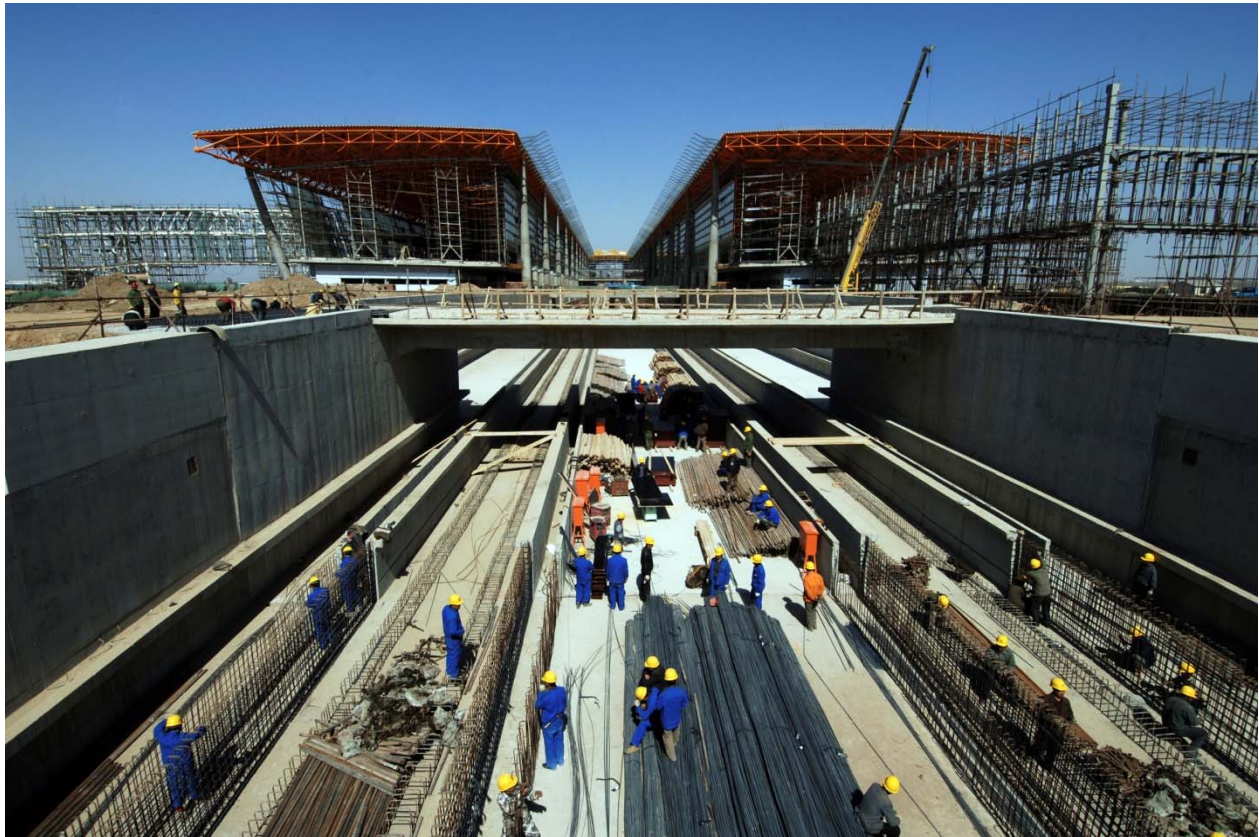


Investing in Infrastructure

International Best Legal Practice in Project and Construction Agreements – 2017



Introduction

The increasing role of superannuation funds in infrastructure investment has been well documented. Governments are encouraging further involvement in infrastructure investment from superannuation funds, primarily to assist in closing Australia's infrastructure gap, which is currently growing at an estimated rate of \$20 billion per year.

However, investment activity has been impacted by the perceived risks in greenfield infrastructure investment. The identification, allocation and management of risks are matters that superannuation funds must address if they are to participate successfully in infrastructure investment during the implementation and delivery phases of greenfield projects.

This Best Practice Guide aims to provide some guidance to superannuation funds in identifying, allocating and managing those risks, from both a legal and commercial perspective.

This Best Practice Guide is also a useful tool for experienced infrastructure funds, governments, Developers and Lenders investing in infrastructure.

It contains detailed position papers on greenfield risks relating to time, cost and, in our view, the critical risk in any project – underperformance. It also contains corresponding papers on liability issues. All of these will enable you to better understand the risk exposures when investing in greenfield infrastructure projects and evaluating latent risk in brownfield infrastructure projects.

The current outlook on infrastructure investment

As of January 2014, approximately 5% of the portfolios of Australian superannuation funds were committed to infrastructure, including both equity and debt investment. This figure is recognised as one of the largest by volume of any pension system in the world and policymakers and stakeholders in the superannuation industry are also seeking to promote and encourage further investment growth in infrastructure. The Federal Government has been vocal in seeking to introduce reforms to encourage private involvement in infrastructure, with former Treasurer Joe Hockey previously stating that the Federal Government was prepared to consider a range of options to increase incentives to invest. The Opposition has announced its intention to introduce a policy to create an “infrastructure market” driven by investment by superannuation funds. And current Treasurer Scott Morrison has indicated that the Government may be willing to agree to such a policy. ANZ chief executive and Australian B20 leader Mike Smith has also outlined the B20's policy of promoting private sector investment and said that infrastructure was a “natural asset class for pension funds”.

Despite these acknowledgements, growth in infrastructure investment by superannuation funds has been slow, particularly in greenfield projects. Recent major superannuation led transactions have generally been restricted to brownfield investment as most funds confine their interest to brownfield projects, where there is an intermediate return for their investors. For example, the consortium led by Industry Funds Management in Port Botany and Port Kembla in 2013 and the 2014 multi-party bid process in relation to the QML assets. This may be changing, particularly with the free trade agreement signed on April 9, 2014 between Australia and Korea. Korean investors, such as National Pension Fund, Korean Investment Corporation and Samsung Life Insurance, are targeting investment in Australian projects in resources and infrastructure by following Korean equity and construction integrated heavyweights such as POSCO, Samsung and Hyundai. Notwithstanding that, it is apparent that the unique and additional risks present in greenfield projects are preventing growth, despite the benefits and potentially more significant returns that greenfield investment can provide.

This Best Practice Guide has been formulated with those risks in mind, using PwC's expertise and experience in project and construction contracting to assist funds in managing greenfield investment risk. Our expertise in risk identification, allocation and management across a range of sectors is essential for superannuation funds seeking to increase their commitment and investment in greenfield infrastructure.

Understanding current concerns of funds

In understanding the application of the appropriate risk identification, allocation and management tools, one should have in mind the specific challenges superannuation funds face as investors. Factors acknowledged by industry bodies as having a negative effect on greenfield investment include:

- **Lack of construction expertise:** Superannuation funds may not all be well placed to assess an infrastructure asset as an investment opportunity. While funds have access to a wide range of information and expertise in regard to traditional investments such as equities, some do not have the benefit of the resources and experience required to obtain and analyse information needed to assess infrastructure projects, particularly during the most high risk phase, the construction period
- **Fund size:** The superannuation fund market is highly fragmented, meaning that smaller funds may lack the capital to become involved in infrastructure. A number of recent mergers and growth in the sector have led to the development of some larger funds. However, the increase in use of the self-managed super fund model by individuals is offsetting that consolidation
- **Liquidity:** Under current choice of fund legislation, superannuation funds are obligated to transfer a member's funds within 30 days of a request for transfer. Consequently, they must retain a certain level of liquidity in their investments in order to meet that regulatory burden. The illiquid nature of infrastructure investment means that funds face compliance issues when directly investing in infrastructure
- **Low risk appetite:** Fund trustees owe their primary duties and obligations to their members, who are generally seeking steady positive returns from their fund. As such, funds will naturally prefer to limit their downside risks. This sits uncomfortably with equity investment in infrastructure, particularly in greenfields projects, where there may be a substantial delay in earning returns and the burden of construction risks
- **Limited pipeline of opportunities:** Funds have also been critical of a lack of viable investment options currently available across infrastructure sectors in Australia. It is generally accepted that there are too few projects currently in the infrastructure pipeline which satisfy the preferences of superannuation funds as investors
- **Procurement costs:** The time and monetary costs of the bidding process are often cited by superannuation funds as prohibitive, particularly given the cost of a losing bid needs to be covered
- **Tightened regulatory framework:** In 2013 the MySuper legislative reforms were introduced, with the aim of providing a default, 'plain vanilla' option for all super fund investors. While these reforms bring consumer protection benefits, they restrict the choices a trustee can make in taking on riskier investments and further increase liquidity pressures, providing a disincentive to invest in riskier infrastructure investments
- **Unfavourable banking terms and underdeveloped debt markets:** Current market practice shows that Australian banks are very hesitant to extend debt terms beyond 10 years. Australia's corporate bond market is also underdeveloped, meaning that projects often have limited choice in terms of debt finance. This exposes superannuation funds to refinancing risks as equity investors. The lack of any large or active infrastructure bond market also means that superannuation funds do not often have an opportunity to make any indirect investment in infrastructure assets.

Risk identification, allocation and management tools in Greenfields projects

Given the significant challenges outlined above, it is essential that superannuation funds are equipped with the tools and expertise to appropriately identify, allocate and manage design, construction, commissioning and operational risk in any future greenfield investment. Generally, only infrastructure projects undertaken within a stable regulatory framework, with low technology risk and with a sufficiently stable revenue stream are regarded as suitable investment targets for superannuation funds. The principles outlined in this Best Practice Guide can be utilised to examine the suitability of infrastructure projects for investment and to identify and allocate risks. These principles are also useful tools for experienced Developers and Lenders investing in infrastructure.

In addition, a tailored contractual approach is desirable to manage risks in a greenfield infrastructure project and to also ensure a project is bankable. In assessing bankability, Lenders will look at a range of factors and assess the suite of project contracts, with particular attention on the construction arrangements, as a whole. Therefore, in isolation it is difficult to state whether one contracting approach is or is not bankable. However, generally speaking, the Lenders will require the following:

- a fixed completion date
- a fixed completion price
- no or limited technology risk
- output guarantees
- liquidated damages for both delay and poor performance
- security from the contract and/or its parent company
- large caps on liability (ideally, there would be no caps on liability, however, given the nature of EPC contracting and the risks to the Contractors involved there are almost always caps on liability)
- restrictions on the ability of the Contractor to claim extensions of time and additional costs.

See Articles 5-10 for more information regarding contract delivery methods for various types of projects which can be translated into other sectors.

Similarly, investors must also be aware of the operational risks present in a project. If the asset fails to generate revenue, then the investor's return is at risk. The patronage risk present in many infrastructure projects has restricted super fund investment, particularly given the recent underperformance of a number of toll roads in Australia, eg Sydney's Lane Cove Tunnel and Brisbane's Rivercity Motorway. ANZ chief executive and Australian B20 leader Mike Smith has also recently emphasised the need for greater protections for superannuation fund investors at an infrastructure roundtable. Mr Smith stated that projects must be structured to "protect the income flows to [pension funds] so there is an incentive to invest." In light of these concerns, best practice by investors will require a carefully designed contract package to ensure that appropriate safeguards for revenue are in place. Further guidelines on construction operation and offtaker contract protections are set out in the remainder of this Best Practice Guide.

While this expertise can add the most value in a greenfield project, our best practice principles are also equally applicable to prospective purchases of existing infrastructure by superannuation funds and other investors, particularly where substantial capital expenditure may be required. Investors can utilise this expertise in order to manage ongoing constructional and operational risks and to undertake appropriate due diligence when purchasing an existing asset.

Trends in infrastructure investment

PwC's expertise and advice in this area is updated regularly, taking account of trends in government and global thinking on greenfield project risk management.

Internationally, Canada has taken progressive steps in the area of pension fund investment in infrastructure, and is now seen as a potential role model for the systems of risk allocation and deal structuring in Australia. Large Canadian pension funds have a current allocation of 5.2% to infrastructure investment in their portfolios, of which 51% is direct investment in unlisted assets – the highest rate globally. Canadian funds are developing their own in house specialist infrastructure investment teams and are using past experiences to better assess and manage risk within transactions. This is seen as one of the key reasons that the rate of Canadian direct investment is at such a high level. Additional factors also assist Canadian funds in their investments, such as more flexible and long term debt arrangements, the existence of an established infrastructure bond market and the pooling of assets of smaller funds. This Canadian model of investment has shown that pension funds can engage in direct investment in infrastructure successfully, provided that the right expertise is provided in identifying investments and allocating and managing risks when investing in a project.

In regard to operational risk, patronage risk sharing models are being trialled overseas, to better protect pension fund investors from the operating risks of a project. An example of this model was adopted by the International Project Finance Association in March 2013. The new transaction structure, called PEBBLE, is essentially aimed at separating the funding of the project into short term and long term categories of bonds. This structure aims to allow institutional investors to avoid exposure to potential short term downsides in exchange for a lower risk, long term return. Similar structures are likely to be utilised further as a means of addressing risk for superannuation fund investors.

In Australia, the Federal Government has committed to assisting private parties manage the risks in greenfield projects. Former Treasurer Joe Hockey was the key instigator of the G20 Finance Minister's campaign to increase the focus on aims to assist "in managing the risks of infrastructure projects as a means of increasing private sector investment", including by using "bonds, guarantees, phased grants/availability payments and concessional loans". Given these trends, it is apparent that the regulatory framework in Australia is likely to continue to be improved to assist superannuation investment in domestic infrastructure projects.

The future for investment and deal structuring

On the whole, it is generally recognised that superannuation investment in infrastructure will continue to increase. The size of superannuation funds is projected to reach \$5 trillion by 2030, and the need for new and diversified investment will only increase. Internationally, the benefits of greenfield infrastructure investment are being recognised by pension funds, and it is clear that the Australian Government is committed to encouraging this investment. However, superannuation funds are continuing to grapple with the transition from brownfield infrastructure asset purchases to investment in greenfield infrastructure development. Through its expertise, experience and the legal frameworks set out in this Best Practice Guide, PwC can assist superannuation funds, as well as experienced Developers and Lenders, in understanding and delivering sound greenfield infrastructure investment.

Damian McNair
PwC

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These papers reflect recent lessons learnt and current case law (notwithstanding the latter they are meant to be more of a practice guide) as of January 2016. Where case law has been included, the papers generally look at a range of common law positions, albeit primarily an English and Australian law position. Please contact us for specific advice on those issues raised rather than relying on these papers.

For further information, please contact



Damian McNair

Partner, Legal

M +61 421 899 231

E damian.mcnaair@pwc.com

Position papers

1 Position paper on liability

Introduction

This paper sets out the legal principles that apply to key provisions in construction contracts and focuses on those issues that contractors raise in an attempt to limit their liability.

It focuses on international market practice and the position under English law, which most participants in the projects and construction industry in this region are familiar with.

Summary

Contractors often raise various arguments concerning provisions relating to time and performance which, if accepted, can have serious consequences for an Employer's ability to recover.

Contractors often argue for:

- the insertion of an exclusive remedies clause for delay and performance liquidated damages and the removal of any failsafe provisions
- the insertion of a general exclusive remedies clause
- the deletion of provisions that attempt to obviate the effects of the Prevention Principle
- no liability for consequential loss
- the exclusion of all implied warranties.

This position paper sets out the legal issues that Employers need to be aware of in dealing with these issues.

Specifically, we explore:

- the operation of liquidated damages clauses and how they can be invalidated
- the impact of exclusive remedies clauses on liquidated damages regimes
- the rationale for, and meaning of, exclusive remedies clauses under construction contracts
- the operation of the Prevention Principle
- the operation of consequential loss provisions
- the application of implied warranties.

It should be emphasised that this paper focuses on the legal risks to Employers; it does not focus on commercial imperatives or technical issues.

How liquidated damages regimes can be invalidated

If an exclusive remedies clause is inserted into a contract, the explicit remedies contained in the contract will take on great significance. Under English law, from a construction law perspective, the presence of liquidated damages will be crucial in providing remedies for delay and underperformance.

However, if a general exclusive remedies provision is inserted, the Employer may have no recourse to common law damages if the liquidated damages regime is invalidated. Contractors attempt to invalidate liquidated damages clauses in a number of ways. The most common methods of circumventing these clauses are by arguing that:

- the liquidated damages clause is a penalty or void for uncertainty
- the Employer has caused delay through an act of prevention.

Liquidated damages not a genuine pre-estimate of loss, but a penalty

If the sum agreed to be imposed by the parties as liquidated damages is, in law (or equity), a penalty, then it will not be enforceable by an Employer (at least to the extent that it is penal in nature). The sum agreed to be imposed as liquidated damages will be regarded as a penalty if it does not represent a genuine pre-estimate of the loss likely to be sustained by the Employer as a result of a delay to completion. As stated by the Privy Council:

“...so long as the sum payable in the event of non-compliance with the contract is not extravagant, having regard to the range of losses that it could reasonably be anticipated it would have to cover at the time the contract was made, it can still be a genuine pre-estimate of the loss that would be suffered and so a perfectly valid liquidated damage provision.”¹

The question of whether a clause is a penalty is one of construction to be decided upon the terms and circumstances of each particular contract at the time of formation. If it can be established that the sum is not a genuine pre-estimate of loss because it is too great a figure, the provision will be unenforceable at common law and in equity it will be read down the clause and enforce it to the extent that it reflects the damage suffered.² It makes no difference that the contract specifically states that the clause is not a penalty³ or in fact the contract uses the word “penalty” (as some still do) provided the sum is in reality a genuine estimate of damage (and so follows general common law damages principles) or is intended as a limitation of damage and not *in terrorem*.⁴ However, in all cases where the act in question is a breach of contract, the law will inquire whether the payment provided for in the contract is a “penalty”, in a modern sense of the word, meaning that it is not in reality a genuine pre-estimate of damage and is excessive or “out of all proportion” with the likely loss flowing from the breach.⁵

In practice, liquidated damages clauses in major infrastructure projects that are financed on a non – or limited recourse basis are not likely to be considered excessive or out of proportion, as they are estimated below the likely loss that an Owner would suffer. Therefore, the more relevant risk is if they are drafted in a way that is too uncertain to be enforced.

¹ Xxx

² Xxx

³ *Philips Hong Kong Ltd v The Attorney General of Hong Kong* [1993] 61 BLR 49, 59 (Lord Woolf).

⁴ *Jobson v Johnson* [1989] 1 WLR 1026; *Andrews v Australia and New Zealand Banking Group Ltd* (2012) 247 CLR 205.

⁵ *Dunlop Pneumatic Tyre Co Ltd v New Garage & Motor Co Ltd* [1915] AC 79, 86.

Time at large

If an Employer prevents the completion of the works in a way not covered by an extension of time clause, then it loses the right to claim liquidated damages. If this occurs, the Contractor cannot complete by the set completion date and it is said that time under the contract has been set “at large”. This means that the Contractor’s obligation is to complete the works within a reasonable time. Time is said to be set at large due to the operation of the Prevention Principle. What is a reasonable time to complete once time has been set at large is a matter of fact dependent on the circumstances as to how time has become at large, the date on which it was set at large and the materials to be able to make a calculation.⁶

The potential for a liquidated damages clause to be declared a penalty and be read down or invalidated increases the importance of failsafe clauses and other provisions that preserve an Employer’s rights to claim damages at law.

Removal of failsafe clauses for delay and underperformance

Failsafe provisions in construction contracts attempt to preserve the Employer’s rights to obtain damages at law if for some reason the liquidated damages clauses are deemed unenforceable. A typical failsafe provision for delay provides as follows:

If this provision (or any part thereof) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Employer from claiming delay liquidated damages, the Employer is entitled to claim against the Contractor damages at law as set out in the damages at law schedule for the Contractor’s failure to attain commercial operation by the date for commercial operation up to the aggregate liability for delay liquidated damages.

Contractors often argue against such clauses and suggest they should be deleted. They often argue for the inclusion of an exclusive remedies provision and the deletion of any failsafe clause, suggesting that liquidated damages should be an Employer’s sole entitlement for the Contractor’s delay or underperformance. As explained below, exclusive remedies clauses may prevent an Employer from claiming damages at common law in the event that the liquidated damages regimes are for some reason found to be unenforceable.

If there is no exclusive remedies clause, then there is no essential need for the inclusion of failsafe clauses. However, if an exclusive remedies clause is inserted – which we advise against below – failsafe clauses must be included to protect the Employer’s ability to recover. If an exclusive remedies clause is present, failsafe clauses provide essential protection if the liquidated damages regimes are for any reason invalidated. While the High Court in *Andrews v Australia and New Zealand Banking Group Ltd*⁷ indicated that in equity a penalty can be enforced to the extent it reflects appropriate compensation, that principle will not have application where a liquidated damages clause is considered void for uncertainty, rather than being a penalty because it is excessive in amount.

⁶ This point was strongly suggested by the Court of Appeal judgments in *Widnes Foundry v Cellulose Acetate* [1931] 2 KB 393 and finally and satisfactorily concluded by the Supreme Court of Canada in *Elsley v J.G. Collins Insurance Agencies Ltd* [1978] 2 SCR 916.

⁷ Ian D Wallace (ed), *Hudson’s Building and Engineering Contracts* (Sweet & Maxwell, 11th ed, 1994) vol 2, [10.002].

Exclusive remedies generally

Contractors typically attempt to insert a provision stating that the remedies expressly provided for under the construction contract are to the exclusion of any remedies at common law. Contractors also typically attempt to delete any reference to recourse to damages at law.

The insertion of an exclusive remedies clause may have far-reaching consequences as it may limit an Employer's rights to those explicitly articulated in the construction contract. This potentially leaves the Employer without remedies for the Contractor's breaches of the construction contract, as we explain below.

A typical comprehensive exclusive remedies clause is as follows:

The Employer and the Contractor agree that their respective rights, obligations and liabilities as provided for in the contract shall be exhaustive of the rights, obligations and liabilities of each of them to the other arising out of, under or in connection with the contract or the works, whether such rights, obligations and liabilities arise in respect or in consequence of a breach of contract or of statutory duty or a tortious or negligent act or omission which gives rise to a remedy at common law. Accordingly, except as expressly provided for in the contract, neither party shall be obligated or liable to the other in respect of any damages or losses suffered by the other which arise out of, under or in connection with the contract or the works, whether by reason or in consequence of any breach of contract or of statutory duty or tortious or negligent act or omission.

The effect of this clause would considerably affect the Employer's ability to recover. The final sentence is particularly comprehensive, as it provides that, other than those clauses in the contract for which a remedy is specifically provided, the Employer would not be able to recover damages from the Contractor for breaches of the engineering, procurement and construction (EPC) Contract or for negligence. It follows that, if there has been a failure by the Contractor to satisfy a contractual obligation, or if the Contractor has been negligent under the contract, then unless the Employer can point to a specific and express remedy under the contract for such breach or negligence, it would be left without a remedy.

An EPC Contract will typically provide specific remedies in the form of liquidated damages for delay and underperformance of the project. Delay and underperformance are only two issues, however, for which an Employer will require contractual compliance. There will be numerous other Contractor obligations under the EPC Contract with which the Employer will require compliance and for which a remedy should be available in the event of non-compliance or breach. If a comprehensive exclusive remedies clause is inserted, the Contractor may be able to breach numerous provisions of the EPC Contract, or behave negligently in respect of certain conduct, without consequence.

For example, consider the scenario under an EPC Contract in which the Contractor has brought the project to practical completion/commercial operation and the liquidated damages regime is no longer required. After commercial operation, there remain various opportunities and possibilities for breach. One example is the Contractor's failure to provide spare parts in accordance with the terms of the EPC Contract. The exclusive remedies clause may have the effect of preventing the Employer from claiming common law remedies for breaches of other provisions of the contract in such a situation. Another example is a breach of the Contractor's warranty that the works will be fit for the purpose reasonably inferable from the contract.

Exclusion of common law damages

Commonly, if a liquidated damages clause is found to be unenforceable (because it is a penalty, void or otherwise unenforceable), the Employer, while prevented from claiming liquidated damages, still has the right to claim damages at common law (or in equity may be entitled to enforce an excessive penalty clause to the extent that it would amount to appropriate compensation).

Exclusive remedies provisions exclude the ability of an Employer to claim common law damages in the event the liquidated damages regime is declared unenforceable, thereby restricting the Employer's remedies for delay or underperformance to liquidated damages. If an exclusive remedies clause is inserted, a further question to be determined is to what extent common law damages are unavailable, that is, whether the clause excludes all common law remedies or only those provisions for which liquidated damages are available.

It is clear that whether the terms of a contract constitute a codification of the rights and liabilities of the parties to it (including a complete statement of those rights and liabilities where one party defaults in a contractual obligation so as to exclude common law rights to damages) depends on the construction of each individual contract.⁸ It is well established that if a party's common law right to sue for damages for breach of contract is to be removed contractually, it must be done by clear words.⁹

Courts have held that clear wording may remove the common law right to damages. This view has been followed in a number of cases, including *Hancock v BW Brazier (Anerley) Ltd* [1966] 1 WLR 1317 (CA); *Billyack v Leyland Construction Co Ltd* [1968] 1 WLR 471; *Photo Production Ltd v Securicor Transport Ltd* [1980] AC 827 and *HW Nevill (Sunblest) Ltd v William Press & Son Ltd* [1981] 20 BLR 78. The High Court in *Concut Pty Ltd v Worrell*¹⁰ has said that "clear words are needed to rebut the presumption that a contracting party does not intend to abandon any remedies for breach of the contract arising by operation of the law".¹¹

It was held in *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd*¹² that a proprietor may lose his right to rely upon a liquidated damages clause providing for liquidated damages in the event of delay in completion if the proprietor caused or contributed to the delay.¹³ However, in *Billyack v Leyland Construction Co Ltd*¹⁴ Davies LJ stated:

"It requires very clear words to debar a building Employer from exercising his ordinary rights of suing if the work done is not in accordance with the contract."

The possibility of broadening this position was considered by Lord Diplock in *Photo Production Ltd v Securicor Transport Ltd*.¹⁵

Since the obligations implied by law in a commercial contract are those which, by judicial consensus over the years or by Parliament in passing a statute, have been regarded as obligations that a reasonable businessman would realise that he was accepting when he entered into a contract of a particular kind, the court's view of the reasonableness of any departure from the implied obligations that would be involved in construing the express words of an exclusion clause in one sense that they are capable of bearing rather than another is a relevant consideration in deciding what meaning the words were intended by the parties to bear. But this does not entitle the court to reject the exclusion clause, however unreasonable the court itself may think it is, if the words are clear and fairly susceptible of one meaning only.

8 Keith Pickervance, 'Calculation of a Reasonable Time to Complete when Time is at Large', [2006] *International Construction Law Review* 167, 168.

9 (2012) 247 CLR 205.

10 Stephen Furst and Sir Vivian Ramsey (eds), *Keating on Construction Contracts*, (Sweet & Maxell, 8th ed, 2006), [10.023].

11 *Hancock v BW Brazier (Anerley) Ltd* [1966] 1 WLR 1317,1334 (Denning MR); *Billyack v Leyland Construction Co Ltd* [1968] 1 WLR 471, 475 (Edmund Davies LJ); *H W Nevill (Sunblest) Ltd v William Press & Son Ltd* (1981) 20 BLR 78, 88 (Judge Newey).

12 (2000) 176 ALR 693.

13 *Ibid*, 699-70; see also *Stocznia Gdanska SA v Latvian Shipping Co* [1998] 1 WLR 574.

14 [1970] 1 BLR 111.

15 See also *Spiers Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd [No 2]* [2012] WASCA 53, [49].

On a broad interpretation, this suggests that if, on the structure of the contract as a whole, it appears that a party has surrendered its rights to common law damages by the insertion of a particularly comprehensive exclusive remedies clause, that party may not have any remedies other than those specifically and particularly stated in the contract.

This argument becomes increasingly persuasive when considered in light of the decision in *Temloc Limited v Errill*¹⁶ in which it was held that the word “nil” in a damages annexure was evidence that the parties intended no liability for either liquidated or unliquidated damages. Nourse LJ noted:

“I think it clear, both as a matter of construction and as one of common sense, that if...the parties complete the relevant part of the Appendix,...then that constitutes an exhaustive agreement as to the damages which are or are not to be payable by the Contractor in the event of his failure to complete the works on time.”¹⁷

These cases suggest that the inclusion of an exclusive remedies clause, then, is a step that can have extremely significant consequences.

The effect of an exclusion of common law damages

Therefore, while the insertion of an effectively drafted exclusive remedies clause will prevent the Employer from claiming common law damages for delay or underperformance in the event that the liquidated damages clause is declared invalid, it may have far-reaching effects on other clauses of the contract.

Rule at law against double recovery

It is a well-established principle that the law (which now embraces equity) will not permit a plaintiff, whatever procedural device is used, to recover more than the damages which have been suffered, no matter what the cause of action: *Baxter v Obacelo Pty Ltd* (2001) 205 CLR 635 as most recently applied in *Ewin v Vergara (No 3)* [2013] FCA 1311. Given the possible severe and wide ranging consequences for both parties if an exclusive remedies clause is inserted, and in light of the well-established (in English and Australian law) principle of double recovery which will operate to have the same effect as an exclusive remedies clause (that is, prohibit an Owner from recovering, for example, liquidated damages under contract for delay and damages at law for the same delay), it is prudent that an exclusive remedies clause be excluded from a contract.

Proposed solutions

One option is for an Employer to accept the Contractor’s exclusive remedies clause, but carefully to elaborate those clauses of the contract for which a remedy is required in the event of breach. These express remedies could then be specifically included in the contract and could operate alongside the exclusive remedies clause. However, in our view, such a strategy is risky, because the Employer would be required to identify all potential breaches of the EPC Contract, and also to consider which remedies should be expressly identified to deal with such breaches. In our view, it is not possible to envisage the different ways in which a Contractor may breach its contractual obligations, and the consequences the Employer may suffer as a result of the breach.

The preferable solution is to resist the inclusion of an exclusive remedies clause, thereby ensuring maximum latitude to claim for damages at law if the liquidated damages regime is for some reason declared unenforceable.

Failing this approach, the other option is to include a “code of rights” provision in the EPC Contract, providing that, except where express remedies are specifically provided under the contract (for example, provisions providing for liquidated damages), each party will be able to claim common law damages for breaches of the contract.

16 [1968] 1 WLR 471.

17 [1980] AC 827.

The operation of the Prevention Principle

Rationale

There are various rationales for the existence of the Prevention Principle under English law. These have been variously suggested as:

- the principle that a party should not be able to recover from damages for what that same party has caused¹⁸
- an implied term or implied supplemental contract¹⁹
- waiver or estoppels²⁰
- unjust enrichment.

Others have suggested that there is in fact no coherent overarching rationale for the Prevention Principle or that it may be regarded as a particular manifestation of the obligation to cooperate implied as a matter of law in all contracts.²¹ In any case, the fundamental considerations are of fairness and reasonableness.²²

Operation

The operation of the Prevention Principle will ensure that an Employer will lose its right to claim liquidated damages for delay if that delay was due to its own, employee's or agent's defaults, where there is no extension of time clause that specifically provides for extensions due to acts or defaults of the Owner and an extension has been validly granted thereunder.²³ A claim that the Prevention Principle operates to set time at large usually arises in the following circumstances:

- where a Contractor alleges that the power to extend time has not been exercised, or has been exercised improperly
- where there is no clause under the contract to extend time for the Employer's act of delay, or where that power cannot be exercised in the circumstances.

What acts or omissions of the Employer bring the Prevention Principle into operation? Courts generally have regarded any wrongful act or fault as sufficient to enliven the principle. It is not necessary that the act constitutes a breach of contract.²⁴ The broadest view is that any act of the Employer, regardless of its fault element, is sufficient to engage it. Variations, whether authorised under the original contract or subsequently agreed, are regarded as acts of prevention for the purposes of the doctrine.²⁵

In considering whether an extension of time clause provides for the granting of extensions of time for Employer-caused delay, the extension of time clause will be construed *contra proferentem* against the Employer. It is established that general or ambiguous words in an extension of time clause, referring to such matters as "events beyond the control of the Employer", will not entitle the Employer to the benefit of the liquidated damages regime.²⁶ Where the extension of time clause provides specifically for the Employer's

18 [1987] 39 BLR 30.

19 Ibid 39.

20 *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd* [1970] 1 BLR 111.

21 *SBS International Pty Ltd v Venuti Nominees Pty Ltd* [2004] SASC 151, [11] (Besanko J).

22 Ibid.

23 *SMK Cabinets v Hili Modern Electrics* [1984] VR 391, 397 (Brooking J).

24 *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* (1979) 144 CLR 596, 607 (Mason J); *Spiers Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd* (No 2) [2012] WASCA 53, [46].

25 Wallace, above n 5.

26 Doug Jones, "Can prevention be cured by time bars?" (2009) (Paper 158) *Society of Construction Law*.

breach, waiver or prevention, the liquidated damages regime will be preserved. As stated by Salmon LJ in *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd (Peak)*:²⁷

*“The liquidated damages and extension of time clauses in printed forms of contract must be construed strictly contra proferentem. If the Employer wishes to recover liquidated damages for failure by the Contractors to complete on time in spite of the fact that some of the delay is due to the Employers’ own fault or breach of contract, then the extension of time clause should provide, expressly or by necessary inference, for an extension on account of such a fault or breach on the part of the Employer.”*²⁸

One of the more contentious aspects of this area of law concerns the interaction of conditions precedent to the granting of an extension of time with the operation of the Prevention Principle. The issue is whether the Prevention Principle is subject to an administrative act (such as the provision of notice by the Contractor) or whether it can operate independently of such procedural requirements of particular contracts.

Case law on this point is divided. In *Gaymark v Walter Construction (Gaymark)*,²⁹ the contract under dispute provided that a notice of delay was to be given within 14 days of the cause of delay arising. The Supreme Court of the Northern Territory reaffirmed an arbitral award that found that, even though the notice requirements were not complied with by the Contractor, because at least some of the delay was caused by the Employer, the right to claim liquidated damages was lost and time was set at large. *Gaymark* suggests that the Prevention Principle overrides conditions precedent. This view has been subjected to strong academic criticism.³⁰ Later cases have suggested that conditions precedent must be satisfied before the Prevention Principle can have application. Indeed, in *Turner Corporation Limited (Receiver and Manager Appointed) v Austotel Pty Ltd*³¹ Cole J stated that the builder could not:

*“... claim that the act of prevention which would have entitled it to an extension of the time for practical completion resulted in its inability to complete by that time. A party to a contract cannot rely upon preventing conduct of the other party where it failed to exercise a contractual right which would have negated the affect [sic] of the preventing conduct.”*³²

A further question regarding the scope of the Prevention Principle concerns what is actually invalidated by the Employer’s act of prevention. If the Employer causes four days of delay to a programme, and the Contractor is 100 days late in delivery of the project, can the Employer recover 96 days of liquidated damages, or is the entire liquidated damages regime invalidated? In such a scenario, what is considered to be a reasonable time to complete?

Early authority on this point favoured the view that any act of prevention by the Employer invalidated the entire liquidated damages regime. In *Holme v Guppy*³³ the delay in completion was five weeks; the Employer was responsible for four weeks of delay and the Contractor for one week of delay. The court found that the Employer was not entitled to any liquidated damages due to its act of prevention. In *Hudson’s Building and Engineering Contracts*, Wallace notes that:

*“... (unless) there is a sufficiently specific clause, it is not open to the Employer or his A/E (independent engineer) where the contract date has ceased to be applicable, to make out a kind of debtor and creditor account allowing so many days or weeks for delay caused by the Employer and, after crediting that period to the builder, to seek to charge him with damages at the liquidated rate for the remainder.”*³⁴

²⁷ *Multiplex Constructions (UK) Ltd v Honeywell Control Systems Ltd* [2007] BLR 195.

²⁸ Wallace, above n 5.

²⁹ [1970] 1 BLR 111.

³⁰ *Ibid.*, 121; see also *D & M (Australia) Pty Ltd v Crouch Developments Pty Ltd* [2011] WASCA 109, accepting Peak.

³¹ [1999] 16 BCL 449.

³² Ian D Wallace, “Prevention and Liquidated Damages: A Theory Too Far?” (2002) 18 *Building and Construction Law* 82.

³³ *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd* (1994) 13 BCL 378.

³⁴ *Ibid.* *Turner* has been accepted as correct in *Peninsula Balmain Pty Ltd v Abigroup Contractors Pty Ltd* (2002) 18 BCL 322; *620 Collins Street Pty Ltd v Abigroup Contractors Pty Ltd (No 2)* [2006] VSC 491. McLure P indicated that all Australian courts were bound to follow that approach in *Spiers Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd (No 2)* [2012] WASCA 53, [53]-[56].

This view appears to be based on the needs of certainty and predictability and finds its foundation in the classic case of *Peak*. More recent authority suggests that the Employer's delay and the Contractor's delay could be in some circumstances divisible for the purposes of determining and enforcing liquidated damages, but remains circumspect in light of *Peak*'s authority. In *Rapid Building Group Ltd v Ealing Family Housing Association Ltd*³⁵ Lloyd LJ remarked that:

"... I was somewhat startled to be told in the course of the argument that if any part of the delay was caused by the Employer, no matter how slight, then the liquidated damages clause in the contract... becomes inoperative.

"I can well understand how that must necessarily be so in a case in which the delay is indivisible and there is a dispute as to the extent of the Employer's responsibility for that delay. But where there are, as it were, two separate and distinct periods of delay with two separate causes, and where the dispute relates only to one of those two causes, then it would seem to me just and convenient that the Employer should be able to claim liquidated damages in relation to the other period."³⁶

Nevertheless, Lloyd LJ went on to note that *"it was common ground before us that is not a possible view...in the light of the decision of the Court of Appeal in Peak's case, and therefore I say no more about it."*³⁷

Accordingly, the classic case of *Peak* remains dominant, with the subsequent line of authority suggesting that where an act of prevention goes to part of the delay but not the whole, the entire liquidated damages clause will be invalidated.³⁸ This traditional view has recently been reinforced in Australia in *SBS International Pty Ltd v Venuti Nominees Pty Ltd*,³⁹ where Besanko J held that, in a situation where delay to the completion date is caused by the Contractor as well as the Principal, it is not open to a court to apply the liquidated damages clause to the delay specifically caused by the Contractor:

"In those cases where both Principal and Contractor are responsible for delay, the liquidated damages clause will be held inapplicable unless there is a contractual provision by way of an appropriate extension of time clause which accommodates or deals with the delay caused by the contract of the Principal".⁴⁰

To summarise, an Employer will not lose its rights to claim liquidated damages if:

- the delay is due wholly or in part to an act of prevention
- there is a provision in the contract providing for extensions of time due to acts of prevention
- an extension of time has been certified pursuant to the contract.

It is prudent to include a provision permitting the Employer to make an extension of time at its discretion, even where the Contractor has not requested one. Such a provision makes it possible to avoid the situation where a Contractor is entitled to an extension of time due to any act of prevention, but has not applied for one on the basis that it can rely on the Prevention Principle. We suggest that the contract should provide that a cause of delay entitling the Contractor to an extension of time includes:

- any act, omission or default by the Employer, the Employer's representative and their agents, employees and contracting counterparties

³⁵ (1838) 3 M&W 387.

³⁶ Wallace, above n 5, [10.025].

³⁷ (1984) 29 BLR 5.

³⁸ [2007] BLR 195; Pickervance, above n 6, 177.

³⁹ (1984) 29 BLR 5, 19.

⁴⁰ Wallace, above n 5, [10.040].

- a variation, except where that variation is caused by an act, omission or default of the Contractor or its sub contractors, agents or employees.

The contract should also include a condition precedent provision with which the Contractor must comply before an extension of time can be granted.

Can the Prevention Principle be contracted out of?

The question arises whether the Prevention Principle can be explicitly contracted out of, so that a liquidated damages regime can remain on foot despite the Contractor being prevented due to the Employer delaying the works.

As well as providing for extensions of time for acts or omissions of the Employer, our standard EPC Contract attempts to contract out of the Prevention Principle as follows:

- *Any principle of law or equity (including the Prevention Principle and those which might otherwise entitle the Contractor to relief), which might otherwise cause the date for commercial operation to be set at large and liquidated damages unenforceable, will not apply*
- *For the avoidance of doubt, a delay caused by any act or omission of the Employer or any failure by the Employer or the Employer's representative to comply with this clause will not cause the date for commercial operation to be set at large*
- *Nothing clauses 1 or 2 will prejudice any right of the Contractor to claim an extension of time or delay costs in accordance with this contract for that delay.*

While we believe that this clause is valid, and that the Prevention Principle can be contracted out of, we must emphasise that this view has not yet received judicial confirmation. There do not appear to be any cases directly in point. However, general principles of law in related areas may provide guidance in this area.

The doctrine of freedom of contract suggests that parties are given considerable latitude in determining the terms of their commercial bargain. In 1993, the Privy Council of the United Kingdom quoted approvingly the view that:

*"...the power to strike down a penalty clause is a blatant interference with freedom of contract and is designed for the sole purpose of providing relief against oppression for the party having to pay the stipulated sum. It has no place where there is no oppression."*⁴¹

Generally speaking, "although the principle of freedom of contract rests on the premise that individuals are free to make agreements as they wish, the public interest in freedom of contract can be outweighed by other public policy considerations."⁴² Providing an agreement does not offend public policy, then it will be enforced in its terms. However, equity may prevent the reliance on contractual provisions where there is demonstrated unconscionable conduct. As yet, there is no judicial consideration of such an approach in relation to reliance upon a clause excluding the Prevention Principle.

Indirect and consequential loss

Introduction

Contractors often attempt to limit their liability by attempting to exclude all "consequential loss" from liability, or by explicitly excluding certain heads of loss under the construction contract.

41 [2004] SASC 151.

42 Ibid, [12] (Besanko J).

It is common practice in standard form EPC Contracts to refer to both “indirect” and “consequential” loss or damage in exclusion of liability clauses.

Under Australian law, the view had been that there was no legal difference between the words “indirect” and “consequential” in exclusion of liability clauses, until relatively recently. However, case law from Victoria that is likely to be applied in other Australian jurisdictions has now held that consequential loss has a broader meaning than previously assumed. The following explains this change and how parties should interpret these words in commercial negotiations.

Under English law, the distinction between indirect and consequential loss, and direct loss, is less certain.

The scope of indirect or consequential loss or damage

Position under English law

The well-known English case of *Hadley v Baxendale*⁴³ provides that where a party to a contract is in breach, the damages to which the other party is entitled falls under two limbs, namely, damages such as may fairly and reasonably be considered:

- to arise naturally, ie according to the usual course of things, from such a breach of contract (often referred to as direct loss or damage) (first limb)
- to be in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of contract (often referred to as indirect loss or damage) (second limb).

Under English law, the term “consequential” is confined to the second limb of the rule in *Hadley v Baxendale*. On this view, the term “indirect or consequential loss or damage” would not include any loss that arises naturally upon the breach, but would include loss or damage that was in the contemplation of both parties, at the time the contract was made, as the probable result of its breach.

Under English law, in determining whether a loss is direct or indirect, it has been held that the enquiry is whether the losses arise naturally and in the ordinary course of things.⁴⁴

English case law has considered which types of loss are typically seen as direct and which are considered indirect or consequential. It is important to emphasise that the classification of loss is often dependent on the specific factual scenarios and contractual provisions at issue, and in practice it is often difficult to determine whether a loss falls within the first or second limb of *Hadley v Baxendale*. However, the following types of losses have frequently been considered direct loss by courts:

- loss of profits
- loss of revenue
- loss of opportunity
- increased expenses or wasted expenditure.

Position under Australian law

The Australian courts have previously supported the above English view of indirect or consequential loss or damage as loss or damage that was in the contemplation of both parties at the time the contract was made, as the probable result of the breach.

⁴³ *Philips Hong Kong Ltd v The Attorney General of Hong Kong* [1993] 61 BLR 49, 58. See also *AMEV-UDC Finance Ltd v Austin* (1986) 162 CLR 170, 190 (Mason and Wilson JJ).

⁴⁴ *Australian Securities and Investments Commission v Fortescue Metals Group Ltd* (2011) 190 FCR 364, [222].

However, in the case of *Environmental Systems Pty Ltd v Peerless Holdings Pty Ltd*⁴⁵ (*Peerless*), the Victorian Court of Appeal moved away from the “second limb test” and decided that the term “consequential loss” should be given its ordinary and natural meaning as would be conceded by ordinary reasonable business persons. In applying this principle, the court drew a distinction between:

- loss that every plaintiff in a like situation will suffer (normal loss)
- anything beyond the normal measure, such as profits lost or expenses incurred through breach (consequential loss).

Peerless was highly influential in the recent decision of *Alstom Ltd v Yokogawa Australia Pty Ltd (No 7)*⁴⁶ (**Alstom**), where the Supreme Court of South Australia considered a clause excluding Yokogawa’s liability as sub contractor for “*any indirect, economic or consequential loss whatsoever*”.

The terms of the contract required the sub contractor to pay damages if it did not complete the works on time or if the works did not meet the performance tests. Alstom made claims against the sub contractor and sought compensation in relation to breaches of these obligations, asserting that the breaches had resulted in losses that flowed naturally from each breach, and therefore were within the first limb of *Hadley v Baxendale*. The sub contractor rejected this assertion and relied upon the exclusion clause, submitting that it should be read more generally to include losses that occurred as a consequence of breach of contract.

The Court considered these claims, and held that the losses claimed by Alstom fell within the first limb, but the breadth of the exclusion clause meant that the sub contractor was not liable for damages occurring as a consequence of any breaches of contract:

“The expression “indirect ... or consequential loss” appears, in this case, as part of a freestanding and powerfully expressed exclusion clause. It is not affected by the immediate presence of any concession as to liability which it might qualify, although it must be read against the background of the qualified exposure of [the sub contractor] to the exclusive remedies of Liquidated Damages and reimbursement of Performance Guarantee Payments. The Article in question was intended to operate in respect of potential liability for loss incurred by Alstom, which was caused by a breach of contract by [the sub contractor] in circumstances other than those giving rise to the payment of Liquidated Damages and reimbursement of Performance Guarantee Payments. The words must be given their ordinary and natural meaning. In those circumstances any loss consequential or following, immediate or eventual, flowing from a breach of contract by [the sub contractor] is excluded from recovery by Alstom.”⁴⁷

In so doing, the Court noted *Peerless* was the preferred precedent over the English cases.

In 2013, the West Australian Supreme Court decision of *Regional Power Corporation v Pacific Hydro Group Two Pty Ltd (No 2)*⁴⁸ (**Regional Power**) rejected both the English approach to the construction of the term “consequential loss” as falling under the second limb of *Hadley v Baxendale*, and the view adopted by *Peerless*. *Regional Power* concerned a PPA entered into between Regional Power Corporation (**SECWA**) and Pacific Hydro Pty Ltd for the supply of electricity. The power station suffered an outage resulting in flooding which led to the power station being inoperative for two months. Resultantly, SECWA claimed damages for breach of the PPA consisting of costs relating to the hiring of replacement diesel generators, cranes and fuel required to run the extra generators; and wages, travel, accommodation and meal expenses of the additional Operators required during that period.

⁴⁵ [1854] 9 Exch 341.

⁴⁶ *FG Minter Ltd v Welsh Health Technical Services Organisation* [1980] 13 BLR 1.

⁴⁷ (2008) 19 VR 358.

⁴⁸ [2012] SASC 49.

⁴⁹ *Ibid*, 82.

Pacific Hydro argued that the damages claimed by SECWA were indirect or consequential losses and accordingly were excluded from recovery by the following clause 26.1:

Neither the Project Entity nor SECWA shall be liable to the other party in contract, tort, warranty, strict liability, or any other legal theory for any indirect, consequential, incidental, punitive or exemplary damages or loss of profits.

The Court rejected both the *Hadley v Baxendale* and *Peerless* positions in favour of the well settled construction approach by the High Court in *Darlington Futures*, stating:

“To reject the rigid construction approach towards the term “consequential loss” predicated upon a conceptual inappropriateness of invoking the Hadley v Baxendale dichotomy as to remoteness of loss, only then to replace that approach by a rigid touchstone of the ‘normal measure of damages’ and which always automatically eliminates profits lost and expenses incurred, would pose equivalent conceptual difficulties. Accordingly, I doubt whether the [93] observations in Environmental Systems were intended to carry any general applicability towards establishing a rigid new construction principle for limitation clauses going much beyond the presenting circumstances of that case.

The natural and ordinary meaning of the words of cl 26.1, begins with these words themselves, assessed in their place within the context of the PPA as a whole. That, on my assessment, is the correct approach to a limitation or exclusion clause required by Darlington Futures Ltd v Delco Australia Pty Ltd, as recently applied by the Western Australia Court of Appeal in Electricity Generation Corporation t/as Verve Energy v Woodside Energy Ltd [38], [42] (McLure P), [138], [140] (Murphy JA)...

Construing 26.1 within the PPA as a whole, the court should not be artificially fettered towards assessing the character of an economic loss by rather vague criteria of whether or not the loss arose ‘in the ordinary course of things’. Nor should the court be oriented from the start towards trying to determine if a claimed loss falls under the equally porous concept of a ‘normal measure of damage.’⁵⁰

Effect on drafting

In summary, there are now three different approaches to the meaning of the words “indirect or consequential” when used in an exclusion clause (or limitation clause, in the instance of Regional Power):

- the English approach, where the words are construed as a reference to damages resulting from special circumstances under which the contract was made communicated by one party to the other
- the *Peerless/Alstom* approach, where the word “consequential” was said to refer to everything beyond the normal measure of damages, such as profits lost or expenses incurred through breach
- the *Regional Power* approach, where the words are said to exclude losses that are in some way less direct and more removed when considered in the context of the transaction at hand.

Contracts governed by Australian law

Darlington Futures holds that limitation (or exclusion) clauses excluding certain categories of loss and damage must be interpreted according to their natural and ordinary meaning, read in the light of the contract as a whole, thereby giving due weight to the context in which the clause appears including the nature and object of the contract. This principle of interpretation must be applied by courts in Australia.

The problem however is whilst the *Darlington Futures* decision confirms the contextual, commercial approach to the interpretation of commercial contracts in Australia, there is potential for significant differences in what would, in a given situation, constitute the ordinary and natural meaning of “consequential loss”, given the clear requirement that losses claimed be interpreted in context of the contract in question. This is highlighted by the

⁵⁰ [2013] WASC 356.

⁵¹ (1986) 161 CLR 500.

recent conflicting principles as to the scope of “consequential loss” taken by the states below (noting the question is yet to be considered in Queensland, Tasmania, the Australian Capital Territory or Northern Territory):

- **Victoria, New South Wales and South Australia:** “consequential loss” is what an ordinary reasonable business person would consider consequential loss ie everything beyond the normal measure of loss (loss that every plaintiff in a like situation will suffer). Lost profits and expenses incurred as a result of breach were given as two examples of consequential losses: *Peerless; Alstom*
- **Western Australia:** “consequential loss” is given its natural and ordinary meaning, read in light of the contract as a whole (ie rejecting the above position and reinforcing the High Court position): Regional Power.

As a result of these decisions, the term “indirect or consequential” should no longer be interpreted as confined to the second limb of the rule in *Hadley v Baxendale*. Instead, any exclusion of indirect or consequential loss should be understood as also excluding some categories of loss that would otherwise be considered to fall under the first limb of *Hadley v Baxendale*; to be determined by construing the clause according to its natural and ordinary meaning, read in the light of the contract as a whole.

Contracts governed by English law

In contracts governed by English law, the following consequential loss clause should be included:

“Without prejudice to the Employer’s right to recover liquidated damages or damages at law for delay or underperformance under clauses 24 and 25 or where otherwise stated in the contract, neither party is liable to the other under the contract, law of tort, including negligence, statute, inequity or otherwise for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the contract or the subject matter of the contract.”

The wording of this clause permits the Employer a certain degree of latitude. In cases where the Contractor has caused loss, the Employer can argue that because of the use of the word “including”, the expressly listed types of loss are in fact forms of direct loss that are thereby recoverable.

This approach has authority to commend it. In *Pegler Ltd v Wang (UK) Ltd*,⁵² the relevant exclusion clause provided that:

*“Wang shall not in any event be liable for any indirect, special or consequential loss, howsoever arising (including but not limited to loss of anticipated profits or of data) in connection with or arising out of the supply, functioning or use of the hardware, the software or the services...”*⁵³

Despite the use of the word “including”, the court held that the clause only excluded losses falling under the second limb of *Hadley v Baxendale*. It was noted by Judge Bowsher QC that:

*“The reference by the words in brackets to loss of anticipated profits does not mean that the exclusion effected by this clause includes all loss of profits: it is plain from the context that only loss of profits which are of the character of indirect, special or consequential loss are referred to.”*⁵⁴

It is certainly arguable that a court would adopt the same approach when considering our proposed clause, so that, for example, losses of profits that could be classified as direct could be recoverable by the Employer.

52 [2013] WASC 356, [96-97, 116].

53 (1986) 161 CLR 500, [16].

54 [2000] BLR 218.

Courts have interpreted similar consequential loss clauses in ways that emphasise the difference between those losses commonly thought to be direct and other forms of indirect loss. In *BHP Petroleum Ltd v British Steel PLC*,⁵⁵ Rix J considered the following consequential loss clause:

“Neither the supplier nor the purchaser shall bear any liability to the other...for loss of production, loss of profits, loss of business or any other indirect losses or consequential damages arising during and/or as a result of the performance or non-performance of this contract.”

Rix J interpreted this clause quite radically by construing the clause to read “for loss of production, loss of profits, loss of business or indirect or consequential damages of any other kind”, as his Honour found that the express heads of loss could not be construed as forms of indirect or consequential loss. However, Rix J’s interpretation of this clause is somewhat unusual, albeit in favour of the Employer. We favour the use of our clause, which is less radical and, given the authority in *Pegler v Wang*, would permit the Employer to argue persuasively for recovery of those losses that could be classified as direct.

Given the unclear position under Australian law, parties must also ensure that an exclusion of liability clause is carefully drafted. Importantly, the clause should set out clearly and exhaustively expressed in detail those losses which are intended to be categorised as consequential. Where presented with a clause excluding liability for consequential loss, Owners must expressly state the categories of loss for which the Contractor will be liable. This essentially means that Owners will need to include a definition of Direct Loss which would identify losses that are within the contemplation of the parties, eg in a project financing of a power or process plant project this should include loss of revenue under a corresponding off take agreement. Clearly this will be difficult to negotiate, but this should be the starting position.,

Exclusion of implied warranties

Contractors often propose to exclude terms implied by law. A general exclusion may be expressed as follows:

The parties agree that the warranties in this clause and any other warranties expressed elsewhere in the contract are the limit of the Contractor’s warranties and are to the exclusion of any implied warranties at law.

Despite such a clause, certain warranties cannot be excluded by contractual agreement.

Nevertheless, we would agree to the inclusion of such a clause excluding implied warranties only if the list of express warranties is comprehensive. These warranties will usually be project specific, but Employers should take great care to ensure that their ability to recover is protected.

⁵⁵ Ibid, 226.

⁵⁶ Ibid, 227.

⁵⁷ [1999] 2 Lloyd’s LR 583.

2 Exclusive remedies, liquidated damages, the Prevention Principle, consequential loss and implied warranties

Introduction

This paper sets out the legal principles that apply to key provisions in EPC Contracts, and focuses on those issues that Contractors raise in an attempt to limit their liability.

Contractors often raise various arguments concerning provisions relating to time and performance which, if accepted, can have serious consequences for an Owner's ability to recover. Contractors often argue for:

- the insertion of an exclusive remedies clause for delay and performance liquidated damages and the removal of any failsafe provisions
- the insertion of a general exclusive remedies clause
- no liability for consequential loss
- the exclusion of all implied warranties
- the deletion of provisions that attempt to obviate the effects of the Prevention Principle.

This position paper sets out the legal issues that Owners need to be aware of in dealing with these issues. Specifically, we explore:

- the operation of liquidated damages clauses and how they can be invalidated
- the impact of exclusive remedies clauses on liquidated damages regimes
- the rationale for, and meaning of, exclusive remedies clauses under EPC Contracts
- the operation of the Prevention Principle
- the operation of consequential loss provisions
- the application of implied warranties.

It should be emphasised that this paper focuses on the legal risks to Owners; it does not focus on commercial imperatives or technical issues.

How liquidated damages regimes can be invalidated

If an exclusive remedies clause is inserted into a contract, the explicit remedies contained in the contract will take on great significance. From a construction law perspective, the presence of liquidated damages will be crucial in providing remedies for delay and underperformance.

However, if a general exclusive remedies provision is inserted, the Owner may have no recourse to common law damages if the liquidated damages regime is invalidated. Contractors attempt to invalidate liquidated damages clauses in a number of ways. The most common methods of circumventing these clauses are:

- by arguing that the liquidated damages clause is a penalty or void for uncertainty
- by arguing that the Owner has caused delay through an act of prevention.

Liquidated damages not a genuine pre-estimate of loss but a penalty

If the sum agreed to be imposed by the parties as liquidated damages is, in law, a penalty, then it will not be enforceable by an Owner. The sum agreed to be imposed as liquidated damages will be regarded as a penalty if it does not represent a genuine pre-estimate of the loss likely to be sustained by the Owner as a result of a delay to completion. The High Court of Australia has recently considered the doctrine of penalties and considered that equity and common law have a role to play in considering their validity. The court provided a wide definition of a penalty, stating:

“In general terms, a stipulation prima facie imposes a penalty on a party (the first party) if, as a matter of substance, it is collateral (or accessory) to a primary stipulation in favour of a second party and this collateral stipulation, upon the failure of the primary stipulation, imposes upon the first party an additional detriment, the penalty, to the benefit of the second party.”¹

The question of whether a clause is a penalty is one of construction to be decided upon the terms and circumstances of each particular contract at the time of formation. If it can be established that the sum is not a genuine pre-estimate of loss because it is too great a figure, the provision will be unenforceable at common law and in equity it will be read down to the extent that it reflects appropriate compensation.² It makes no difference that the contract specifically states that the clause is not a penalty³ or in fact the contract uses the word penalty” (as some still do) provided the sum is in reality a genuine estimate of damage (and so follows general common law damages principles) or is intended as a limitation of damage and not *in terrorem*.⁴ However, in all cases where the act in question is a breach of contract, the law will inquire whether the payment provided for in the contract is a “penalty”, in a modern sense of the word, meaning that it is not in reality a genuine pre-estimate of damage and is excessive or “out of all proportion” with the likely loss flowing from the breach.⁵

In practice, liquidated damages clauses in major infrastructure projects that are financed on a non or limited recourse basis are not likely to be considered excessive or out of proportion, as they are generally estimated below the likely loss that an Owner would suffer. Therefore, the more relevant risk is if they are drafted in a way that is too uncertain to be enforced.

1 *Andrews v Australian and New Zealand Banking Group Ltd* (2012) 247 CLR 205, 216.

2 *Ibid.*

3 *Jobson v Johnson* [1989] 1 WLR 1026; *Andrews v Australian and New Zealand Banking Group Ltd* (2012) 247 CLR 205.

4 *Dunlop Pneumatic Tyre Co Ltd v New Garage & Motor Co Ltd* [1915] AC 79, 86.

5 This point was strongly suggested by the Court of Appeal judgments in *Widnes Foundry v Cellulose Acetate* [1931] 2 KB 393 and finally and satisfactorily concluded by the Supreme Court of Canada in *Elsley v J.G. Collins Insurance Agencies Ltd* [1978] 2 SCR 916.

Time at large

If an Owner prevents the completion of the works in a way not covered by an extension of time clause, then it loses the right to claim liquidated damages. If this occurs, the Contractor cannot complete by the set completion date and it is said that time under the contract has been set “at large”. This means that the Contractor’s obligation is to complete the works within a reasonable time. Time is said to be set at large due to the operation of the Prevention Principle. What is a reasonable time to complete once time has been set at large, is a matter of fact dependent on the circumstances as to how time has become at large, the date on which it was set at large, and the materials to be able to make a calculation.⁶

The potential for the liquidated damages clause to be declared invalid or otherwise inoperative indicates the importance of failsafe clauses and other provisions which preserve an Owner’s rights to claim damages at law.

Removal of failsafe clauses for delay and underperformance

Failsafe provisions in EPC Contracts attempt to preserve the Owner’s rights to obtain damages at law if for some reason the liquidated damages clauses are deemed unenforceable. A typical failsafe provision for delay provides as follows:

If this provision (or any part thereof) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming Delay Liquidated Damages, the Owner is entitled to claim against the Contractor damages at law as set out in the Damages at Law Schedule for the Contractor’s failure to attain Commercial Operation by the Date for Commercial Operation up to the aggregate liability for Delay Liquidated Damages.

Contractors often argue against such clauses and suggest they should be deleted. They often argue for the inclusion of an exclusive remedies provision and the deletion of any failsafe clause, suggesting that liquidated damages should be an Owner’s sole entitlement for the Contractor’s delay or underperformance. As explained below, exclusive remedies clauses may prevent an Owner from claiming damages at common law in the event that the liquidated damages regimes are for some reason found to be unenforceable.

If there is no exclusive remedies clause, then there is no essential need for the inclusion of failsafe clauses. However, if an exclusive remedies clause is inserted – which we advise against below – failsafe clauses must be included to protect the Owner’s ability to recover. If an exclusive remedies clause is present, failsafe clauses provide essential protection if the liquidated damages regimes are for any reason invalidated.

Exclusive remedies generally

Contractors typically attempt to insert a provision stating that the remedies expressly provided for under the EPC Contract are to the exclusion of any remedies at common law. Contractors also typically attempt to delete any reference to recourse to damages at law.

The insertion of an exclusive remedies clause may have far-reaching consequences as it may limit an Owner’s rights to those explicitly articulated in the EPC Contract. This potentially leaves the Owner without remedies for the Contractor’s breaches of the EPC Contract, as we explain below.

⁶ Keith Pickervance, ‘Calculation of a Reasonable Time to Complete when Time is at Large’, [2006] *International Construction Law Review* 167, 168.

Exclusion of common law damages

Commonly, if a liquidated damages clause is found to be unenforceable (because it is a penalty, void or otherwise unenforceable), the Owner, while prevented from claiming liquidated damages, still has the right to claim damages at common law (or in equity it may have the right to enforce the clause to the level that represents appropriate compensation in the circumstances).

Exclusive remedies provisions exclude the ability of an Owner to claim common law damages in the event the liquidated damages regime is declared unenforceable, thereby restricting the Owner's remedies for delay or underperformance to liquidated damages.

If an exclusive remedies clause is inserted, a further question to be determined is to what extent common law damages are unavailable, ie if the clause excludes all common law remedies or only those provisions for which liquidated damages are available.

It is clear that whether the terms of a contract constitute a codification of the rights and liabilities of the parties so as to exclude common law rights to damages depends on the construction of each individual contract: *Turner Corporation Ltd (Receiver & Manager Appointed) v Austotel Pty Ltd*.⁷ It is well established that if a party's common law right to sue for damages for breach of contract is to be removed contractually, it must be done by clear words.⁸

Courts in both England and Australia have held that clear wording may remove the common law right to damages. This view has been followed in a number of cases.⁹ In *Baese Pty Ltd v RA Bracken Building Pty Ltd*¹⁰ (**Baese**), Giles J stated that:

*"...it would require clear words...before it was held that a liquidated damages clause was the entirety of the proprietor's rights, because the proprietor would be exposed to being left with no entitlement at all to damages for delay if by reason of his own contribution thereto he was unable to rely upon the liquidated damages clause."*¹¹

This position has arguably been broadened by Australian courts, so that "clear words" does not necessarily mean "express words." In *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd*¹² Cole J held that a party's rights to common law damages do not need to be excluded by express words; a general intention, surmised from the terms of the contract more generally, can be sufficient:

*If on the proper construction of the contract as a whole, it can be said that a party has surrendered its common law rights to damages, that construction must be given effect to, notwithstanding absence of express words surrendering the common law rights to damages.*¹³

7 (1994) 13 BCL 378.

8 *H W Nevill (Sunblest) v William Press & Sun* (1981) 20 BLR 78, 88; *Baese Pty Ltd v RA Bracken* (1990) 6 BCL 137.

9 See, eg, *Photo Production Ltd v Securicor Transport Ltd* [1980] AC 827 (Lord Diplock); *Hancock v Brazier (Anerley) Limited* (1966) 1 WLR 1317; *Billyack v Leyland Construction Co Ltd* (1968) 1 WLR 471; *H W Nevill (Sunblest) v William Press & Sun* (1981) 20 BLR 78; *Baese Pty Ltd v RA Bracken Building Pty Ltd* (1990) 6 BCL 137.

10 (1990) 6 BCL 137.

11 *Ibid*, 142.

12 (1994) 13 BCL 378.

13 *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd* (1994) 13 BCL 378, [36] (Cole J).

This is an important and controversial statement of principle, as it suggests that if, on the structure of the contract as a whole, it appears that a party has surrendered its rights to common law damages by the insertion of a particularly comprehensive exclusive remedies clause, that party will have no remedies other than those specifically and particularly stated in the Contract. In *Temloc Limited v Errill*¹⁴ it was held that the words “Nil” in a damages annexure was evidence that the parties intended no liability for either liquidated or unliquidated damages.¹⁵ Nourse LJ noted that:

*“I think it clear, both as a matter of construction and as one of common sense, that if...the parties complete the relevant part of the Appendix...then that constitutes an exhaustive agreement as to the damages which are or are not to be payable by the Contractor in the event of his failure to complete the works on time.”*¹⁶

These cases suggest that the inclusion of an exclusive remedies clause, then, is a step that can have extremely significant consequences.

The effect of an exclusion of common law damages

Therefore, while the insertion of an exclusive remedies clause will prevent the Owner from claiming common law damages for delay or underperformance in the event that the liquidated damages are declared invalid, it may have far reaching effects on other clauses of the Contract.

A typical comprehensive exclusive remedies clause is as follows:

The Owner and the Contractor agree that their respective rights, obligations and liabilities as provided for in the Contract shall be exhaustive of the rights, obligations and liabilities of each of them to the other arising out of, under or in connection with the Contract or the Works, whether such rights, obligations and liabilities arise in respect or in consequence of a breach of contract or of statutory duty or a tortious or negligent act or omission which gives rise to a remedy at common law. Accordingly, except as expressly provided for in the Contract, neither party shall be obligated or liable to the other in respect of any damages or losses suffered by the other which arise out of, under or in connection with the Contract or the Works, whether by reason or in consequence of any breach of contract or of statutory duty or tortious or negligent act or omission.

The effect of this clause would considerably affect the Owner’s ability to recover. The final sentence is particularly comprehensive, as it provides that, other than those clauses in the contract for which a remedy is specifically provided for, the Owner would not be able to recover damages from the Contractor for breaches of the EPC Contract or for negligence. It follows that, if there has been a failure by the Contractor to satisfy a contractual obligation, or if the Contractor has been negligent under the contract, then unless the Owner can point to a specific and express remedy under the Contract for such breach or negligence, it would be left without a remedy.

An EPC Contract will typically provide specific remedies in the form of liquidated damages for delay and underperformance of the project. Delay and underperformance are only two issues, however, for which an Owner will require contractual compliance. There will be numerous other Contractor obligations under the EPC Contract with which the Owner will require compliance, and for which a remedy should be available in the event of non-compliance or breach. If a comprehensive exclusive remedies clause is inserted, the Contractor may be able to breach numerous provisions of the EPC Contract, or behave negligently in respect of certain conduct, without consequence.

14 [1987] 39 BLR 30.

15 See also *CS Phillips Pty Ltd and Anor v Baulderstone Hornibrook Pty Ltd* [1994] 30 NSWSC 185 (26 October 1994).

16 [1987] 39 BLR 30, 39.

For example, consider the scenario under an EPC Contract in which the Contractor has brought the project to practical completion/commercial operation and the liquidated damages regime is no longer required. After commercial operation, there remain various opportunities and possibilities for breach. One example is the Contractor's failure to provide spare parts in accordance with the terms of the EPC Contract. The exclusive remedies clause may have the effect of preventing the Owner from claiming common law remedies for breaches of other provisions of the contract in such a situation. Another example is a breach of the Contractor's warranty that the Works will be fit for the purpose reasonably inferable from the contract.

Proposed solutions

One option is for an Owner to accept the Contractor's exclusive remedies clause, but carefully to elaborate those clauses of the contract for which a remedy is required in the event of breach. These express remedies could then be specifically included in the contract and could operate alongside the exclusive remedies clause. However, in our view, such a strategy is risky, because the Owner would be required to identify all potential breaches of the EPC Contract, and also to consider which remedies should be expressly identified to deal with such breaches. In our view, it is not possible to envisage the different ways in which a Contractor may breach its contractual obligations, and the consequences which the Owner may suffer as a result of the breach.

The preferable solution is to argue strongly against the inclusion of an exclusive remedies clause, thereby ensuring maximum latitude to claim for damages at law if the liquidated damages regime is for some reason declared unenforceable.

Failing this approach, the other option is to include a "code of rights" provision in the EPC Contract, providing that, except where express remedies are specifically provided under the contract (for example, provisions providing for liquidated damages), each party will be able to claim common law damages for breaches of the contract.

The operation of the Prevention Principle

Rationale

There are various rationales for the existence of the Prevention Principle. These have been variously suggested as:

- the principle that a party should not be able to recover from damages for what that same party has caused
- an implied term or implied supplemental contract¹⁷
- waiver or estoppels¹⁸
- unjust enrichment.

Others have suggested that there is in fact no coherent overarching rationale for the Prevention Principle or that it may be regarded as a particular manifestation of the obligation to cooperate implied as a matter of law in all contracts (see *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* (1979) 144 CLR 596, 607 (Mason J) and *Spires Earthworks Pty Ltd v Landtec Projects Corporation Pty Ltd [No 2]* [2012] WASCA 54, [46]). In any case, the fundamental considerations are of fairness and reasonableness.¹⁹

¹⁷ *SBS International Pty Ltd v Venuti Nominees Pty Ltd* [2004] SASC 151, [11] (Besanko J).

¹⁸ [1987] 39 BLR 30.

¹⁹ *SMK Cabinets v Hili Modern Electrics* [1984] VR 391, 397 (Brooking J).

Operation

The operation of the Prevention Principle will ensure that an Owner will lose its right to claim liquidated damages for delay if that delay was caused by an act of prevention, where there is no extension of time clause which specifically provides for extensions due to acts of prevention. A claim that the Prevention Principle operates to set time at large usually arises in the following circumstances:

- where a Contractor alleges that the power to extend time has not been exercised, or has been exercised improperly
- where there is no clause under the contract to extend time for the Owner's act of delay, or where that power cannot be exercised in the circumstances.

What acts or omissions of the Owner bring the Prevention Principle into operation? Courts generally have regarded any wrongful act or fault as sufficient to enliven the principle.²⁰ It is not necessary that the act constitutes a breach of contract. The broadest view is that any act of the Owner, regardless of its fault element, is sufficient to engage it. Variations are regarded as acts of prevention for the purposes of the doctrine.²¹

In considering whether an extension of time clause provides for the granting of extensions of time for Owner caused delay, the extension of time clause will be construed *contra proferentem* against the Owner. It is established that general or ambiguous words in an extension of time clause, referring to such matters as "events beyond the control of the Owner," will not entitle the Owner to the benefit of the liquidated damages regime.²² Where the extension of time clause provides specifically for the Owner's breach, waiver or prevention, the liquidated damages regime will be preserved. As stated by *Salmon LJ in Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd*:²³

*"The liquidated damages and extension of time clauses in printed forms of contract must be construed strictly contra proferentem. If the Employer wishes to recover liquidated damages for failure by the Contractors to complete on time in spite of the fact that some of the delay is due to the Employers' own fault or breach of contract, then the extension of time clause should provide, expressly or by necessary inference, for an extension on account of such a fault or breach on the part of the Employer."*²⁴

One of the more contentious aspects of this area of law concerns the interaction of conditions precedent to the granting of an extension of time with the operation of the Prevention Principle. The issue is whether the Prevention Principle is subject to an administrative act (such as the provision of notice by the Contractor) or whether it can operate independently of such procedural requirements of particular contracts.

Case law on this point remains unsettled in England as there has been no comprehensive consideration of the principle since the decision in *Alghussein Establishment v Eton College*²⁵. However, the case law in Australia remains divided. In *Gaymark v Walter Construction* (1999)²⁶ (**Gaymark**), the contract under dispute provided that a notice of delay was to be given within 14 days of the cause of delay arising. The Supreme Court of the Northern Territory reaffirmed an arbitral award that found that, even though the notice requirements were not complied with by the Contractor, because at least some of the delay was caused by the Employer, the right to claim liquidated damages was lost and time was set at large. *Gaymark* suggests that the Prevention Principle overrides conditions precedent. This view has been subjected to strong academic criticism.²⁷ Later cases have suggested that conditions precedent must be satisfied before the Prevention Principle can have

²⁰ Ian D Wallace (ed), *Hudson's Building and Engineering Contracts* (Sweet & Maxwell, 11th ed, 1994) vol 2, [10-040].

²¹ *SMK Cabinets v Hili Modern Electrics* [1984] VR 391, 397 (Brooking J); *SBS International Pty Ltd v Venuti Nominees Pty Ltd* [2004] SASC 151, [12].

²² Wallace, above n 20.

²³ (1970) 1 BLR 111.

²⁴ *Ibid*, 121.

²⁵ [1988] 1 WLR 587.

²⁶ [1999] 16 BCL 449.

²⁷ Ian D Wallace, "Prevention and Liquidated Damages: A Theory Too Far?" (2002) 18 *Building and Construction Law* 82.

application. Indeed, in *Turner Corporation Limited (Receiver and Manager Appointed) v Austotel Pty Ltd*²⁸ Cole J stated that the builder could not claim that the act of prevention which would have entitled it to an extension of the time for Practical Completion resulted in its inability to complete by that time, because:

*"A party to a contract cannot rely upon preventing conduct of the other party where it failed to exercise a contractual right which would have negated the affect [sic] of the preventing conduct."*²⁹

A further question regarding the scope of the Prevention Principle concerns what is actually invalidated by the Owner's act of prevention. If the Owner causes four days of delay to a program, and the Contractor is 100 days late in delivery of the project, can the Owner recover 96 days of liquidated damages, or is the entire liquidated damages regime invalidated? In such a scenario, what is considered to be a reasonable time to complete?

Early authority on this point favoured the view that any act of prevention by the Owner invalidated the entire liquidated damages regime. In *Holme v Guppy*³⁰ the delay in completion was five weeks; the Owner was responsible for four weeks of delay and the Contractor for one week of delay. The court found that the Owner was not entitled to any liquidated damages due to its act of prevention. In *Parle v Leistikow*³¹, the Contractor was responsible for a delay of 21 weeks. The total period of delay was 24 weeks. The Court found that, because there had been an act of prevention by the Owner (albeit only three weeks), the Owner was not entitled to any liquidated damages. In *Hudson's Building and Engineering Contracts*, Wallace notes that:

*"[u]nless there is a sufficiently specific clause, it is not open to the Owner or his A/E [independent engineer] where the contract date has ceased to be applicable, to make out a kind of debtor and creditor account allowing so many days or weeks for delay caused by the Owner and, after crediting that period to the builder, to seek to charge him with damages at the liquidated rate for the remainder."*³²

This view appears to be based on the needs of certainty and predictability, and finds its foundation in the classic case of *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd*.³³ More recent authority suggests that the Owner's delay and the Contractor's delay could be in some circumstances divisible for the purposes of determining and enforcing liquidated damages, but remains circumspect in light of *Peak's* authority. In *Rapid Building Group v Ealing Family Housing*³⁴ Lloyd LJ remarked that:

*"...I was somewhat startled to be told in the course of the argument that if any part of the delay was caused by the Employer, no matter how slight, then the liquidated damages clause in the contract...becomes inoperative."*³⁵

*"I can well understand how that must necessarily be so in a case in which the delay is indivisible and there is a dispute as to the extent of the Employer's responsibility for that delay. But where there are, as it were, two separate and distinct periods of delay with two separate causes, and where the dispute relates only to one of those two causes, then it would seem to me just and convenient that the Employer should be able to claim liquidated damages in relation to the other period."*³⁶

Nevertheless, Lloyd LJ went on to note that *"it was common ground before us that that is not a possible view...in the light of the decision of the Court of Appeal in Peak's case, and therefore I say no more about it."*³⁷

28 *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd* (1994) 13 BCL 378, [11] (Cole J).

29 *Ibid.*

30 (1838) 3 M&W 387.

31 (1883) 4 LR (NSW) 84.

32 Wallace, above n 20, [10.025].

33 (1970) 1 BLR 111.

34 (1984) 29 BLR 5.

35 *Ibid.*, 18.

36 Above n 21, cited in Keith Pickervance, 'Calculation of a Reasonable Time to Complete When Time is at Large,' [2006] *International Construction Law Review* 167, 177.

37 (1984) 29 BLR 5, 19.

In *SMK Cabinets v Hili*,³⁸ Brooking J stated that the Employer's act of prevention served only to prevent the Employer from taking liquidated damages that accrued after the Employer's breach.³⁹ While this view has much to commend it, the classic case of *Peak* remains dominant, and authorities seem to suggest that where an act of prevention goes to part of the delay but not the whole, the entire liquidated damages clause will be invalidated.⁴⁰ This traditional view has recently been reinforced in *SBS International Pty Ltd v Venuti Nominees Pty Ltd*,⁴¹ where Besanko J held that, in a situation where delay to the completion date is caused by the Contractor as well as the Principal, it is not open to a court to apply the liquidated damages clause to the delay specifically caused by the Contractor. Besanko J stated that:

*"In those cases where both Principal and Contractor are responsible for delay, the liquidated damages clause will be held inapplicable unless there is a contractual provision by way of an appropriate extension of time clause which accommodates or deals with the delay caused by the contract of the Principal."*⁴²

To summarise, an Owner will not lose its rights to claim liquidated damages if:

- the delay is due wholly or in part to an act of prevention
- there is a provision in the contract providing for extensions of time due to acts of prevention
- an extension of time has been certified pursuant to the Contract.

It is prudent to include a provision permitting the Owner to make an extension of time at its discretion, even where the Contractor has not requested one. Such a provision makes it possible to avoid the situation where a Contractor is entitled to an extension of time due to any act of prevention, but has not applied for one on the basis that it can rely on the Prevention Principle. We suggest that the Contract should provide that a cause of delay entitling the Contractor to an extension of time includes:

- any act, omission or default by the Owner, the Owner's Representative and their agents, employees and contracting counterparties
- a Variation, except where that Variation is caused by an act, omission or default of the Contractor or its Sub contractors, agents or employees.

The Contract should also include a condition precedent provision with which the Contractor must comply before an extension of time can be granted.

³⁸ [1984] VR 391.

³⁹ *Ibid*, cited in Keith Pickervance, 'Calculation of a Reasonable Time to Complete When Time is at Large,' [2006] *International Construction Law Review* 167, 177.

⁴⁰ Wallace, above n 20.

⁴¹ [2004] SASC 151.

⁴² *Ibid*, [12] (Besanko J).

Can the Prevention Principle be contracted out of?

The question arises whether the Prevention Principle can be explicitly contracted out of, so that a liquidated damages regime can remain on foot despite the Contractor being prevented due to the Owner delaying the works.

As well as providing for extensions of time for acts or omissions of the Owner, our standard EPC Contract attempts to contract out of the Prevention Principle as follows:

- *Any principle of law or equity (including those which might otherwise entitle the Contractor to relief and the Prevention Principle) which might otherwise cause the Date for Commercial Operation to be set at large and liquidated damages unenforceable, will not apply*
- *For the avoidance of doubt, a delay caused by any act or omission of the Owner or any failure by the Owner or the Owner's Representative to comply with this Clause [] will not cause the Date for Commercial Operation to be set at large*
- Nothing in Clause [].2 will prejudice any right of the Contractor to claim an extension of time under this Clause [] or delay costs under [] for that delay.

While we believe that this clause is valid, and that the Prevention Principle can be contracted out of, we must emphasise that this view has not yet received judicial confirmation. There do not appear to be any cases directly on point. However, general principles of law in related areas may provide guidance in this area.

The doctrine of freedom of contract suggests that parties are given considerable latitude in determining the terms of their commercial bargain. In 1993, the Privy Council of the United Kingdom quoted approvingly the view that:

*"...the power to strike down a penalty clause is a blatant interference with freedom of contract and is designed for the sole purpose of providing relief against oppression for the party having to pay the stipulated sum. It has no place where there is no oppression."*⁴³ See to similar effect *Mason and Wilson JJ in AMEV-UDC Finance Ltd v Austin* (1986) 162 CLR 170, 190.

Generally speaking, *"although the principle of freedom of contract rests on the premise that individuals are free to make agreements as they wish, the public interest in freedom of contract can be outweighed by other public policy considerations"* (see *Australian Securities and Investments Commission v Fortescue Metals Group Ltd* [2011] FCAFC 19 at [222]). Providing an agreement does not offend public policy, then it will be enforced in its terms. However, equity may prevent the reliance on contractual provisions where there is demonstrated unconscionable conduct. As yet, there is no judicial consideration of such an approach in relation to reliance upon a clause excluding the Prevention Principle.

This approach has found favour in a recent High Court decision relating to penalties.⁴⁴ Similar sentiment may apply to permit parties to contract out of the Prevention Principle. Exceptions from the doctrine of freedom of contract normally require an element of unconscionability or oppression. In *Ringrow Pty Ltd v BP Australia Pty Ltd*, the High Court of Australia noted that, *"[e]xceptions from that freedom of contract require good reason to attract judicial intervention to set aside the bargains upon which parties of full capacity have agreed."*⁴⁵ This authority suggests, by analogy, that the Prevention Principle can be excluded in contracts where the parties have expressly agreed upon their risk allocation in terms of time and money.

⁴³ *Philips Hong Kong Ltd v The Attorney General of Hong Kong* (1993) 61 BLR 49, 58.

⁴⁴ *Ringrow Pty Ltd v BP Australia Pty Ltd* (2005) 222 ALR 306, 314 (citing *AMEV-UDC Finance Ltd v Austin* (1986) 162 CLR 170 at 190).

⁴⁵ (2005) 222 ALR 306, 314.

However, recent developments in the law of penalties suggest a greater willingness of courts to examine the purpose with which certain contractual clauses purport to operate. For example *Andrews v ANZ*⁴⁶ states that a clause may be characterised as penal if it operates as a security to ensure that the primary obligation is performed. This differs from the statement in *Ringrow Pty Ltd v BP Australia Pty Ltd* where the court focused on the element of oppression or unconscionability.

Because the Prevention Principle is based on general principles of fairness, it could be argued that a provision in a contract allowing an Owner to recover liquidated damages as a result of its own delay may be viewed by a court as unconscionable. Indeed, a court may be inclined to ignore a provision which attempts to contract out of the Prevention Principle, and may instead regard such an attempt as a way of bypassing equitable principles on which the principle is built.

Similarly, it may be argued a provision which attempts to exclude the operation of the Prevention Principle may sound in a claim for restitution through the principle of unjust enrichment. An attempt to contract out of the Prevention Principle may lead a court to conclude that the Owner, by causing a delay that does not invalidate the liquidated damages regime, is thereby unjustly enriched. However, it is submitted that this view would not be considered persuasive.

First, it is submitted that the Prevention Principle is not a fundamental equitable principle, equivalent to established equitable principles. The more sound view is that the Prevention Principle could be contracted out of, subject to the absence of oppression or disadvantage – in which case, the doctrine of unconscionability may apply to impose an equitable remedy.

Secondly, a restitutionary claim would be unlikely to succeed based on the exclusion of the Prevention Principle. A claim that the exclusion of a clause, mutually agreed to by the parties (in most cases we presume a valid contract exists between the Owner and the Contractor in relation to the provision of the benefits), could be sufficient to unjustly enrich one party, to the detriment of another, would be highly unusual and an extension of restitutionary principle beyond currently elaborated boundaries.

Consequential loss

Introduction

Contractors often attempt to limit their liability by attempting to exclude all “consequential loss” from liability, or by explicitly excluding certain heads of loss under the construction contract.

It is common practice in standard form EPC Contracts to refer to both “indirect” and “consequential” loss or damage in exclusion of liability clauses.

Under Australian law, the view had been that there was no legal difference between the words “indirect” and “consequential” in exclusion of liability clauses, until relatively recently. However, case law from Victoria that is likely to be applied in other Australian jurisdictions has now held that consequential loss has a broader meaning than previously assumed. The following explains this change and how parties should interpret these words in commercial negotiations.

Under English law, the distinction between indirect and consequential loss, and direct loss, is less certain.

⁴⁶ *Andrews v Australian and New Zealand Banking Group Ltd* (2012) 247 CLR 205.

The scope of indirect or consequential loss or damage

Position under English law

The well-known English case of *Hadley v Baxendale*⁴³ provides that where a party to a contract is in breach, the damages to which the other party is entitled falls under two limbs, namely, damages such as may fairly and reasonably be considered:

- to arise naturally, ie according to the usual course of things, from such a breach of contract (often referred to as direct loss or damage) (**first limb**)
- to be in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of contract (often referred to as indirect loss or damage) (**second limb**).

Under English law, the term “consequential” is confined to the second limb of the rule in *Hadley v Baxendale*. On this view, the term “indirect or consequential loss or damage” would not include any loss that arises naturally upon the breach, but would include loss or damage that was in the contemplation of both parties, at the time the contract was made, as the probable result of its breach.

Under English law, in determining whether a loss is direct or indirect, it has been held that the enquiry is whether the losses arise naturally and in the ordinary course of things.⁴⁴

English case law has considered which types of loss are typically seen as direct and which are considered indirect or consequential. It is important to emphasise that the classification of loss is often dependent on the specific factual scenarios and contractual provisions at issue, and in practice it is often difficult to determine whether a loss falls within the first or second limb of *Hadley v Baxendale*. However, the following types of losses have frequently been considered direct loss by courts:

- loss of profits
- loss of revenue
- loss of opportunity
- increased expenses or wasted expenditure.

Position under Australian law

The Australian courts have previously supported the above English view of indirect or consequential loss or damage as loss or damage that was in the contemplation of both parties at the time the contract was made, as the probable result of the breach.

However, in the case of *Environmental Systems Pty Ltd v Peerless Holdings Pty Ltd*⁴⁵ (Peerless), the Victorian Court of Appeal moved away from the “second limb test” and decided that the term “consequential loss” should be given its ordinary and natural meaning as would be conceded by ordinary reasonable business persons. In applying this principle, the court drew a distinction between:

- loss that every plaintiff in a like situation will suffer (normal loss)
- anything beyond the normal measure, such as profits lost or expenses incurred through breach (consequential loss).

Peerless was highly influential in the recent decision of *Alstom Ltd v Yokogawa Australia Pty Ltd (No 7)*⁴⁶ (**Alstom**), where the Supreme Court of South Australia considered a clause excluding Yokogawa’s liability as sub contractor for “*any indirect, economic or consequential loss whatsoever*”.

The terms of the contract required the sub contractor to pay damages if it did not complete the works on time or if the works did not meet the performance tests. Alstom made claims against the sub contractor and sought compensation in relation to breaches of these obligations, asserting that the breaches had resulted in losses that flowed naturally from each breach, and therefore were within the first limb of *Hadley v Baxendale*. The sub contractor rejected this assertion and relied upon the exclusion clause, submitting that it should be read more generally to include losses that occurred as a consequence of breach of contract.

The Court considered these claims, and held that the losses claimed by Alstom fell within the first limb, but the breadth of the exclusion clause meant that the sub contractor was not liable for damages occurring as a consequence of any breaches of contract:

“The expression “indirect ... or consequential loss” appears, in this case, as part of a freestanding and powerfully expressed exclusion clause. It is not affected by the immediate presence of any concession as to liability which it might qualify, although it must be read against the background of the qualified exposure of [the sub contractor] to the exclusive remedies of Liquidated Damages and reimbursement of Performance Guarantee Payments. The Article in question was intended to operate in respect of potential liability for loss incurred by Alstom, which was caused by a breach of contract by [the sub contractor] in circumstances other than those giving rise to the payment of Liquidated Damages and reimbursement of Performance Guarantee Payments. The words must be given their ordinary and natural meaning. In those circumstances any loss consequential or following, immediate or eventual, flowing from a breach of contract by [the sub contractor] is excluded from recovery by Alstom.”⁴⁷

In so doing, the Court noted *Peerless* was the preferred precedent over the English cases.

In 2013, the West Australian Supreme Court decision of *Regional Power Corporation v Pacific Hydro Group Two Pty Ltd (No 2)*⁴⁸ (**Regional Power**) rejected both the English approach to the construction of the term “consequential loss” as falling under the second limb of *Hadley v Baxendale*, and the view adopted by *Peerless*. *Regional Power* concerned a PPA entered into between Regional Power Corporation (**SECWA**) and Pacific Hydro Pty Ltd for the supply of electricity. The power station suffered an outage resulting in flooding which led to the power station being inoperative for two months. Resultantly, SECWA claimed damages for breach of the PPA consisting of costs relating to the hiring of replacement diesel generators, cranes and fuel required to run the extra generators; and wages, travel, accommodation and meal expenses of the additional Operators required during that period.

Pacific Hydro argued that the damages claimed by SECWA were indirect or consequential losses and accordingly were excluded from recovery by the following clause 26.1:

Neither the Project Entity nor SECWA shall be liable to the other party in contract, tort, warranty, strict liability, or any other legal theory for any indirect, consequential, incidental, punitive or exemplary damages or loss of profits.

The Court rejected both the *Hadley v Baxendale* and *Peerless* positions in favour of the well settled construction approach by the High Court in *Darlington Futures*, stating:

“To reject the rigid construction approach towards the term “consequential loss” predicated upon a conceptual inappropriateness of invoking the Hadley v Baxendale dichotomy as to remoteness of loss, only then to replace that approach by a rigid touchstone of the “normal measure of damages” and which always automatically eliminates profits lost and expenses incurred, would pose equivalent conceptual difficulties. Accordingly, I doubt whether the [93] observations in Environmental Systems were intended to carry any general applicability towards establishing a rigid new construction principle for limitation clauses going much beyond the presenting circumstances of that case.

⁴⁷ (1854) 9 Ex 341.

⁴⁸ *Peerless Holdings Pty Ltd v Environmental Systems Pty Ltd* [2006] VSC 194. See also *Hotel Services Ltd v Hilton International Hotels (UK) Ltd* [2000] 1 All ER (Comm) 750.

The natural and ordinary meaning of the words of cl 26.1, begins with these words themselves, assessed in their place within the context of the PPA as a whole. That, on my assessment, is the correct approach to a limitation or exclusion clause required by Darlington Futures Ltd v Delco Australia Pty Ltd, as recently applied by the Western Australia Court of Appeal in Electricity Generation Corporation t/as Verve Energy v Woodside Energy Ltd [38], [42] (McLure P), [138], [140] (Murphy JA)...

Construing 26.1 within the PPA as a whole, the court should not be artificially fettered towards assessing the character of an economic loss by rather vague criteria of whether or not the loss arose "in the ordinary course of things". Nor should the court be oriented from the start towards trying to determine if a claimed loss falls under the equally porous concept of "normal measure of damage."⁵⁰

Effect on drafting

In summary, there are now three different approaches to the meaning of the words "indirect or consequential" when used in an exclusion clause (or limitation clause, in the instance of Regional Power):

- the English approach, where the words are construed as a reference to damages resulting from special circumstances under which the contract was made communicated by one party to the other
- the *Peerless/Alstom* approach, where the word "consequential" was said to refer to everything beyond the normal measure of damages, such as profits lost or expenses incurred through breach
- the *Regional Power* approach, where the words are said to exclude losses that are in some way less direct and more removed when considered in the context of the transaction at hand.

Contracts governed by Australian law

Darlington Futures holds that limitation (or exclusion) clauses excluding certain categories of loss and damage must be interpreted according to their natural and ordinary meaning, read in the light of the contract as a whole, thereby giving due weight to the context in which the clause appears including the nature and object of the contract. This principle of interpretation must be applied by courts in Australia.

The problem however is whilst the *Darlington Futures* decision confirms the contextual, commercial approach to the interpretation of commercial contracts in Australia, there is potential for significant differences in what would, in a given situation, constitute the ordinary and natural meaning of "consequential loss", given the clear requirement that losses claimed be interpreted in context of the contract in question. This is highlighted by the recent conflicting principles as to the scope of "consequential loss" taken by the states below (noting the question is yet to be considered in Queensland, Tasmania, the Australian Capital Territory or Northern Territory):

- **Victoria, New South Wales and South Australia:** "consequential loss" is what an ordinary reasonable business person would consider consequential loss ie everything beyond the normal measure of loss (loss that every plaintiff in a like situation will suffer). Lost profits and expenses incurred as a result of breach were given as two examples of consequential losses: *Peerless*; *Alstom*
- **Western Australia:** "consequential loss" is given its natural and ordinary meaning, read in light of the contract as a whole (ie rejecting the above position and reinforcing the High Court position): *Regional Power*.

As a result of these decisions, the term "indirect or consequential" should no longer be interpreted as confined to the second limb of the rule in *Hadley v Baxendale*. Instead, any exclusion of indirect or consequential loss should be understood as also excluding some categories of loss that would otherwise be considered to fall under

⁴⁹ *Peerless Holdings Pty Ltd v Environmental Systems Pty Ltd* [2006] VSC 194, [96-97; 116]; *Millars Machine Co Ltd v David Way & Son* (1934) 40 Com Cas 204; *Croudace Construction Ltd v Cawoods Concrete Products* [1978] 8 BLR 20.

⁵⁰ *GEC Alstom Australia v City of Sunshine* [1996] 170 FC 1 (20 February 1996); *Aquatec-Maxcon Pty Ltd v Barwon Region Water Authority (No 2)* [2006] VSC 117, [103].

the first limb of *Hadley v Baxendale*; to be determined by construing the clause according to its natural and ordinary meaning, read in the light of the contract as a whole.

Contracts governed by English law

In contracts governed by English law, the following consequential loss clause should be included:

Without prejudice to the Employer's right to recover liquidated damages or damages at law for delay or underperformance under clauses 24 and 25 or where otherwise stated in the contract, neither party is liable to the other under the contract, law of tort, including negligence, statute, inequity or otherwise for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the contract or the subject matter of the contract.

The wording of this clause permits the Employer a certain degree of latitude. In cases where the Contractor has caused loss, the Employer can argue that because of the use of the word “including”, the expressly listed types of loss are in fact forms of direct loss that are thereby recoverable.

This approach has authority to commend it. In *Pegler Ltd v Wang (UK) Ltd*,⁵¹ the relevant exclusion clause provided that:

*“Wang shall not in any event be liable for any indirect, special or consequential loss, howsoever arising (including but not limited to loss of anticipated profits or of data) in connection with or arising out of the supply, functioning or use of the hardware, the software or the services...”*⁵³

Despite the use of the word “including”, the court held that the clause only excluded losses falling under the second limb of *Hadley v Baxendale*. It was noted by Judge Bowsher QC that:

*“The reference by the words in brackets to loss of anticipated profits does not mean that the exclusion effected by this clause includes all loss of profits: it is plain from the context that only loss of profits which are of the character of indirect, special or consequential loss are referred to.”*⁵⁴

It is certainly arguable that a court would adopt the same approach when considering our proposed clause, so that, for example, losses of profits that could be classified as direct could be recoverable by the Employer.

Courts have interpreted similar consequential loss clauses in ways that emphasise the difference between those losses commonly thought to be direct and other forms of indirect loss. In *BHP Petroleum Ltd v British Steel PLC*,^{55,56} Rix J considered the following consequential loss clause:

“Neither the supplier nor the purchaser shall bear any liability to the other...for loss of production, loss of profits, loss of business or any other indirect losses or consequential damages arising during and/or as a result of the performance or non-performance of this contract.”

Rix J interpreted this clause quite radically by construing the clause to read “for loss of production, loss of profits, loss of business or indirect or consequential damages of any other kind”, as his Honour found that the express heads of loss could not be construed as forms of indirect or consequential loss. However, Rix J’s interpretation of this clause is somewhat unusual, albeit in favour of the Employer. We favour the use of our

⁵¹ [1999] 1 Lloyd’s Rep 387.

⁵² (1986) 161 CLR 500.

⁵³ [2013] WASC 356.

⁵⁴ (2008) 19 VR 358.

⁵⁵ [2013] WASC 356, [96-97, 116].

⁵⁶ *MWH Australia Pty Ltd v Wynton Stone Australia Pty Ltd (in liq)* (2010) 31 VR 575, [87]-[88]; *Glennmont Investments Pty Ltd v O’Loughlin & Ors* (2000) 79 SASR 185, [247]-[273].

clause, which is less radical and, given the authority in *Pegler v Wang*, would permit the Employer to argue persuasively for recovery of those losses that could be classified as direct.

Given the unclear position under Australian law, parties must also ensure that an exclusion of liability clause is carefully drafted. Importantly, the clause should set out clearly and exhaustively expressed in detail those losses which are intended to be categorised as consequential. Where presented with a clause excluding liability for consequential loss, Owners must expressly state the categories of loss for which the Contractor will be liable. This essentially means that Owners will need to include a definition of Direct Loss which would identify losses that are within the contemplation of the parties, eg in a project financing of a power or process plant project this should include loss of revenue under a corresponding off take agreement. Clearly this will be difficult to negotiate, but this should be the starting position.

Exclusion of implied warranties

Contractors often propose to delete reference to warranties implied by law. A general exclusion may be expressed as follows:

The parties agree that the warranties in this clause and any other warranties expressed elsewhere in the Contract are the limit of the Contractor's warranties and are to the exclusion of any implied warranties at law.

Despite such a clause, certain warranties cannot be excluded by contractual agreement. For example, in Australia it is impossible to contract out of certain provisions of the Australian Consumer Law. Those provisions that are most applicable to EPC projects, such as section 18 on misleading or deceptive conduct, cannot be validly excluded. Further, a 'fitness for purpose' warranty will be implied despite a Contractor's desire to exclude it.

Nevertheless, we would agree to the inclusion of such a clause excluding implied warranties only if the list of express warranties is comprehensive. These warranties will usually be project specific, but Owners should take great care to ensure that their ability to recover is protected.

3 Position paper on performance liquidated damages – Power projects

Introduction

The interaction between the performance and completion conditions in an Engineering, Procurement and Construction (**EPC**) contract and the provisions for Performance Liquidated Damages (**PLDs**) payable under it will vary depending on a number of circumstances, including the size, nature and complexity of the project.

This paper outlines two suites of clauses that may be included in an EPC Contract to accommodate these situations. They are drafted for power projects, but may be relevant to other sectors, such as oil and gas and for process plant projects. Solar and wind projects will require a different regime with more of a focus on post commercial operation testing, ie a production guarantee mechanism.

Your project requirements

Overview

This section addresses the benefits and utility of two different PLDs regimes, before discussing some of the project characteristics that might render one regime more or less suitable to your project.

Features of the simple regime

The simple regime uses a two-stage completion process whereby the Contractor does not have the ability to access the facility after the Owner assumes care, custody and control for the purposes of improving performance. Sample clauses illustrating this approach are contained in Appendix 1 (Simple regime clauses).

This regime is appropriate where:

- the planned operation of the facility is such that it is not feasible for the Owner to allow the Contractor any significant period of time beyond the date for commercial operation in which to make modifications and retest the facility
- provided the minimum performance guarantees are met, the Owner allows the Contractor to choose to retain care, custody and control so that it can improve the results of the guarantee tests whilst paying Delay Liquidated Damages (**DLDs**).

Features of the detailed regime

The detailed regime uses a three-stage completion process, incorporating a period of time after the Owner assumes control of the facility in which the Contractor may, with the Owner's approval, attempt to improve the performance of the facility whilst paying DLDs.

This regime is appropriate where:

- the Owner prefers to take possession of the facility and begin generating electricity as soon as commercial operation is achieved (effectively, in certain circumstances, as soon as the minimum performance guarantees are met)
- it is viable, even after the Owner has assumed the care, custody and control of the facility, for the Owner to allow the Contractor access to attempt to improve performance whilst paying DLDs.

Features of your project

The following questions may help decide which regime is more appropriate.

Are you building a baseload facility or a peaking facility?

Both regimes have been drafted to apply to a baseload facility, but each can easily be tailored for a peaking facility.

However, given that a peaking facility only operates during periods of high demand, it may be possible for the Owner to grant the Contractor access to the facility (after the Owner takes over the facility) without suffering undue inconvenience or expense (through lost operation time).

This may make the detailed regime more suitable to a peaking facility, especially if DLDs will run during any period that the Contractor takes the facility out of service (even if not required to generate electricity during that period).

Is there an inflexible deadline for you to begin operating the facility?

If there is an inflexible deadline by which you must begin operating the facility (such as a contractual obligation to begin selling electricity)¹ the detailed regime may be the more appropriate option.

Under the detailed regime, the Owner is better placed to take over the facility on or before the date for commercial operation (provided that the minimum performance guarantees are met), and later allow, at the Owner's discretion and convenience, the Contractor to attempt to improve the performance of the facility (during periods of low demand). The Contractor has an incentive during these periods to bring the performance of the facility to the highest possible level in order to minimise its PLDs liability. Accordingly, the Owner achieves the highest standard of plant performance without undue disruption to its operation of the facility.

Is the performance of the facility your highest priority?

If there is some flexibility in the date by which you must begin operating the facility, and the first priority is to ensure that the facility achieves the highest possible standard of performance, the simple regime may be more suitable. This regime requires commercial operation (and, in this regime, the point at which the Contractor is no longer permitted to continue work on the project) to be deferred as long as is required to meet the performance guarantees (limited only by the Contractor reaching the aggregate limit for DLDs). Under this arrangement, the Owner does not take control of the facility until the performance guarantees are met or DLDs cap out. This means the facility will be at the maximum possible level of performance by the time the Owner begins operating.

Simple regime

This section will analyse in detail the simple regime. As discussed above, it employs a two-stage completion process and does not permit the Contractor any opportunity to improve the facility's performance after the Owner assumes care, custody and control. Refer to Appendix 1 (Simple regime clauses) for the sample clauses illustrating the simple regime.

Preliminary steps

The simple regime requires several steps to be completed prior to commercial operation: mechanical completion, precommissioning, and commissioning.²

¹ The performance regime for a project may also be influenced by the terms of any third party offtake agreements, particularly back-to-back arrangements for liquidated damages and other performance guarantees.

² Note that there will be different commissioning and testing requirements depending on the characteristics of the facility in question, including, for a gas-fired plant, whether it is single or combined cycle, and otherwise whether there are various units, staged completion or synchronisation issues.

Mechanical completion

Mechanical completion is the stage at which the facility has been completed mechanically and structurally, within the requirements of the contract, such that the facility is able to be started. The Contractor must notify the Owner's representative when it is satisfied that the facility has reached mechanical completion. The Owner's representative must then either:

- issue a certificate of mechanical completion
- notify the Contractor of any deficiencies in the facility preventing the issue of a certificate of mechanical completion.

The Contractor must correct any defects and reapply for a certificate of mechanical completion. This procedure is repeated until the certificate of mechanical completion is issued.

Precommissioning and commissioning

Commissioning is the stage at which the facility is operated by the Contractor in a limited way for the purpose of preparing the facility for operation and for the performance tests necessary to establish commercial operation.

Prior to commissioning, the Contractor must comply with certain procedures set by the Owner (as specified in the project documentation). After these precommissioning procedures are completed, the Contractor may begin commissioning.

Commercial operation

The simple regime then sets out the steps necessary for the facility to be placed into commercial operation. Broadly, commercial operation is the point at which the facility can be operated reliably, safely and legally under the conditions it is normally expected to operate within and:

- the environmental guarantees (that is, emissions and noise) have been met
- the performance guarantees have been met³ or PLDs paid for any shortfall in meeting such guarantees.

It is permissible for some minor items to remain outstanding at the point of commercial operation, provided that the Contractor undertakes a programme for their proposed completion and they do not impact on the safe and efficient performance of the facility.

The steps required for achieving commercial operation are as follows.

Performance tests

After commissioning the facility, and when the Contractor is satisfied that all requirements for commercial operation have been met, it must notify the Owner's representative that the facility has achieved commercial operation.

If, during the performance tests, the performance guarantees are not met, the Contractor must make such changes, modifications and/or additions to the facility as are necessary to meet the performance guarantees. On completion of these modifications, the Contractor must notify the Owner and continue to repeat the tests until the performance guarantees are met.

This process will ordinarily continue until DLDs cap out. However, at any time between the date for commercial operation and the date of DLDs capping out, either the Contractor or the Owner may elect to stop further work on the facility. Where such an election is made, the Contractor pays PLDs in consideration of its failure to satisfy the performance guarantees.

³ For example, both heat rate and output.

Certificate of commercial operation

On successful completion of the performance tests, the Contractor must notify the Owner's representative that, in the Contractor's opinion, the facility has reached commercial operation.

The Owner's representative must then either:

- issue a certificate of commercial operation
- notify the Contractor of any defects preventing the facility from reaching commercial operation.

The Contractor must remedy any defects and repeat the performance tests until the Owner's representative issues a certificate of commercial operation.

The Contractor hands over care, custody and control of the facility when the Owner issues a certificate of commercial operation.

Final completion

The last stage in the simple regime is final completion, which is the point when:

- commercial operation has been achieved
- all defects and deficiencies have been remedied by the Contractor
- the defects liability period has expired.

The process for achieving final completion is as follows.

Notification

The Contractor must notify the Owner's representative that the facility has reached the stage of final completion.

Certificate of final completion

The Owner's representative must then either:

- issue a certificate of final completion
- notify the Contractor of any outstanding defects that must be remedied before final completion can be achieved.

The Contractor must remedy any defects and repeat the notification procedure until the Owner issues a certificate of final completion.

PLDS⁴

Assuming that neither party exercises their right to terminate, PLDs are payable by the Contractor upon the earlier of:

- either party electing to stop further modifications by the Contractor, provided that the date for commercial operation has passed
- DLDs capping out.

⁴ Depending on the nature of the project and other commercial considerations, PLDs may not always be suitable compensation for a failure to achieve the minimum performance guarantees. Other options available to the Owner can include a right to reject the facility and buy-down (at a price determined by a pre-agreed valuation formula) or the Owner may wish to terminate the contract and engage others to complete the facility at the Contractor's cost.

For the purposes of assessing PLDs, commercial operation will be deemed at the point at which DLDs cap out.

(Note that this discussion does not take into account any PLDs that may arise because of a failure to meet the availability guarantee).

PLDs may be payable in the following four scenarios.

Opt-out election; minimum performance guarantees not met; performance guarantees not met

This scenario will arise if, at the date for commercial operation, the minimum performance guarantees have not been met. The Contractor is obliged to continue retesting until DLDs cap out, unless, as in this scenario, either the Contractor or the Owner exercises its rights to halt further work on the facility and have the Contractor pay PLDs. At the point of that election, the minimum performance guarantees will remain unsatisfied, meaning that the performance guarantees have also not been satisfied.

Liability to pay PLDs will arise for the Contractor's failure to meet the minimum performance guarantees and to meet the performance guarantees.⁵

Opt-out election; minimum performance guarantees met; performance guarantees not met

This situation will arise as in the paragraph above, except that at the date for commercial operation the minimum performance guarantees may or may not have been met, and, in any event, at the point of the Contractor or the Owner electing not to continue modification, the Contractor will have achieved the minimum performance guarantees.

Accordingly, the Contractor's liability to pay PLDs will arise only in respect of the failure to meet the performance guarantees.

DLDs cap out; minimum performance guarantees not met; performance guarantees not met

This scenario will arise where the Contractor has failed to meet the minimum performance guarantees during the performance tests and continued modification and retesting by the Contractor fails to improve the facility for it to meet the minimum performance guarantees before DLDs cap out.

Liability to pay PLDs will arise for the Contractor's failure to meet the minimum performance guarantees and to meet the performance guarantees.

DLDs cap out; minimum performance guarantees met; performance guarantees not met

This scenario will arise where the performance tests demonstrate that the minimum performance guarantees have been met, but the performance guarantees have not. The Contractor is accordingly obliged to continue modifications and retesting. PLDs will become payable if, at the point DLDs cap out, the Contractor has failed to improve performance to meet the performance guarantees.

⁵ Note that there may be differing rates of PLDs. PLDs for a failure to meet the Minimum Performance Guarantees may be higher than those payable for a failure to achieve the Performance Guarantees.

Detailed regime

This section will discuss the operation and function of the detailed regime. As stated earlier, the detailed regime establishes a three-stage completion process, incorporating a period of time in which the Contractor may, with the Owner's approval, attempt to improve the performance of the facility. This period of time occurs after the Owner certifies commercial operation and takes control of the facility.

Sample clauses illustrating the detailed regime are included in Appendix 2 (Detailed regime clauses).

Preliminary steps

Under the detailed regime, several steps must be completed to achieve commercial operation.

Mechanical completion, precommissioning and commissioning

Under the detailed regime, the concepts of mechanical completion, precommissioning and commissioning are identical to those under the simple regime (see above).

Commercial operation

After mechanical completion, precommissioning and commissioning, the detailed regime then specifies certain steps that are required for the facility to be placed into commercial operation. Similar to the notion of commercial operation in the simple regime, commercial operation is the point at which the facility can be operated reliably, safely and legally under the conditions it is normally expected to operate within and:

- the environmental guarantees have been met
- the minimum performance guarantees have been satisfied
- One of:
 - the performance guarantees have been met
 - the Contractor has paid PLDs in consideration of its failure to meet the performance guarantees
 - the Contractor has elected to utilise the subsequent testing period in an attempt to meet the performance guarantees post-commercial operation and has given security for the PLDs that would otherwise be payable.

It is permissible for some minor items to remain outstanding at the point of commercial operation, provided that the Contractor provides a programme for their proposed completion.

After the preliminary steps are completed, the procedures that must be followed to achieve commercial operation are as follows:

Performance tests

Once the Contractor is satisfied that all requirements for commercial operation have been met, the Contractor must notify the Owner's representative. The performance tests must then take place.

If, after the performance tests are completed, the minimum performance guarantees have not been met, the Contractor must, at its own expense, make such changes, modifications or additions as may be required to meet the minimum performance guarantees. When the modifications are completed, the Contractor must notify the Owner and continue to repeat the overall performance test until the minimum performance guarantees are met.

Otherwise, if, after the performance tests are completed, the:

- performance guarantees have been met
- minimum performance guarantees have been met and either:
 - the Contractor elects to pay PLDs in lieu of meeting the performance guarantees
 - if DLDs have not capped out, the Contractor elects to give security and exercise its rights to utilise the subsequent testing period, the Contractor must notify the Owner’s representative that the facility has reached commercial operation.

Certificate of commercial operation

The Owner must either:

- issue a certificate of commercial operation (effectively certifying that the minimum performance guarantees have been met)
- notify the Contractor of any defects or deficiencies that prevent the facility from reaching commercial operation.

The Contractor must remedy any defects and again notify the Owner that the facility is ready for commercial operation. This process must be repeated until the Owner issues a certificate of commercial operation.

When the Owner issues the certificate of commercial operation, care, custody and control of the facility is handed to the Owner. Note that the Owner has the discretion to issue a certificate of commercial operation at any time (notwithstanding that the requirements for issuing a certificate of commercial operation have not been met).

At this point, if the minimum performance guarantees have been met, but the performance guarantees have not, and the Contractor has elected to pay PLDs rather than attempt to improve the facility’s performance, the PLDs must be paid.

Alternately, if the minimum performance guarantees have been met, but the performance guarantees have not, and the Contractor has provided the Owner with security for the PLDs (in the form of payment or a bank guarantee), the subsequent testing period commences.

Subsequent testing period⁶

The subsequent testing period is a 60-day period after commercial operation in which, if the performance guarantees have not been met and the Contractor elects to utilise the subsequent testing period, the Contractor may request access to the facility to perform modifications and otherwise seek to improve performance (despite the fact that care, custody and control of the facility has passed to the Owner).

During the subsequent testing period, the Contractor may at any time:

- request the facility to be taken out of service
- at its own expense, make changes, modification or additions to the facility in an attempt to meet the performance guarantees
- notify the Owner upon completion of any changes or modifications
- continue to repeat the overall performance test.

⁶ During this period, the Contractor is responsible for the cost of fuel, water and all other consumables necessary for the additional testing.

The Owner has an absolute discretion to refuse or reschedule the Contractor's request to take the facility out of service. During periods where the facility is taken out of service, the Contractor assumes sole and absolute responsibility for the care, custody and control of the facility and bears the risk of loss or damage to it.

Final commercial operation

Where the Contractor has failed to meet the performance guarantees at the point of commercial operation and elects to utilise the subsequent testing period, a further stage of completion is required (Final Commercial Operation).

Final Commercial Operation is reached on the earliest of:

- the date DLDs cap out
- the expiration of the subsequent testing period
- the date on which the Owner issues the certificate of final completion.

There are two stages to the achievement of Final Commercial Operation.

Notification

The Contractor must notify the Owner's representative that it believes the facility has reached Final Commercial Operation.

Certification of final commercial operation

The Owner's representative must either:

- issue a certificate of Final Commercial Operation
- notify the Contractor of any defects preventing the facility from reaching Final Commercial Operation (effectively, any defect causing the facility to no longer satisfy the minimum performance guarantees or another compulsory condition).

The Contractor must remedy any defects and again notify the Owner's representative that the facility has reached Final Commercial Operation. This procedure must be repeated until the Owner's representative issues a certificate of Final Commercial Operation.

Final completion

The final completion procedure is identical under both the simple and detailed regimes (see above).

PLDs

PLDs become payable under the detailed regime at the point of:

- if the minimum performance guarantees are not met (and thus commercial operation is not achieved) before DLDs cap out commercial operation
- where the subsequent testing period is utilised, Final Commercial Operation.

(Note that this discussion does not take into account any PLDs that may arise because of a failure to meet the availability guarantee.)

The following sections set out the PLDs that will be payable in the three possible scenarios.

DLDs cap out; minimum performance guarantees not met; performance guarantees not met

This scenario will arise either where the Contractor:

- does not reach the point of carrying out performance tests on the facility before DLDs cap out and overall performance tests at that point reveal that the minimum performance guarantees have not been met

- has failed to meet the minimum performance guarantees at the point of the performance tests and continued modification and retesting fails to improve the facility for it to meet the minimum performance guarantees before DLDs cap out.

In this case, liability to pay PLDs will arise in respect of the failure both to meet the minimum performance guarantees and to meet the performance guarantees.

Commercial operation; minimum performance guarantees met; performance guarantees not met

This scenario will arise only where the performance tests demonstrate that the minimum performance guarantees have been met, but the performance guarantees have not been met and the Contractor elects to immediately pay PLDs in consideration of its failure to meet the performance guarantees. PLDs will become payable in this scenario as soon as the Contractor makes such an election.

Final commercial operation; minimum performance guarantees met; performance guarantees not met

This scenario will arise where the performance tests demonstrate that the minimum performance guarantees have been met, but the performance guarantees have not been met and the Contractor applies for commercial operation and elects to utilise the subsequent testing period.

In this scenario, the Contractor must secure its potential PLDs liability (as at commercial operation) by either:

- paying the PLDs that would be payable at commercial operation (for the failure to meet the performance guarantees)
- providing a bank guarantee to the Owner for the same amount.

At the point of Final Commercial Operation, PLDs will crystallise and:

- if the Contractor has met the performance guarantees, the money paid or security will be refunded or released, less an offset for the period of reduced performance between commercial operation and Final Commercial Operation
- if the Contractor has improved the performance of the facility, but has not met the performance guarantees, a portion of the money paid or security will be refunded or released, proportionate with the increase in performance, less an offset for the period of reduced performance between commercial operation and Final Commercial Operation
- if the performance of the facility is the same as or worse than it was at commercial operation, the Owner will retain the PLDs or cash the guarantee and the Contractor will be liable to pay to the Owner an amount equal to the difference between the PLDs now payable for the deficiency in performance and the money or guarantee already given by the Contractor.

Appendix 1 Simple regime clauses

Precommissioning and commissioning

Mechanical completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of Mechanical Completion the Contractor must give a notice to the Owner's representative.
- (b) The Owner's representative must, promptly, and no later than five business days after receipt of the Contractor's notice under clause 1.1(a), either issue a Certificate of Mechanical Completion stating that the facility has reached Mechanical Completion or notify the Contractor of any defects and/or deficiencies.
- (c) If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in clauses 1.1(a) and (b) must be repeated until the Owner's representative issues a Certificate of Mechanical Completion.

Precommissioning

The Contractor must comply with the Owner's requirements and procedures in relation to Precommissioning as set out in the schedule of technical specification.

Commissioning

As soon as all works in respect of Precommissioning are completed the Contractor must notify the Owner's representative in writing that the facility is ready for the commissioning tests.

Requirements and procedures

The Contractor must comply with the Owner's requirements and procedures in relation to Commissioning and the performance of the commissioning tests as set out in the schedule of technical specification.

Performance tests, commercial operation and final completion

Performance tests

- (a) After the initial testing is completed, and as soon as the facility, in the opinion of the Contractor, satisfies all the requirements for Commercial Operation (other than the passing of the Performance Tests), the Contractor must notify the Owner's representative in writing that the facility is ready for the Performance Tests.
- (b) Each Performance Test must be completed at the time and in accordance with the procedures specified in the schedule of tests.
- (c) The Contractor acknowledges and agrees that, despite any other provision of this contract, no partial or entire use or generation of electricity or occupancy of the site, the Works or the facility as a whole by the Owner, whether prior to, during or after the Performance Tests or otherwise, in any way constitutes an acknowledgment by the Owner that Commercial Operation has occurred, nor does it operate to release the Contractor from any of its warranties, obligations or liabilities under or in connection with this contract.

Commercial operation

- (a) As soon as the facility has passed the Performance Tests the Contractor must notify the Owner's representative in writing that the facility has, in the Contractor's opinion, reached Commercial Operation. That notice must, if applicable, also include the Contractor's list of minor outstanding items that in its view meet the requirements of paragraph (k) of the definition of Commercial Operation and a programme for expeditiously completing those minor outstanding items.
- (b) The Owner's representative must promptly, and no later than five days after receipt of the Contractor's notice under clause 2.2(a), either issue a Certificate of Commercial Operation stating the date on which the facility has reached Commercial Operation or notify the Contractor in writing of any defects and/or deficiencies that prevent the facility from achieving Commercial Operation.
- (c) If the Owner's representative notifies the Contractor of any such defects and/or deficiencies, the Contractor must then remedy those defects and/or deficiencies and the procedures described in clauses 2.2(a) and (b) must be repeated until the Owner issues a Certificate of Commercial Operation.
- (d) Upon the issue of the Certificate of Commercial Operation, the Contractor must hand over care, custody and control of the facility to the Owner.
- (e) Notwithstanding that all the requirements for the issuing of a Certificate of Commercial Operation have not been met, the Owner may at any time, in its absolute, sole and unfettered discretion, issue a Certificate of Commercial Operation. The issue of a Certificate of Commercial Operation in accordance with this clause 2.2(e) will waive the requirement of paragraph (d) of the definition of Commercial Operation but will not operate as an admission that all the other requirements of Commercial Operation have been met, and does not prejudice any of the Owner's rights, including the right to require the Contractor to satisfy all these requirements, nor does it release the Contractor from any of its warranties, obligations or liabilities under or in connection with this contract.

Final completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of Final Completion the Contractor must give a written notice to the Owner's representative.
- (b) The Owner's representative must, promptly, and no later than five days after receipt of the Contractor's notice under clause 2.3(a), either issue a Certificate of Final Completion stating that the facility has reached Final Completion or notify the Contractor in writing of any defects and/or deficiencies that must be remedied before Final Completion can be achieved.
- (c) If the Owner's representative notifies the Contractor of any outstanding defects and/or deficiencies, the Contractor must then remedy those defects and/or deficiencies and the procedures described in clauses 2.3(a) and (b) must be repeated until the Owner issues a Certificate of Final Completion.

Performance guarantees

Performance guarantees

- (a) The Contractor guarantees that the facility as a whole and all sections thereof will meet the:
 - (i) Performance Guarantees
 - (ii) Environmental Guarantees
 - (iii) as specified in the schedule of performance guarantees and the schedule of tests.
- (b) The Contractor agrees that the Environmental Guarantees are absolute guarantees, the meeting of which is a condition precedent to achieving Commercial Operation.

Performance guarantees not met – Retesting

If for reasons not attributable to the Owner, either or both of the Performance Guarantees are not met during the same Performance Test, the Contractor must:

- (a) at its cost and expense make changes, modifications and/or additions to the facility or any part as may be necessary to meet the Performance Guarantees
- (b) notify the Owner upon completion of the necessary changes, modifications and/or additions
- (c) subject to the Owner's rights under clauses 2.2(e) and 3.5 and 3.14, continue to repeat the Performance Test until the Performance Guarantees have been met during the same Performance Test.

Minimum performance guarantees not met – PLDs

Subject to clause 2.2(e), if for reasons not attributable to the Owner, the Contractor does not meet one or more of the Minimum Performance Guarantees by the date it has incurred or is liable for Delay Liquidated Damages up to the aggregate liability specified in the schedule of delay liquidated damages, the Owner may require the Contractor to pay:

- (a) if the Minimum Net Electrical Output Performance Guarantee has been met (but the net electrical output performance guarantee has not been met) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages
- (b) if the Minimum Net Electrical Output Performance Guarantee has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual rated net output of the facility was equal to 95.0% of the net electrical output performance guarantee as specified in the schedule of performance liquidated damages
 - (ii) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.
- (c) if the Minimum Net Heat Rate Performance Guarantee has been met, (but the net heat rate performance guarantee has not been met) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages
- (d) if the Minimum Net Heat Rate Performance Guarantee has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual net heat rate of the facility was equal to 105.0% of the net heat rate performance guarantee as specified in the schedule of performance liquidated damages
 - (ii) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.

Performance guarantees not met – PLDs

If for reasons not attributable to the Owner, the Contractor has met the Minimum Performance Guarantees but does not meet one or more of the Performance Guarantees by the date it has incurred or is liable for Delay Liquidated Damages up to the aggregate liability specified in the schedule of delay liquidated damages, the Contractor is liable to pay Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.

Performance guarantees not met after date for commercial operation – Opt out

- (a) Despite clauses 3.3 and 3.4, the Contractor may at any time after the Date for Commercial Operation elect to pay Performance Liquidated Damages in respect of the failure to meet either or all of the Performance Guarantees (for reasons not attributable to the Owner), provided the Minimum Performance Guarantees and the Environmental Guarantees have been met.
- (b) Despite clauses 3.3 and 3.4, the Owner may at any time after the Date for Commercial Operation require the Contractor to pay Performance Liquidated Damages in respect of the failure to meet any or all of the Performance Guarantees (for reasons not attributable to the Owner), provided the Minimum Performance Guarantees and the Environmental Guarantees have been met.

Satisfaction of performance guarantees

The payment of Performance Liquidated Damages under clause 3 will be in satisfaction of the relevant Performance Guarantee or Performance Guarantees.

Environmental guarantees

If the Contractor has met the Performance Guarantees or the Minimum Performance Guarantees, as the case may be, but does not, for reasons not attributable to the Owner, during the same Overall Performance Test, meet the Environmental Guarantees, the performance of the facility may, at the Contractor's option, be derated to a level not below the Minimum Performance Guarantee levels, to enable the Emissions Guarantees to be achieved. If the Contractor elects to derate the performance of the facility, the Contractor must pay Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages for such derated performance.

Availability guarantee

The Contractor guarantees that the facility either in whole or in part will operate at the guaranteed availability for a period of 12 months from not later than two months after the Date of Commercial Operation.

Availability – PLDs

If the Availability Guarantee is not achieved, the Contractor must pay Performance Liquidated Damages as specified in the schedule of performance liquidated damages.

Aggregate liability

The aggregate liability of the Contractor for Performance Liquidated Damages under clause 3 will not exceed the amount calculated in accordance with the schedule of performance liquidated damages.

Invoicing

Performance Liquidated Damages must be invoiced by the Owner and payment must be made by the Contractor within 15 days of the date of the invoice. At the expiration of those 15 days, the amount involved is, if not paid, a debt due and payable to the Owner by the Contractor.

Fair and reasonable pre-estimate

The parties agree that the Performance Liquidated Damages in the schedule of performance liquidated damages are a fair and reasonable pre-estimate of the damages likely to be sustained by the Owner as a result of the Contractor's failure to meet the Minimum Performance Guarantees and/or the Performance Guarantees.

No relief

- (a) The payment of Performance Liquidated Damages does not in any way relieve the Contractor from any of its obligations to complete the Works or from any of its warranties, obligations or liabilities under or in connection with this contract.
- (b) Without prejudice to clause 3.13(a), the payment of Performance Liquidated Damages under this clause 3 is in addition to any liability of the Contractor for Delay Liquidated Damages.

Rights at law

If this clause 3 (or any part) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming Performance Liquidated Damages, the Owner is entitled to claim against the Contractor for damages at law for the Contractor's failure to meet the Performance Guarantees. Such damages must not exceed the amounts specified in the schedule of damages at law.

No benefit

The Contractor is not entitled to the benefit of the exclusion of liability for consequential loss under this contract in any claim for damages at law by the Owner against the Contractor pursuant to clause 3.14.

Duplicate damages

Nothing in this clause 3 entitles the Owner to claim duplicate damages in respect of the failure of the Contractor to meet the Performance Guarantees, the Minimum Performance Guarantees or the Availability Guarantee.

Definitions

Availability Guarantee means the guarantee specified as the "Availability Guarantee" in the [schedule of performance guarantees].

Availability Test means the test described as the Availability Test in the [schedule of tests].

Certificate of Commercial Operation means the certificate issued by the Owner under clause 2.2 in the form set out in the [schedule of forms of certificates].

Certificate of Final Completion means the certificate issued under clause 2.3 in the form set out in the [schedule of forms of certificates].

Certificate of Mechanical Completion means the certificate issued under clause 1.1(b) in the form set out in the [schedule of forms of certificates].

Commercial Operation means the stage of the Works when the following has occurred:

- (a) the Contractor has provided copies of the draft operation and maintenance manual
- (b) the Emissions Guarantee Test has been passed
- (c) the Noise Guarantee has been met
- (d) the Minimum Performance Guarantees have been met
- (e) the Performance Guarantees have been met or, where applicable, Performance Liquidated Damages have been paid
- (f) the facility is capable of being operated reliably, safely and efficiently under all anticipated or likely operational conditions
- (g) the Contractor has provided the Spare Parts required to be provided by the Date for Commercial Operation
- (h) the facility is in a condition which allows the Owner to comply with all laws relating to its operation
- (i) all documents and other information in respect of the facility required under this contract have been supplied to the Owner or the Owner's representative
- (j) all government approvals to be obtained by the Contractor under the contract and which are necessary for the operation of the facility, and to the full extent permitted by law, have been transferred (to the extent necessary and/or permitted at law) to the Owner or the Owner's nominee

- (k) the facility is complete in all respects other than minor items that in the reasonable opinion of the Owner's representative will not prejudice (either by not being completed or as a result of the work needed to complete them), the ability of the Owner to operate the facility legally, safely, reliably and efficiently.

Commissioning means the operation of the facility, or any part, by the Contractor following Precommissioning in accordance with the schedule of project technical requirements [not included], which operation is to be carried out by the Contractor as provided in clause 1.4, for the purpose of preparing the facility for operation and the carrying out of the Performance Tests.

Date for Commercial Operation means, in respect of the facility, the date specified in the [schedule of guaranteed dates], as may be varied in accordance with the terms of the contract.

Date of Commercial Operation means the date specified in the Certificate of Commercial Operation.

Defects Liability Period means the period of 12 months from:

- (a) in relation to the facility as a whole, the Date of Commercial Operation
- (b) in relation only to where a part or parts of the facility are repaired, replaced or made good, the date of commencement in accordance with the contract as the case may be.

Delay Liquidated Damages means the liquidated damages for delay specified in the relevant section of the [schedule of delay liquidated damages].

Emissions Guarantee means the guarantee specified in the [schedule of performance guarantees], which is an absolute guarantee and the meeting of which is a condition precedent to achieving Commercial Operation.

Emissions Guarantee Tests means the tests specified as the emissions guarantee tests in the [schedule of tests].

Environmental Guarantees means the Emissions Guarantee and the Noise Guarantee as specified in the [schedule of performance guarantees].

Final Completion means the stage of the Works when:

- (a) Commercial Operation has been achieved
- (b) all defects and/or deficiencies have been satisfactorily remedied
- (c) the Defects Liability Period has expired.

Mechanical Completion means that the facility has been completed mechanically and structurally in accordance with the [schedule of project technical requirements] and the other requirements of the contract such that in the reasonable opinion of the Owner's representative the facility is substantially completed and able to operate safely, reliably and efficiently and the facility is ready for Precommissioning and Commissioning.

Minimum Net Electrical Output Performance Guarantee means the minimum net output performance level specified in the schedule of performance guarantees.

Minimum Net Heat Rate Performance Guarantee means the minimum net heat rate performance level specified in the schedule of performance guarantees.

Minimum Performance Guarantees means the Minimum Net Heat Rate Performance Guarantee and the Minimum Net Electrical Output Performance Guarantee.

Noise Guarantee means the guarantee specified as the "Noise Guarantee" in the [schedule of performance guarantees], which is an absolute guarantee and the meeting of which is a condition precedent to achieving Commercial Operation and Final Commercial Operation.

Noise Guarantee Tests means the tests specified as the noise guarantee tests in the [schedule of tests].

Overall Performance Test means a test in which the Performance Guarantees and the Environmental Guarantees are measured simultaneously.

Performance Guarantees means the performance guarantees to be met in relation to Commercial Operation as set out in the [schedule of performance guarantees] but does not include the Environmental Guarantees.

Performance Liquidated Damages means the liquidated damages for underperformance of the facility as specified in the [schedule of performance liquidated damages].

Performance Tests means the tests described as Performance Tests in the [schedule of tests].

Precommissioning means the testing, checking and other works specified in the [schedule of project technical requirements] to be performed by the Contractor in preparation for Commissioning.

Spare Parts means the spare parts the Contractor is obliged to provide pursuant to the contract that must, as a minimum, comprise the parts listed in the [schedule of project technical requirements].

Works means all the equipment to be supplied and the whole of the work and services to be performed by the Contractor under the contract in accordance with the contract documents and as further described in the schedule of project technical requirements and includes any variation.

Appendix 2 Detailed regime clauses

1 Precommissioning and commissioning

1.1 Mechanical completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of Mechanical Completion the Contractor must give a notice to the Owner's representative
- (b) The Owner's representative must, promptly, and no later than five business days after receipt of the Contractor's notice under clause 1.1(a), either issue a Certificate of Mechanical Completion stating that the facility has reached Mechanical Completion or notify the Contractor of any defects and/or deficiencies
- (c) If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in clauses 1.1(a) and (b) must be repeated until the Owner's representative issues a Certificate of Mechanical Completion.

1.2 Precommissioning

The Contractor must comply with the Owner's requirements and procedures in relation to Precommissioning as set out in the schedule of technical specification.

1.3 Commissioning

As soon as all works in respect of Precommissioning are completed the Contractor must notify the Owner's representative in writing that the facility is ready for the Commissioning Tests.

1.4 Requirements and procedures

The Contractor must comply with the Owner's requirements and procedures in relation to Commissioning and the performance of the Commissioning Tests as set out in the schedule of technical specification.

2 Performance tests, commercial operation and final completion

2.1 Performance tests

- (a) After the initial testing is completed, and the Contractor is satisfied that all requirements for Commercial Operation (other than the passing of the Performance Tests) have been met, the Contractor must notify the Owner's representative in writing that the facility is ready for the Performance Tests
- (b) Each Performance Test must be completed at the time and in accordance with the procedures specified in the schedule of tests
- (c) The Contractor acknowledges and agrees that, despite any other provision of this contract, no partial or entire use or generation of electricity or occupancy of the site, the Works or the facility as a whole by the Owner, whether prior to, during or after the Performance Tests or otherwise, in any way constitutes an acknowledgment by the Owner that Commercial Operation has occurred, nor does it operate to release the Contractor from any of its warranties, obligations or liabilities under or in connection with this contract.

2.2 Commercial operation

- (a) After the Performance Tests are completed and the:
- (b) Performance Guarantees have been met
- (c) Minimum Performance Guarantees have been met and the Contractor elects to pay the applicable Performance Liquidated Damages in accordance with clause 3.4
- (d) Minimum Performance Guarantees have been met and provided the Contractor has not incurred Delay Liquidated Damages equal to or in excess of the amount specified in section 2 of the schedule of delay liquidated damages, the Contractor elects to exercise its rights under clause 2.3 and provide security or pay the applicable Performance Liquidated Damages in accordance with clause 3.4.

the Contractor must notify the Owner's representative in writing that the facility has, in the Contractor's opinion, reached Commercial Operation. That notice must, if applicable, also include the Contractor's list of minor outstanding items that in its view meet the requirements of paragraph (j) of the definition of Commercial Operation and a programme for expeditiously completing those minor outstanding items.

- (e) The Owner's representative must promptly, and no later than five days after receipt of the Contractor's notice under clause 2.2(a), either issue a Certificate of Commercial Operation stating the date on which the facility has reached Commercial Operation or notify the Contractor in writing of any defects and/or deficiencies that prevent the facility from achieving Commercial Operation
- (f) If the Owner's representative notifies the Contractor of any such defects and/or deficiencies, the Contractor must then remedy those defects and/or deficiencies and the procedures described in clauses 2.2(a) and (b) must be repeated until the Owner issues a Certificate of Commercial Operation
- (g) Upon the issue of the Certificate of Commercial Operation, the Contractor must hand over care, custody and control of the facility to the Owner
- (h) Notwithstanding that all the requirements for the issuing of a Certificate of Commercial Operation have not been met, the Owner may at any time, in its absolute, sole and unfettered discretion, issue a Certificate of Commercial Operation. The issue of a Certificate of Commercial Operation in accordance with this clause 2.2(e) will waive the requirement of paragraph (d) of the definition of Commercial Operation but will not operate as an admission that all the other requirements of Commercial Operation have been met, and does not prejudice any of the Owner's rights, including the right to require the Contractor to satisfy all these requirements, nor does it release the Contractor from any of its warranties, obligations or liabilities under or in connection with this contract.

2.3 Subsequent testing period

If the Contractor has elected under clause 2.2(a) (iii) to exercise its rights under this clause 2.3, the Contractor may, at any time during the Subsequent Testing Period:

- (a) request the facility or any part of the facility be taken out of Service
- (b) at its cost and expense make changes, modifications and/or additions to the facility or any part as may be necessary to meet the Performance Guarantees
- (c) notify the Owner upon completion of the necessary changes, modifications and/or additions
- (d) continue to repeat the Overall Performance Test, in order to meet the Performance Guarantees.

The Owner may in its absolute discretion refuse or reschedule the Contractor's request to take the facility or any part of the facility out of Service or otherwise modify or adapt the facility or any part of the facility as a result of operational requirements. The Contractor is solely and absolutely responsible for ensuring the facility or any part of the facility returns to Service and operates in accordance with the requirements of this contract after it is taken out of Service pursuant to this clause 2.3. In addition, the Contractor is responsible for the care, custody and control of the facility and bears the risk of loss or damage to the facility or part of the facility taken out of Service pursuant to this clause 2.3 until the facility or any such part is returned to Service.

During the Subsequent Testing Period, the Owner agrees that the Contractor is not liable for Delay Liquidated Damages during any scheduled outage.

2.4 Final commercial operation

- (a) The Contractor must notify the Owner's representative in writing that the facility has, in the Contractor's opinion, reached Final Commercial Operation, on:
 - (i) the date the Contractor has incurred liability for Delay Liquidated Damages equal to the amount specified in the Schedule of Delay Liquidated Damages
 - (ii) the expiration of the Subsequent Testing Period
 - (iii) at any other time during the Subsequent Testing Period.
- (b) The Owner's representative must promptly, and no later than five days after receipt of the Contractor's notice under clause 2.4(a), either issue a Certificate of Final Commercial Operation stating the date on which the facility has reached Final Commercial Operation or notify the Contractor in writing of any defects and/or deficiencies that prevent the facility from achieving Final Commercial Operation.
- (c) If the Owner's representative notifies the Contractor of any such defects and/or deficiencies, the Contractor must then remedy those defects and/or deficiencies and the procedures described in clauses 2.4(a) and (b) must be repeated until the Owner issues a Certificate of Final Commercial Operation.

2.5 Final completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of Final Completion the Contractor must give a written notice to the Owner's representative.
- (b) The Owner's representative must, promptly, and no later than five days after receipt of the Contractor's notice under clause 2.5(a), either issue a Certificate of Final Completion stating that the facility has reached Final Completion or notify the Contractor in writing of any defects and/or deficiencies that must be remedied before Final Completion can be achieved.
- (c) If the Owner's representative notifies the Contractor of any outstanding defects and/or deficiencies, the Contractor must then remedy those defects and/or deficiencies and the procedures described in clauses 2.5(a) and (b) must be repeated until the Owner issues a Certificate of Final Completion.

3 Performance guarantees

3.1 Trial runs, performance guarantees, environmental guarantees

- (a) The Contractor guarantees that the facility as a whole and all parts will pass the trial runs and meet the:
 - (i) Performance Guarantees
 - (ii) Environmental Guarantees, as specified in the Schedule of Performance Guarantees and the Schedule of Tests.
- (b) The Contractor agrees that the meeting of the Environmental Guarantees and the passing of each trial run are absolute guarantees and requirements, the meeting and passing of which are conditions precedent to achieving Commercial Operation.

3.2 Minimum performance guarantees not met – Retesting

If, for reasons not attributable to the Owner, either or both of the Minimum Performance Guarantees are not met during the same Overall Performance Test, the Contractor must:

- (a) at its cost and expense make changes, modifications and/or additions to the facility or any part as may be necessary to meet the Minimum Performance Guarantees
- (b) notify the Owner upon completion of the necessary changes, modifications and/or additions
- (c) subject to the Owner's rights under clauses 2.2(e) and 3.3 and 3.13, continue to repeat the Overall Performance Test until the Minimum Performance Guarantees have been met during the same Overall Performance Test.

Subject to clause 3.3, nothing in this clause 3.2 derogates from the Contractor's obligation to meet the Performance Guarantees.

3.3 Minimum performance guarantees not met – PLDs

Subject to clause 2.2(e), if for reasons not attributable to the Owner, the Contractor does not meet one or more of the Minimum Performance Guarantees by the date it has incurred or is liable for Delay Liquidated Damages up to the aggregate liability specified in the schedule of delay liquidated damages, the Owner may require the Contractor to pay:

- (a) If the Minimum Net Electrical Output Performance Guarantee has been met (but the net electrical output performance guarantee has not been met) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages
- (b) If the Minimum Net Electrical Output Performance Guarantee has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual rated net output of the facility was equal to 95.0% of the net electrical output performance guarantee as specified in the schedule of performance liquidated damages
 - (ii) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.
- (c) If the Minimum Net Heat Rate Performance Guarantee has been met, (but the net heat rate performance guarantee has not been met) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages
- (d) If the Minimum Net Heat Rate Performance Guarantee has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual net heat rate of the facility was equal to 105.0% of the net heat rate performance guarantee as specified in the schedule of performance liquidated damages
 - (ii) Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.

3.4 PLDs – Commercial operation

If the Performance Guarantees have not been met, but the Minimum Performance Guarantees have been met, the Contractor may apply for Commercial Operation in accordance with clause 2.2 provided all the requirements for Commercial Operation have been satisfied and it:

- (a) pays to the Owner Performance Liquidated Damages calculated in accordance with the Schedule of Performance Liquidated Damages
- (b) elects under clause 2.2(a) (iii) to exercise its rights under clause 2.3 and:
 - (i) pays to the Owner Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages that would be payable if the Contractor's liability for Performance Liquidated Damages crystallised on the day the Contractor applied for Commercial Operation
 - (ii) provides the Owner with an irrevocable and unconditional bank guarantee in a form and from a financial institution approved by the Owner, in its absolute discretion, for an amount equal to the Performance Liquidated Damages that would be payable if the Contractor's liability for Performance Liquidated Damages crystallised on the day the Contractor applied for Commercial Operation.

If the Contractor has met the Performance Guarantees or the Minimum Performance Guarantees, as the case may be, but does not, for reasons not attributable to the Owner, during the same Overall Performance Test, meet the Environmental Guarantee, the performance of the facility may, at the Contractor's option, be derated to a level not below the Minimum Performance Guarantee levels, to enable the Emissions Guarantees to be met. If the Contractor elects to derate the performance of the facility, the Contractor must pay Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages for such derated performance.

3.5 PLDs – Final commercial operation

- (a) If the Contractor elects under clause 2.2(a) (iii) to exercise its rights under clause 2.3, on:
 - (i) the date the Contractor has incurred liability for Delay Liquidated Damages equal to the amount specified in the schedule of delay liquidated damages
 - (ii) the expiration of the Subsequent Testing Period
 - (iii) the date nominated by the Contractor under clause 2.3(a) (iii), the Contractor's liability for Performance Liquidated Damages will crystallise and the Contractor is liable for Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages.

the Contractor's liability for Performance Liquidated Damages pursuant to clause 3.5(a) is calculated by reference to the highest level at which the facility performed during the Overall Performance Test while still meeting the Environmental Guarantees.

- (b) If the amount calculated under clause 3.5(a) is greater than the security provided by, or the Performance Liquidated Damages paid by, the Contractor under clause 3.4(b) (i) or clause 3.4(b) (ii), as the case may be, then the Contractor must pay to the Owner the difference
- (c) If the amount calculated under clause 3.5(a) is less than the security provided by, or the Performance Liquidated Damages paid by, the Contractor under clause 3.4(b) (i) or clause 3.4(b) (ii) as the case may be, the Owner must either:
 - (i) refund the Contractor from the monies paid pursuant to clause 3.4(b) (i) so that the net amount retained by the Owner is equal to amount to Performance Liquidated Damages the Contractor is liable for under clause 3.5(a)

- (ii) release the remainder of the bank guarantee provided pursuant to clause 3.4(b)(ii) after cashing the guarantee for an amount equal to the amount of Performance Liquidated Damages the Contractor is liable for under clause 3.5(a).
- (d) The Contractor must, in addition to its obligation to pay Performance Liquidated Damages under clauses 3.4(b)(i) and 3.5(c) or provide security under clause 3.4(b)(ii) as the case may be, pay Performance Liquidated Damages calculated in accordance with the schedule of performance liquidated damages for the reduced performance of the facility during the period between Commercial Operation and Final Commercial Operation, less the number of days the facility is out of Service.

3.6 Availability guarantee

The Contractor guarantees that the facility either in whole or in part will operate at the guaranteed availability for a period of 12 months from not later than two months after the Date of Commercial Operation.

3.7 Availability – PLDs

If the Availability Guarantee is not achieved, the Contractor must pay Performance Liquidated Damages as specified in the schedule of performance liquidated damages.

3.8 Aggregate liability

The aggregate liability of the Contractor for Performance Liquidated Damages under clause 3 will not exceed the amount calculated in accordance with the schedule of performance liquidated damages.

3.9 Satisfaction of performance guarantees

The payment of Performance Liquidated Damages under clause 3 will be in satisfaction of the relevant Performance Guarantee.

3.10 Invoicing

Performance Liquidated Damages must be invoiced by the Owner and payment must be made by the Contractor within 15 days of the date of the invoice. At the expiration of those 15 days, the amount involved is, if not paid, a debt due and payable to the Owner by the Contractor.

3.11 Fair and reasonable pre-estimate

The parties agreed that the Performance Liquidated Damages in the schedule of performance liquidated damages are a fair and reasonable pre-estimate of the damages likely to be sustained by the Owner as a result of the Contractor's failure to meet the Minimum Performance Guarantees and/or the Performance Guarantees.

3.12 No relief

- (a) The payment of Performance Liquidated Damages does not in any way relieve the Contractor from any of its obligations to complete the Works or from any of its warranties, obligations or liabilities under or in connection with this contract.
- (b) Without prejudice to clause 3.12(a), the payment of Performance Liquidated Damages under this clause 3 is in addition to any liability of the Contractor for Delay Liquidated Damages.

3.13 Rights at law

If this clause 3 (or any part) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming Performance Liquidated Damages, the Owner is entitled to claim against the Contractor for damages at law for the Contractor's failure to meet the Performance Guarantees. Such damages must not exceed the amounts specified in the schedule of damages at law.

3.14 No benefit

The Contractor is not entitled to the benefit of the exclusion of liability for consequential loss under this contract in any claim for damages at law by the Owner against the Contractor pursuant to clause 3.13.

3.15 Duplicate damages

Nothing in this clause 3 entitles the Owner to claim duplicate damages at law or under this contract in respect of the failure of the Contractor to meet the Performance Guarantees, the Minimum Performance Guarantees or the Availability Guarantee.

4 Definitions

Availability Guarantee means the guarantee specified as the “Availability Guarantee” in the [schedule of performance guarantees].

Availability Test means the test described as the availability test in the [schedule of tests].

Certificate of Commercial Operation means the certificate issued by the Owner under clause 2.2 in the form set out in the [schedule of forms of certificates].

Certificate of Final Commercial Operation means the certificate issued by the Owner under clause 2.4 in the form set out in the [schedule of forms of certificates].

Certificate of Final Completion means the certificate issued by the Owner under clause 2.5 in the form set out in the [schedule of forms of certificates].

Certificate of Mechanical Completion means the certificate issued under clause 1.1(b) in the form set out in the [schedule of forms of certificates].

Commercial Operation means the stage of the Works when the following has occurred:

- (a) the Contractor has provided copies of the draft operation and maintenance manual
- (b) the Emissions Guarantee Test has been passed
- (c) the Noise Guarantee has been met
- (d) one of the following has occurred:
 - (i) the Performance Guarantees have been met
 - (ii) the Minimum Performance Guarantees have been met and the Contractor has paid the applicable Performance Liquidated Damages
 - (iii) the Minimum Performance Guarantees have been met and the Contractor has elected under clause 2.2(a)(iii) to exercise its rights under clause 2.3.
- (e) the facility is capable of being operated reliably, safely and efficiently under all anticipated or likely operational conditions
- (f) the Contractor has provided the Spare Parts required to be provided by the Date for Commercial Operation
- (g) the facility is in a condition which allows the Owner to comply with all laws relating to its operation
- (h) all documents and other information in respect of the facility required under this contract have been supplied to the Owner or the Owner’s representative
- (i) all government approvals to be obtained by the Contractor under this contract and which are necessary for the operation of the facility, and to the full extent permitted by law, have been transferred (to the extent necessary and/or permitted at law) to the Owner or the Owner’s nominee

- (j) the facility is complete in all respects other than minor items that in the reasonable opinion of the Owner's representative will not prejudice (either by not being completed or as a result of the work needed to complete them), the ability of the Owner to operate the facility legally, safely, reliably and efficiently.

Commissioning means the operation of the facility, or any part, by the Contractor following Precommissioning in accordance with the [schedule of technical specification], which operation is to be carried out by the Contractor as provided in clause 1.3, for the purpose of preparing the facility for operation and the carrying out of the Performance Tests.

Commissioning Tests means the tests specified as commissioning tests in the schedule of tests.

Date for Commercial Operation means, in respect of the facility, the date specified in the [schedule of guaranteed dates], as may be varied in accordance with this contract.

Date of Commercial Operation means the date specified in the Certificate of Commercial Operation.

Defects Liability Period means the period of 12 months from:

- (a) in relation to the facility as a whole, the Date of Commercial Operation
- (b) in relation only to where a part or parts of the facility are repaired, replaced or made good, the date of commencement in accordance with the contract.

as the case may be.

Delay Liquidated Damages means the liquidated damages for delay specified in the [schedule of delay liquidated damages].

Emissions Guarantee means the guarantee specified in the [schedule of performance guarantees], which is an absolute guarantee and the meeting of which is a condition precedent to achieving Commercial Operation.

Emissions Guarantee Tests means the tests specified as the emissions guarantee tests in the [schedule of tests].

Environmental Guarantees means the Emissions Guarantee and the Noise Guarantee as specified in the [schedule of performance guarantees].

Final Commercial Operation means, where paragraph (d)(iii) of the definition of Commercial Operation applies, the stage of the Works when the following has occurred:

- (a) Commercial Operation has been achieved
- (b) one of the following has occurred:
 - (i) the Performance Guarantees have been met
 - (ii) if applicable, the Contractor has paid Performance Liquidated Damages in accordance with clause 3.5.
- (c) all other preconditions to Commercial Operation have been achieved, met or passed during the Subsequent Testing Period.

Final Completion means the stage of the Works when:

- (a) Commercial Operation has been achieved
- (b) if applicable, Final Commercial Operation has been achieved
- (c) all defects and/or deficiencies have been satisfactorily remedied

(d) the Defects Liability Period has expired.

Mechanical Completion means that the facility has been completed mechanically and structurally in accordance with the [schedule of project technical requirements] and the other requirements of the contract such that in the reasonable opinion of the Owner's representative the facility is substantially completed and able to operate safely, reliably and efficiently and the facility is ready for Precommissioning and Commissioning.

Minimum Net Electrical Output Performance Guarantee means the minimum net output performance level specified in the [schedule of performance guarantees].

Minimum Net Heat Rate Performance Guarantee means the minimum net heat rate performance level specified in the [schedule of performance guarantees].

Minimum Performance Guarantees means the Minimum Net Heat Rate Performance Guarantee and the Minimum Net Electrical Output Performance Guarantee.

Noise Guarantee means the guarantee specified as the "Noise Guarantee" in the [schedule of performance guarantees], which is an absolute guarantee and the meeting of which is a condition precedent to achieving Commercial Operation and Final Commercial Operation.

Overall Performance Test means a test in which the Performance Guarantees and the Environmental Guarantees are measured together.

Performance Guarantees means the performance guarantees to be met in relation to Commercial Operation and Final Commercial Operation as set out in the [schedule of performance guarantees] but does not include the Environmental Guarantees or the Availability Guarantee.

Performance Liquidated Damages means the liquidated damages for underperformance of the facility as specified in the schedule of performance liquidated damages.

Performance Tests means the tests specified as Performance Tests in the [schedule of tests].

Precommissioning means the testing, checking and other works specified in the schedule of technical specification to be performed by the Contractor in preparation for Commissioning.

Project means the development, design, financing, construction, commissioning, testing, delivery, operation and maintenance of the facility.

Service means the facility is available and is capable of meeting the Minimum Performance Guarantees, provided however that it is not in Service from the time ramp-down commences pursuant to a request from the Contractor under clause 2.4. If the facility is not generating electricity then the facility is not in Service from the time agreed between the parties following a request by the Contractor that it be taken out of Service pursuant to clause 2.3. If the parties cannot agree on the time then, provided that the Contractor has made a request pursuant to clause 2.3, the facility will be deemed to be out of Service for the time that the facility is not available.

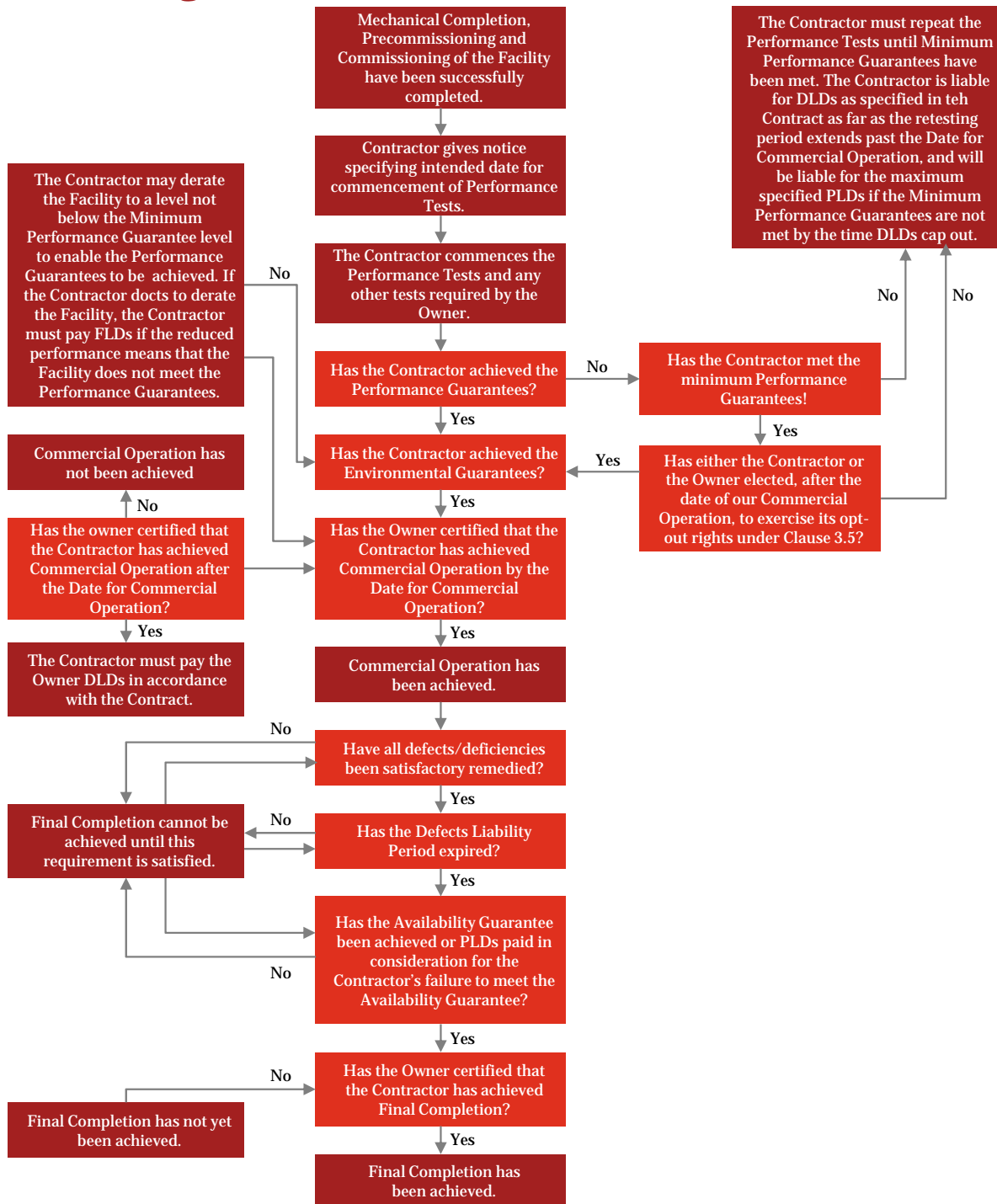
Spare Parts means the spare parts the Contractor is obliged to provide pursuant to the contract that must, as a minimum, comprise the parts listed in the [schedule of project technical requirements].

Subsequent Testing Period means the 60-day period after the Date of Commercial Operation as described in clause 2.3.

Works means all the equipment to be supplied and the whole of the work and services to be performed by the Contractor under this contract and as further described in the [schedule of technical specification] and includes any variation."

Appendix 3 Simple regime flowchart

Commercial operation, final completion and performance guarantees

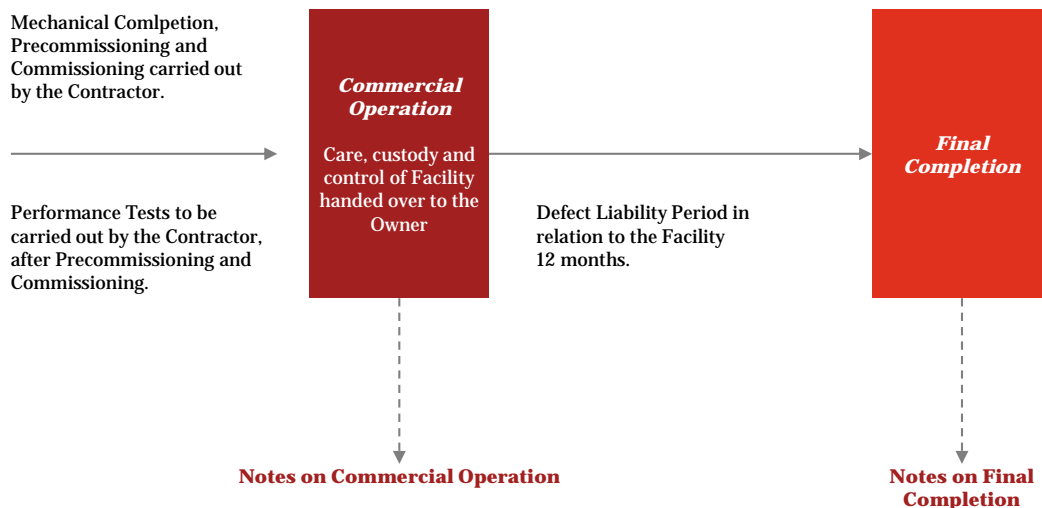


Appendix 4 Simple regime timeline

Simple regime completion

Notes on structure

The advantage of this regime is that the Owner does not assume care, custody and control of the plant (and thus does not assume responsibility or liability for it) until the Contractor has either met the Performance Guarantees or paid the appropriate Performance Liquidation Damages for its failure to meet the Performance Guarantees. This structure is more suitable where it is not viable to grant the Contractor any time after Commercial Operation in which to try and increase the Facility's performance.



In order to achieve Commercial Operation the Contractor must fulfill the requirements set out in the definition of Commercial Operation, unless the Owner, in its absolute, sole and unfettered discretion, issues a Certificate of Commercial Operation, notwithstanding that all requirements have not been satisfied.

The Contractor may achieve Commercial Operation and be under no further obligation if the Performance Tests demonstrate that the Minimum Performance Guarantees and the Performance Guarantees have been achieved, and all other preconditions have been met.

If either the Performance Guarantees have not been achieved but the Minimum Performance Guarantees have, or both the Performance Guarantees and the Minimum Performance Guarantees have not been achieved, the Contractor is obliged by Clause 3.2 to attempt to improve the performance of the Facility. Where this deferral means that Commercial Operation is not achieved by the Date for Commercial Operation, Delay Liquidated Damages will accrue; and the period in which this deferral and improvement will take place must end when the aggregate liability cap on Delay Liquidation Damages is reached.

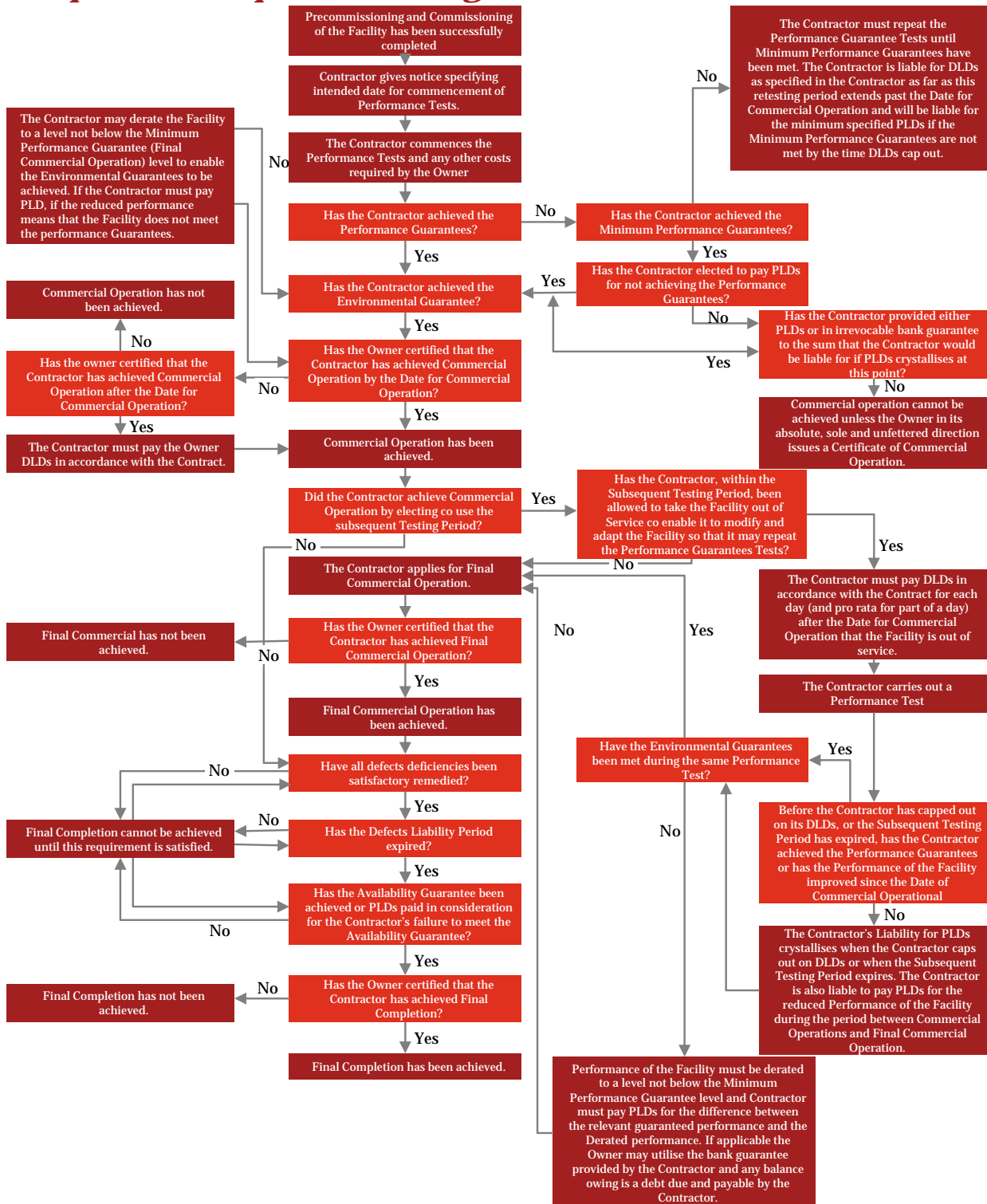
Despite the fact that Clause 3.2 requires the Contractor to continue to improve the plant after the Date for Commercial Operation, provided that the Minimum Performance Guarantees and the Environmental Guarantees have been met, at any time after the Date for Commercial Operation either the Contractor or the Owner may exercise their opt-out rights under Clause 3.5, meaning that further modifications will be halted and the Contractor's PLDs for any continuing failure to meet the Performance Guarantees will crystallise.

The Contractor is liable to pay Delay Liquidated Damages in any instance where it falls to achieve Commercial Operation by the Date for Commercial Operation.

In order to achieve Final Completion, the requirements set out in the definition of Final Completion must be satisfied. If the Contractor has failed to achieve the Guaranteed Availability set out in Clause 3.8 following the Date of Commercial Operation, the Contractor must pay Performance Liquidation Damages.

Appendix 5 Detailed regime flowchart

Commercial operation, final commercial operation, final completion and performance guarantees

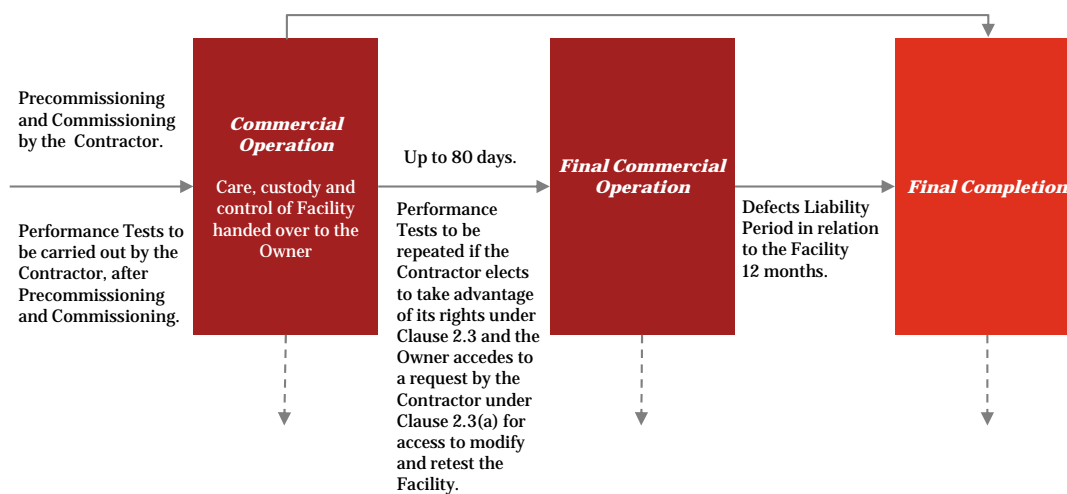


Appendix 6 Detailed regime timeline

Completion timeline

Notes on structure

The benefit of this process is that the Owner will be able to take possession of the Facility and begin generating electricity as soon as Commercial Operation is achieved (effectively, as soon as the Minimum Performance Guarantees are met). This structure is most useful where it is viable to grant (in the Owner's discretion) the Contractor a Subsequent Testing Period in which to try and increase the Facility's performance, secured by advantage payment (or a guarantee) equivalent to the PLDs that would otherwise be payable.



Notes on Commercial Operation

In order to achieve Commercial Operation the Contractor must satisfy one of the three paragraphs in Clause 2.2(a) unless the Owner, in its absolute, sole and unfettered discretion, issues a Certificate of Commercial Operation, notwithstanding that all requirements have not been satisfied.

The Contractor may achieve Commercial Operation and be under no further obligation if the Performance Guarantees have been achieved at the Performance Tests, and all other preconditions have been met.

If the Performance Guarantees have not been achieved but the Minimum Performance Guarantees have, the Contractor may elect to exercise its rights under Clause 2.3 and undertake further modifications during the Subsequent Testing Period. These rights are conditional on the payment of Performance Liquidated Damages or the granting of security, and may not be exercised once the Delay Liquidated Damages cap is reached.

If the Performance Guarantees have not been achieved but the Minimum Performance Guarantees have, and the Contractor does not elect to take advantage of its rights under Clause 2.3, it may pay Performance Liquidated Damages for its failure to achieve the Performance Guarantees and be released from further obligation.

The Contractor is liable to pay Delay Liquidated Damages for failure to achieve Commercial Operation by the Date for Commercial Operation.

The meeting of the Environmental Guarantees (Noise and Emissions) is an absolute requirement to achieving Commercial Operation.

Notes on Final Commercial Operation

In order to achieve Final Commercial Operation the requirements set out in the definition of Final Commercial Operation must be satisfied. If the Contractor has failed to meet one or more of the Performance Guarantees, the Contractor must pay Performance Liquidated Damages in satisfaction of the relevant Performance Guarantees.

The Contractor is liable to pay Delay Liquidated Damages for each day after the Date for Commercial Operation that the Facility or part of the Facility is not in Service as a result of the Contractor electing to take advantage of its rights under Clause 2.3.

The meeting of the Environmental Guarantees is an absolute requirement to achieving Final Commercial Operation.

Notes on Final Completion

In order to achieve Final Commercial Operation, the requirements set out in the definition of Final Completion must be satisfied. If the Contractor has failed to achieve the Availability Guarantee over the 12 months following the Date of Commercial Operation, the Contractor must pay Performance Liquidated Damages.

4 Position paper on contracting delivery models

Purpose

The purpose of this paper is to provide a brief outline of a narrow range of delivery models commonly used in the delivery of complex infrastructure projects including:

- Engineering, Procure and Construct (**EPC**)
- novated EPC
- Engineering and Procurement and Construction Management (**EPCM**)
- Project Management Contractor (**PCM**)
- Early Contractor Involvement (**ECI**)
- Front End Engineering Design (**FEED**).

Choosing an appropriate delivery model is not an exact science. There is no formula into which an individual project's peculiarities and Owner's unique requirements can be 'plugged in' to produce the only correct answer. Ultimately, the choice of the delivery model is a risk management exercise in itself, involving a balancing of various factors including:

- the degree of complexity of the engineering of the project and how much control the Owner wants to retain or be involved in overall design
- time constraints on project delivery – for example, whether it should be executed over a normal, sequential schedule, or a fast-track schedule
- the experience and capability of the Owner, including the Owner's degree of knowledge of design and construction and the extent and nature of the Owner's resources (including the skills and expertise of the Owner's team)
- the experience and capability of the designers and construction Contractors to be engaged to deliver the project
- the size of the project (in terms of the dollar value and physical complexity)
- requirements of equity and debt Financiers.

Ancillary documents

The following documents are useful to Owners when considering the appropriate delivery model and determining their appetite for risk alongside balancing the various factors described above:

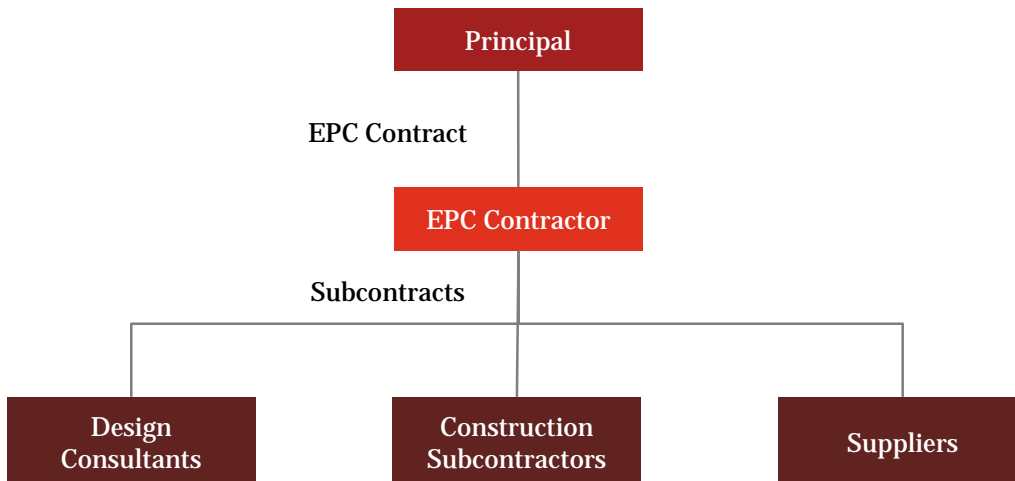
- a contracting and procurement plan (**Appendix 1**)
- a risk register and action plan (**Appendix 2**).

A contracting and procurement plan analyses and recommends a chosen project delivery model and contracting and procurement approach for committing and managing the project in order to provide a best value, best risk outcome for the project, through least capital and operational expenditure and taking into account the Lenders' bankability requirements in respect of time and cost certainty and quality and volume of output. This plan typically provides for a "base case scenario" for formulating the detailed contracting and procurement procedures for the execution phase of a project.

A risk register records details of all the risks identified for the project. Risks associated with activities and strategies are identified then graded in terms of likelihood of occurring and seriousness of impact. Risk registers typically contain the following information:

- a description of each risk and its potential consequences (operational and strategic)
- factors that may impact upon the likelihood and consequence of the risk
- an assessed risk grade – Low, Medium, High or Extreme and whether this risk grade is acceptable
- actions and controls that currently exist to mitigate risks
- early warning factors and upward reporting thresholds.

The process of identifying and analysing risks should be a part of tactical decision making and be dealt with in the initial planning of the project.



EPC

Under an EPC structure, the Principal enters into a contract with the EPC Contractor, which will then enter into various subcontracts with its sub-Contractors for performance of discrete portions of work and carry out all aspects of the design, construction and commissioning of the project.

The perceived **advantages** of the EPC structure for an Owner include:

- the degree of complexity of the engineering of the project and how much control the Owner wants to retain or be involved in over design
- time constraints on project delivery – for example, whether it should be executed over a normal, sequential schedule, or a fast-track schedule
- the experience and capability of the Owner, including the Owner’s degree of knowledge of design and construction and the extent and nature of the Owner’s resources (including the skills and expertise of the Owner’s team)
- the experience and capability of the designers and construction Contractors to be engaged to deliver the project
- the size of the project (in terms of the dollar value and physical complexity)
- requirements of equity and debt Financiers
- single point responsibility – the Contractor is responsible whether a fault is due to design or construction
- costs – this form of delivery structure can be more economical as the design can take into account constructability issues (such as access, construction problems and particular methods of working employed by the Contractor) which can result in substantial savings
- time – it can allow fast track construction due to phased construction
- there is one overall contract for the Owner to manage, with design and construction warranted by a single contracting
- the Owner obtains the significant extra-legal promise (not usually obtainable in either of the alternative delivery structures) of a warranty of fitness for purpose from the Contractor
- guarantee or wrap – the EPC structure more easily facilitates a corporate ‘wrap’ or guarantee of the design and construction of the whole project increasing the bankability of the project
- the EPC structure, or a combination of EPC structures for a project, tend to be the better ‘bankable’ form of delivery models because of the ‘perceived’ fixed time and fixed price nature of the contracts.

The perceived **disadvantages** of the EPC delivery structure include:

- the checks and balances that are usually present when design and construction are separate do not usually exist, as the design and construction are being performed through one entity
- under-design – this is not frequently detectable by the Owner’s “design checking” team, and may result in latent recurrent operational or maintenance problems and costs in the completed project
- the difficulty of making any genuine assessment or comparison of prices submitted by tenderers where designs differ (“comparing apples and oranges”)
- it can be an expensive option if the EPC Contractor seeks to extract an excessive “price premium” for the acceptance of design risk, particularly where the Owner has controlled the earlier design process

- if the Owner finds that it must direct significant variations (usually where it has not fully or properly expressed its requirements in the functional performance brief), the EPC Contractor will usually be able to extract a significant price premium for carrying them out
- an Owner must generally rely solely on one organisation for recovery of compensation if something goes wrong with the project. There may be few organisations that will be able to provide adequate financial guarantees to ensure that there is substance behind the contracting party in the event of a claim for the total failure of the project.

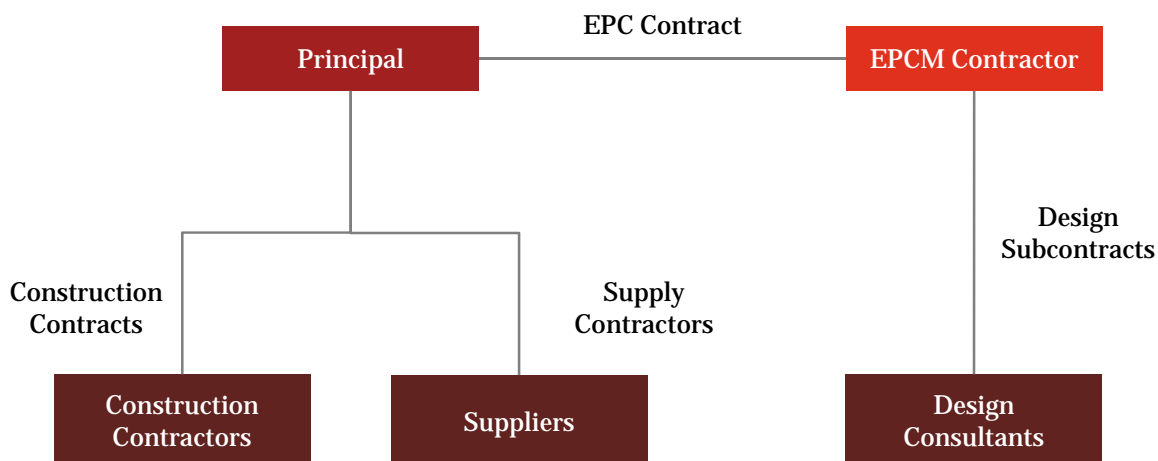
Novated EPC

There are hybrids of the EPC structure. For example, under a novated EPC approach, the Owner engages design consultants (under contracts obliging them to agree to being novated at the Owner’s direction to a construction Contractor) to carry out the design to an appropriate stage (generally speaking, a stage that is sufficiently advanced for the Owner to feel comfortable that it will receive the type and standard of facility it is seeking, but not so advanced that the benefits of an experienced construction Contractor’s buildability and other time-saving practical input will be lost), and then the Owner engages a Contractor who agrees to accept the novation of, and responsibility for the work of, the design consultants who enter into new (novated) contractual arrangements with the Contractor.

The perceived **advantages** of the novated EPC approach for the Owner include:

- the close relationship between the Owner and the design consultants at the early stages of design retains for the Owner the opportunity to monitor and provide direct input into the design process
- a closer relationship between the Contractor and the design consultants in the later stages of the design process so that the design can take account of constructability issues and methods of working of the Contractor
- the Owner retains the benefits of an EPC delivery model (including obtaining a warranty for fitness for purpose from and single point of responsibility in the Contractor, and a higher degree of certainty in the design process compared to the standard EPC structure).

The novated EPC delivery structure’s perceived main disadvantage is that it can be the most expensive delivery structure, as there will usually be a degree of overlap and repetition, as it is incumbent on a prudent Contractor to review the designer’s design in order to be comfortable with taking over responsibility for it.



EPCM

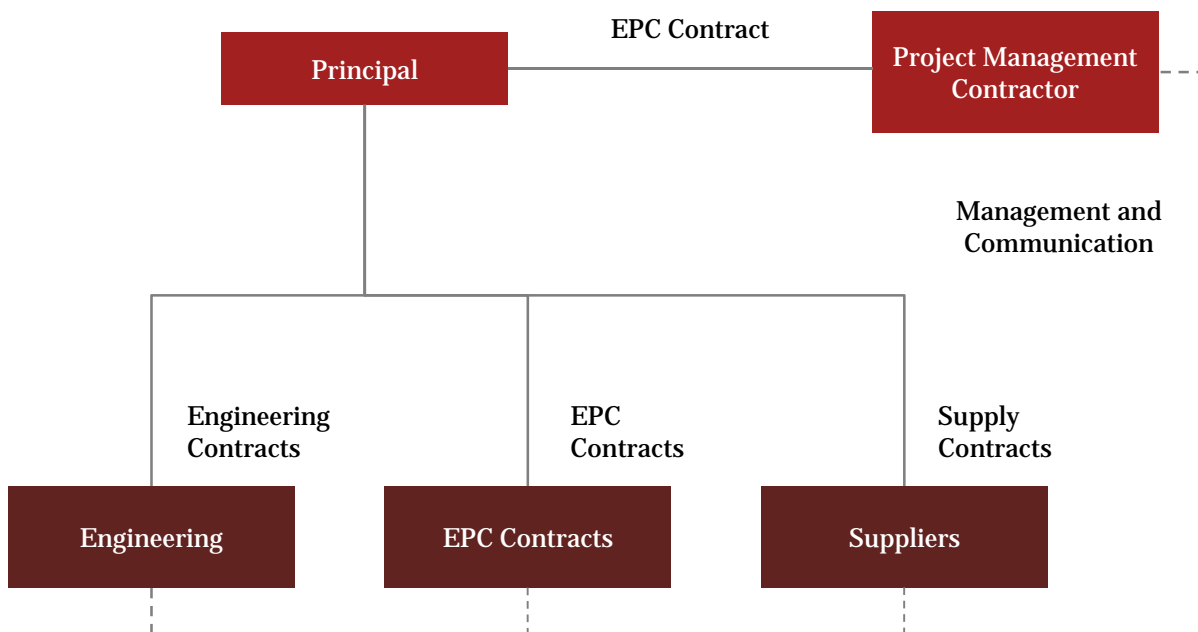
Under an EPCM structure, the Owner engages an EPCM Contractor to carry out the engineering design, and to manage the procurement and construction of the project. The Owner enters into direct contracts with suppliers and construction Contractors for the project. EPCM structures may be used in the delivery of large projects where an Owner is keen to take a “hands on” approach throughout the project, often with an expectation that getting things right will take ‘fine tuning’ to design.

The perceived **advantages** of the EPCM delivery structure include:

- time – it allows fast track construction due to phased design and construction. Project delivery can be competitive in overall design-construction time as compared with an EPC approach
- the Owner retains better control over design development (than in an EPC approach) while at the same time, the design can take into account constructability issues (such as access, construction problems and particular methods of working employed by the Contractor) by using the construction management skills of the EPCM Contractor.

The perceived **disadvantages** of the EPCM structure include:

- there is usually no firm project cost established until construction is well underway
- neither the EPCM Contractor nor the construction Contractors warrant that the project, when completed, will achieve all of the operational requirements of the project (that is, no warranty of fitness for purpose)
- there is the risk that the overall quality and performance of the project may be subordinated to the EPCM Contractor's desire to maximise cost and time performance-based incentives incorporated into its remuneration. For example, because of the inability to fix project costs, various techniques are adopted such as awarding a larger portion of the project early in the project or setting targets for each portion of the project work and then trying to maintain the targets. The techniques used to minimise cost overruns can sometimes compromise the quality of the project. In addition, the opportunity for the EPCM Contractor to cover up its own design deficiencies by the way it manages or procures construction packages is greater
- the successful integration of design and construction functions and avoidance of changes/modifications to the design are largely left to the EPCM Contractor. The Owner may not be aware of potential conflicts of interest or weaknesses in the EPCM Contractor structure that may interfere with economical and timely project completion.



PCM

Under a PCM structure, the Owner engages a Contractor to project/contract manage, or a project manager to contract/project manage to assist the Owner in the management aspects of the project delivery process. The Owner enters into direct contracts (supervised on its behalf by the PCM) with design Contractors, construction Contractors and suppliers.

Under the PCM structure the manager/Contractor is nominated as the Owner's agent to manage the direct contracts with designers, Contractors and suppliers.

The perceived **advantages** of the PCM structure for an Owner include:

- the construction management skills of the PCM can be utilised without the inherent conflict of interest of it also being the designer. The PCM can play an active role in evaluating design tendered by design Contractors, so as to effect value engineering to reduce costs and to make suggestions as to how to improve the performance outcome of the design
- individual project components are performed by the most expert specialists in those fields, so that each risk is spread to those best equipped to take it and is thus minimised for the overall project
- there can be independent evaluation of cost, schedule and construction performance (including evaluation for changes/modifications in design) by the PCM as it is not the designer or Contractor
- full time, objective co-ordination between the design and construction Contractors (both horizontally, between different designers or between different construction Contractors, and vertically, between designers and construction Contractors) is available by dedicated resources
- if the management function is well executed, project delivery can be competitive in overall design-construction time as compared with the EPC and EPCM structures.

The perceived **disadvantages** from an Owner's perspective include:

- in using a phased construction approach, the Owner begins the project before the total project price is established. The issue is whether the possibility of early completion is a sufficient trade-off for this cost risk
- the Owner has certain responsibilities and obligations under the construction contracts that must be met in a timely manner – for example, delays in the design development or supply of Principal-supplied materials and equipment can have serious time and cost consequences for the Owner. The Owner heavily relies upon the PCM to manage the Owner's performance of these responsibilities and obligations
- similar to an EPCM delivery structure, it would be difficult to procure a warranty for fitness for purpose for the Project from either of the PCM, the design Contractors or the construction Contractors as the PCM is not performing either design or construction and neither the engineering designers or the construction Contractors are solely responsible for both the design and construction of the project
- the success of project implementation to a great extent stands or falls on the planning, estimating and project management skills and resources of the PCM
- the PCM does not usually give a guarantee either in terms of overall price or the quality of the work (this contrasts with the corporate 'wrap' or guarantee of the design and construction of the whole project given under an EPC structure).

ECI

ECI is a relational procurement method which involves Contractors in the preliminary design process and, when used correctly, is an efficient means of designing and planning infrastructure projects in a less adversarial structure. ECI is similar to a design and build contract model, the key difference being that ECI seeks to obtain the benefit of the Contractor's specialist knowledge early in the project planning and design process, as opposed to novating a design to the Contractor which has been developed by the Owner.

This procurement method comprises a two stage process:

- **Stage 1:** the Contractor proceeds with the design development; works with the Owner on identifying, mitigating and apportioning engineering and constructability issues and risks; prepares a preliminary design; and submits a detailed design for pricing for stage 2 (which proceeds at the discretion of the Owner)
- **Stage 2:** construction commences, usually pursuant to a design and construct model, with key construction risks and issues already identified and defined in stage 1, allowing for a guaranteed contract price for the project. Stage 2 typically includes KPI incentivisation procedures or other ways of sharing risks and rewards to continue the collaborative and cooperative themes of the ECI procurement method.

Feed

Similar to an ECI, a FEED contract governs the front-end engineering and design processes, typically referring to planning and design (with defined groups of activities or segments) in the early stage of a project, usually commencing after provisional project approval and will normally be completed prior to final project approvals. It is especially used for process plants.

The objective of the FEED contract is to further develop and document the front-end engineering and design processes so that the Owner can obtain final project approvals; required applications to authorities can be submitted; and the resulting documents can form a basis for the design and construct contract.

The perceived **advantages** of the ECI and FEED structures for an Owner include:

- enables risks to be identified, mitigated and/or properly allocated and priced in the initial stage, allowing for a number of initial risk uncertainties to be removed so that the parties can agree to a realistic risk adjusted price
- reduces the costs of tendering as only one design process is undertaken
- value for money can be achieved through early Contractor involvement in design and pricing
- all costs and documentation are transparent and the decision-making process allows for discussion and deeper understanding of project requirements
- optimising construction efficiencies and improving profitability by reducing operating costs and ensuring more efficient delivery
- the parties can work together as partners to create unique solutions for the project, building a transparent relationship where the risks of misunderstandings are reduced and a culture of blaming each other is avoided.

The perceived **disadvantages** of both ECI and FEED structures from an Owner's perspective include:

- it does not embrace risk sharing and is therefore unsuitable for projects where risk in the construction phase remains high
- it requires commitment from the top management of both the Owner and the Contractor for the entire project as transparency, an integrated team and openness of communication remain cornerstones of the ECI method.

Appendix 1 Sample contracting and procurement plan

1 Executive summary

This Plan has been prepared by the Owner and contains an overview of the recommended approach for committing and managing major works packages in order to provide a best value, least risk outcome for the Project, through least capital and operational expenditure and considering the Project's Financiers' requirements in respect of time and cost certainty.

The recommended project delivery model is an **[insert recommended contracting model and reasons for this recommendation]**

2 Introduction

2.1 Purpose

This Contracting and Procurement Plan (**Plan**) has been developed to describe the basis for the contracting and procurement plan going forward into the Implementation Phase of the Project.

This Plan has also been developed for the purposes of providing guidance and support to the Capital Cost Estimate for the Definitive Feasibility Study (**DFS**).

As such this Plan is based upon certain key principles and assumptions which are set out in Section 2 and Section 3 of this Plan.

This Plan is an integral part of the Project Execution Plan (**PEP**) and should be read in conjunction with the PEP.

This Plan provides for a "base case scenario" for formulating the contracting and procurement plan for the execution phase of the Project. This Plan will therefore be subject to modification particularly where key assumptions made during the DFS change going forward. Key assumptions this Plan relies upon include:

- the perceived corporate structure adopted for operating the Project (refer to the PEP)
- the perceived Project business and contracting risk profile to be adopted (refer to the PEP)
- perceived market conditions during the Implementation Phase as assessed at the time of preparing this Plan
- all land access, environmental, heritage and other regulatory approvals will be obtained in accordance with the Project schedule
- input from the Owner's Lenders (including Export Credit Agencies) will influence the forms of the contracts (including pricing) and the numbers of the contracts finally proposed for each work package
- the Project will proceed in accordance with the current Project schedule.

2.2 The project

[insert description of project]

2.3 Overview

This Contracting and Procurement Plan considers three phases of works to be implemented. These are:

- **Early Works:** Works to be undertaken with preliminary funding through equity raising prior to the scheduled Project finance approval date
- **Construction Implementation Phase:** Works undertaken after the Project finance approval date to construct the [facility] and all associated infrastructure
- **Ramp Up To Operations Phase:** Specified initial operations contracts to facilitate the commencement of commercial operation by the Owner.

The areas covered by this Plan are:

- Early Works Packages (prior to Project finance approval date)
- Site Construction and Installation Packages
- Plant and Equipment Procurement (including from offshore suppliers and manufacturers)
- Service Contracts
- Purchase Orders
- Owner's Initial Operations Phase Packages.

2.4 Contract procurement and management procedures

Contract management procedures will be based upon proven delivery and management systems from the selected Contractor, Owner and its other consultants. These procedures will be developed in conjunction with the Owner during the Project Implementation Phase and cover the following functions:

- Develop and utilise a suite of shortform model contracts, with purpose written general terms and conditions and associated contract documentation
- Pre-qualify suitable Contractors, suppliers and consultants for bid lists or sole source negotiation by exception
- Competitively tender and award contract packages, or where appropriate in limited circumstances sole source and negotiate contract packages
- Administer contracts after award including initial contract obligations, variations, claims management, warranty claims and contract close outs
- Proscribe internal signing authorities and authorisations to commit capital expenditure.

3 Key principles

This Plan has been developed on the basis of the following key underlying principles:

- Safety, value and cost efficiency are the key drivers for the Project
- Engineering and design is to be progressed to an advanced stage so that the scopes of works can be defined in sufficient detail to 1) enable Contractors to provide firm lump sum prices where possible, or, 2) if lump sum pricing is not achievable because the market dictates schedule of rates payment terms, enable the Owner to accurately assess and include overrun contingency in the Capital Cost Estimate for the DFS

- Wherever possible multidiscipline vertical packages will be awarded on a fixed time and cost basis. It is generally accepted that this will contribute to the best value, least risk outcome for the Project, the Owner and the Project's Financiers
- Whenever possible "best fit" construction companies, suppliers and manufacturers (including international companies and joint ventures) will be engaged to accord with the size and complexity of scope to be performed
- Individual package values will be assessed to ensure that as a single risk exposure to the Project that the financial risk is avoided or minimised to acceptable levels
- A proven and reliable set of project management and delivery systems will be utilised for Project delivery
- Quality standards will be established, communicated to Contractors, and managed to attain the required quality in all areas
- No "new" technology will be introduced and only proven, reliable equipment will be used
- This Plan takes into account the requirements of the Project Financiers, such as time and cost certainty, the transfer of design, interface and cost overrun risk to Contractors, insurers and end users and suppliers, and Contractors nominated by any Export Credit Agencies providing funding to the Project
- Detailed contracting plans will be separately completed for each of the work package summaries set out in the Contracts and Procurement Strategy Package Plan Matrix [not provided].

4 Key assumptions

4.1 [Insert contracting model chosen] Project Delivery Model

The review process to determine the most appropriate delivery model for the Project has taken into account various factors, including:

- the degree of complexity of the engineering of the Project and the degree of control and level of input the Owner wishes to retain for the overall design
- fast-track schedule time constraints are not currently being imposed on project delivery
- the internal experience and capability of the Owner, including the Owner's degree of knowledge of design and construction and the extent and nature of the Owner's resources (including the skills and expertise of the Owner's team)
- the experience and capability of the designers and construction Contractors to be engaged to deliver the Project
- the availability of local and international Contractors
- the size of the Project (in terms of the dollar value and physical complexity)
- the requirements of equity and Lenders.

The expected "boom" in the number of energy, resources and infrastructure projects to be delivered across Australia and globally, increased pressure to fast-track delivery, limitations on Owners' resources, rising prices of commodities, materials and labour, has meant we are witnessing a re-defining of the way projects are being delivered. **[Insert contracting model]** contracting is just one of a number of alternative models becoming more wide spread.]

The key recommendation in this Plan is that the proposed contracting structure for the Project is **[Insert contracting model]** structure, whereby the **[Insert details of contracting model]**.

It anticipated that the Contractor will be appointed by means of a competitive tender initiated through an expression of interest process. However, there are potential benefits in single-source negotiations with the existing DFS service provider, which should be analysed before the Owner commits expenditure to a full blown tender process for the appointment of the Contractor. These include:

- time and cost savings to the Owner through ongoing continuity of knowledge and resources retained by using the existing DFS services provider
- liabilities for pre-FEED and FEED performed by the existing DFS services provider could be wrapped in **[Insert contracting model]**
- time and cost savings to the Owner through existing DFS services provider needing less time to validate existing engineering and design
- time and tender costs savings in the event the Owner does not get a suitable level of engagement from third party Contractors during the tender process to create a truly competitive environment because the Contractors don't believe they can compete with the existing DFS services provider.

The obvious risks in pursuing a single sourced negotiation process include:

- it does not create a competitive environment and the Owner may not receive the most competitive terms and price in the market for this major package
- the Owner may not be able to assess the best available resources, personnel and systems in the market
- the existing DFS services provider may push for a significant risk premium in its price to take design liability for the entire Project.

Recommendations will be made separately by the Owner's project team after a cost benefit analysis of the Owner pursuing single-source negotiations with the existing DFS service provider for the **[Insert contracting model]** has been completed.

4.2 Project timing

It is assumed that:

- detail design works funding (through equity raising) will be available to allow design to commence by the Owner
- early procurement activity funding (through equity raising) will be available to facilitate procurement of long lead time items by the Owner
- early works funding (through equity raising) will be available and early works on site may commence by the Owner
- project finance approval will be given by the Owner
- an estimated **[insert]** % of the total value of the works packages will be locked in/awarded (subject to financial close) prior to finance approval the Owner
- the EPCM Contractor will be appointed by the Owner to provide tendering and procurement services prior to finance approval
- site construction other than early works will commence.

4.3 General risk assumptions

It is assumed that:

- whenever possible contract packages will be constructed so as to reduce interfaces between construction Contractors, engineering disciplines and the Owner. This will reduce cost overruns and gaps in liability
- the Owner will transfer construction risks to Contractors where the cost of doing so is not prohibitive
- wherever possible, the engineering and scopes of work for construction packages will be sufficiently detailed to allow for firm lump sum pricing
- the Owner will minimise its direct procurement of plant, equipment and bulk materials. Items of plant, equipment and bulk materials will only be purchased by the Owner for issue to construction Contractors if such procurement is required to maintain the Project schedule, reduce sequencing interface (though stockpiling of critical long lead material) or would result in a substantial cost saving to the Project. Otherwise, to avoid unnecessary interface risk, Contractors will be responsible for their own procurement, inspection, expediting, transport and storage of necessary plant, equipment and materials
- common facilities, utilities and consumables will only be supplied by the Owner to Contractors where there is a clear cost and/or strategic benefit; otherwise Contractors shall be required to be “self-sufficient”
- local resources will be utilised whenever possible with Indigenous participation levels actively encouraged
- overseas procurement may be utilised if there are local resource constraints, such procurement is necessary to maintain the Project schedule, or it offers the opportunity to significantly reduce Project costs (eg through Export Credit Agency Funding or cheaper procurement)
- during the Project Implementation Phase the resources and oil and gas construction market in Australia will be very active, resulting in the Owner having to compete for key Contractors and skilled resources (note: many of the Owner’s competitors already have strategic relationships with major Contractors and suppliers. The Owner is also competing with project Owners who are able to fund their projects off-balance sheet and therefore are not restricted by the requirements of Lender and commonly offer attractive schedule of rates or cost reimbursable terms to Contractors).

4.4 Engineering risk assumptions

It is assumed that:

- engineering design for the core infrastructure, including **[insert details]**, will be sufficiently advanced (approximately **[insert]**% complete) at the time of tendering major construction packages to allow for firm lump sum pricing
- the Owner will only detail design where necessary for non-core infrastructure construction packages (such as **[insert details]**), transferring detail design risks to Contractors via novated design and construct packages where the additional cost is considered acceptable and the Owner can provide sufficient detail in respect of its engineering and performance requirements
- preferred equipment suppliers will be specified to Contractors where proven suppliers and equipment specifications are required for particular works packages. These suppliers may have previously negotiated pricing agreements with the Owner
- sufficient geotechnical information will be available and design sufficiently advanced to enable Contractors to provide firm lump sum prices where possible, or, if lump sum pricing is not achievable because the market dictates schedule of rates payment terms, enable the Owner to accurately assess and include overrun contingency in the Capital Cost Estimate for the DFS
- wherever possible the Project will utilise proven and tested designs and pre-engineered products (eg non-process buildings) to reduce design costs and interfaces between design, supply and install components of certain works packages

- for plant and equipment proven designs will be selected and component suppliers specified only if it provides a practical commonality of spares holdings and minimises spares inventories.

4.5 Construction risk assumptions

It is assumed that:

- key contracting companies will be consulted for constructability reviews during the design phase to obtain best value in design, cost and/or schedule
- whenever possible process facilities contracts will be lump sum vertical multidiscipline packages, where scope will cover detailed earthworks, concrete foundations, structural, mechanical, piping, electrical and instrumentation
- construction Contractors will be responsible for establishment of their temporary facilities and services where that Contractor (including subContractors) has sole use of such facilities (excluding common facilities across the Project which will be provided by the Owner)
- construction camps will be provided and managed by the Owner, and construction Contractors will be charged a man day rate for the use of these facilities
- railway construction contracts will be lump sum vertical multidiscipline packages including, earthworks, drainage, bridges, track laying and some signalling backbone infrastructure
- earthworks for railway formation and bulk earthworks at the mine sites and port will be undertaken on a predominantly lump sum basis:
 - Site preparation works at the mines and the port that also involve large scale bulk earthworks will be contracted as single discipline, “horizontal” packages of work
 - At the mine sites the advantageous of including site preparation earthworks and drainage works in the scope of the railway Contractor or the mine pre-strip Contractor will be considered to enable economies of scale to be realised, due to the size of equipment fleets that will need to be mobilised to carry out this work
 - It may be advantageous to include the rail loop earthworks to a defined battery limit, in the port site preparation scope to better manage the mass balance of earthworks.
- major machine items such as stackers, reclaimers, ship loaders and train unloaders will be contracted on a design, supply, erect and commission basis using proven technology and suppliers
- non process buildings such as workshops, warehouses, offices and workforce accommodation will be tendered on a detailed design and erect basis with only floor plans, functional descriptions, level of fit out, nominated equipment and material and other Owner quality and performance requirements being provided to tenderers. This will maximise the use of standardised, pre-engineered buildings and will reduce indirect (design) costs and interface/gap in liability between designers and Contractors.

Railway rolling stock maintenance workshop and facilities design will be progressed by the Owner to an advanced stage before tendering due to their specialist nature and the need for the Owner to clearly articulate its functional and performance requirements.

5 Strategy

5.1 Objective

As outlined above, the objective is to obtain “best value, least risk” outcome for the Project within risk limits acceptable to the Owner and the Lenders. To achieve this objective the strategy is to:

- award consolidated fixed time and cost vertical multidiscipline contract packages wherever possible
- transfer risk to Contractors and insurers when value is represented
- leverage upon known Contractor expertise
- progress design and scopes of work to an advanced stage prior to going to tender, rather than a “fast track” procurement approach
- ensure appropriately resourced internal Owner project team and Contractor maintained for the duration of the Project.

5.2 Market conditions

The current market Owner remains very strong with a sustained high demand for Contractor resources, construction materials and key labour skills at all levels. Whilst the impact of the global economic down turn has tempered construction activity over the past 12 month period there is now significant risk of an upturn in activity. There are several major resource and oil and gas projects now committed, or likely to be committed within the Implementation Phase of this Project. Increased market activity brings with it the risk of price escalation in both labour and materials and exacerbates the skills shortage.

Since it is difficult to predict with any certainty market events and direction, the Project must be ready to adjust to a rapidly changing and ultimately competitive market environment. Contract packaging and the timing of packages to market will therefore need to retain some flexibility in order to respond to market forces. Ensuring some degree of flexibility in contract package refinement and contracting approach will assist the Project in responding positively to market forces.

This Project contains long lead time commodities such as the procurement of rail rolling stock, marine piling, stacker/reclaimers and heavy mining equipment where the schedule risk must be managed. The Project must also take into account long lead and specialist construction contract performance such as the marine dredging works.

Market conditions will also influence the final Project content in relation to Australian and foreign labour and/or overseas fabrication and component supply. Depending on the “tightness” of the labour market this may necessitate adjustments to the final package plan.

5.3 Project delivery systems and procedures

The project delivery systems and procedures used during the Project Implementation Phase will be provided primarily by the selected Contractor (refer to Section 4 – Proposed Project Delivery Model) and further developed in conjunction with the Owner and the Owner’s other consultants.

The systems, procedures and project execution documentation provided by the Contractor will be based on proven systems and specifically tailored to meet the requirements of this Project, including this Plan. As outlined above, as part of this process the Owner, in conjunction with the Contractor and the Owner’s legal advisors, will develop a suite of Owner Model Contracts.

The Owner will review and approve the project delivery systems and model contracts recommended by the Owner, the Contractor and the Owner’s legal advisors. This shall include reviewing to ensure the safety, legal, commercial, environmental, community, engineering, technical, logistical and operational needs of the Project and the Owner are met.

5.4 Contracting approach

The vertically integrated multidisciplinary packages include civil work, structural steel work, electrical, instrumentation, all services reticulation and where appropriate fit out and material procurement. Where appropriate some site preparation bulk earth works may be structured on the basis of suitably scoped horizontal packages to obtain economies of scale for such works.

The contracting approach seeks to provide the Owner with the benefit of “price and time certainty” at the time of contract award. It is anticipated that Contractors will build into their contract pricing an upfront “construction risk allowance” of between 5% and 10% of the contract price to provide “price and time certainty” in terms of a firm lump sum, or design and construct price. However, off setting this up front “fixed price and time certainty premium” it is anticipated that the Project will benefit from:

- a reduction in the Owner’s direct construction management and site supervision costs
- a reduction in contractual claims risk due to contract awards being made on advanced design, firm pricing and reduced the Owner-Contractor interfaces
- a built in profit incentive for Contractors to deliver contracts on or ahead of schedule where the Owner’s and the Contractors interests can be aligned through appropriate drafter KPI incentive regimes in the Model Form Contract
- securing limited recourse project financing
- being able to leverage off Contractors expertise to enhance value adding opportunities.

The contracting approach provides Contractors with a high degree of freedom, allowing Contractors to control the performance of construction works with minimal Owner intervention. Each construct only and design and construct works package will require the Contractor to assume full construction and schedule risks. Contractors must be able to reasonably price these risks and the Project must be able to assess if the cost to assume these risks are reasonable and practical. The Owner must also be confident that Contractors can manage the construction risk to deliver a quality product on time before awarding contracts. Packages will therefore only be committed on a lump sum or design and construct basis if cost and overall value can be clearly demonstrated. Individual package plans will be adjusted if necessary to provide a “best value, least risk” outcome in response to either changing market conditions or commercial and construction risk factors.

The contracting approach requires a substantial up front effort in the tender and contract negotiation period. Careful preparation of tender and contract documentation including scopes of work, defined battery limits between packages, technical standards and commercial terms is critical to maximising the benefits of this approach. It is therefore recommended that this preparation process be commenced and the Contractor appointed as soon as practically possible.

It must be recognised that the use of large, vertically integrated lump sum contracts limits the Owner’s ability to vary design, scope, or schedule following the award of contracts without incurring the risk of significant additional cost increase. This is also the case with respect to design and construct contracts.

Proposed tenderers for contract and procurement packages will be subject to a comprehensive prequalification process to verify their suitability prior to being invited to tender. Selected Contractors will therefore have demonstrated a clear understanding of project scope, schedule, and capability of delivering scopes of work safely, on time and within budget to the relevant quality requirements.

Wherever possible all contract and procurement packages will be competitively tendered in the market place. This will include where deemed advantageous the requesting tenders from overseas Contractors, fabricators and suppliers. In certain instances it may be necessary to negotiate contracts from a sole source provider. Where sole sourcing is required this will be undertaken on the basis of a formal negotiation plan.

The Contracting and Procurement Strategy Package Plan [not provided] will be used as the controlling document for the Project and will be revision controlled.

5.5 Commissioning strategy

Generally with the exception of bulk earthworks packages, all major contract packages will obligate Contractors to undertake precommissioning activities to effect specified “no-load testing” requirements. Manufacturers and equipment suppliers will also be required, where it is appropriate, to provide installation engineers to assist Contractors undertaking precommissioning activities. Contractors will allow for precommissioning work in their contract pricing sufficient to complete such activities and make ready for the Owner to fully commission the works.

Except the extent that it relates to an EPC or other supply and install works package where the Contractor or supplier is solely responsible for commissioning, upon successful completion of precommissioning activities, Contractors and equipment suppliers will be required to assist the Owner to fully commission the mines and port process plants, mining, marine and rail plant and equipment and all other systems ready for sustained production use by the Owner’s Operators. Such commissioning assistance will include achieving full “load commissioning” and completing performance testing requirements. Contractors and suppliers will provide commissioning assistance on an “as required basis” with costs being charged on a schedule of rates basis. Contracts will therefore include a schedule of rates for provision of such commissioning assistance to the Owner.

5.6 Risk mitigation

Project risks will be minimised and/or managed utilising measures which include:

- award of contracts on the basis of completed design (except for EPC and D&C packages as described above) and sufficient geotechnical information
- formal prequalification processes for tenderer assessment and selection
- use of Model Form Contracts and tender documents for all contract and procurement activities, including tailored general conditions of contract
- use of pre-prepared and approved Project technical standards
- extensive use of lump sum pricing to minimise risk of capital expenditure growth
- use where appropriate of contract mechanisms such as milestone payments, bonus incentives and/or liquidated damages to drive outcomes which are consistent with all the Owner’s time, cost, safety and quality/performance objectives for the Project
- use of comprehensive contract administration procedures
- use of both in house and third party expediting and inspection personnel to monitor conformance to specifications and schedule
- use of international design personnel where appropriate
- sourcing of materials, equipment and prefabricated modules from offshore when appropriate (including from Export Credit Agencies)
- requiring Contractors to manage their own productivity risks
- consideration of modularisation of plant and facility components so as to minimise the site based labour content.

Other risks that may affect the Project for which appropriate contingency will be required include:

- Government Work Place Legislation amendments and subsequent industrial relations issues in the resources industry

- increases in fuel prices and or foreign currency fluctuations which could cause cost increases in delivery of materials and services
- ability to access labour in the event of either labour or skills shortages.

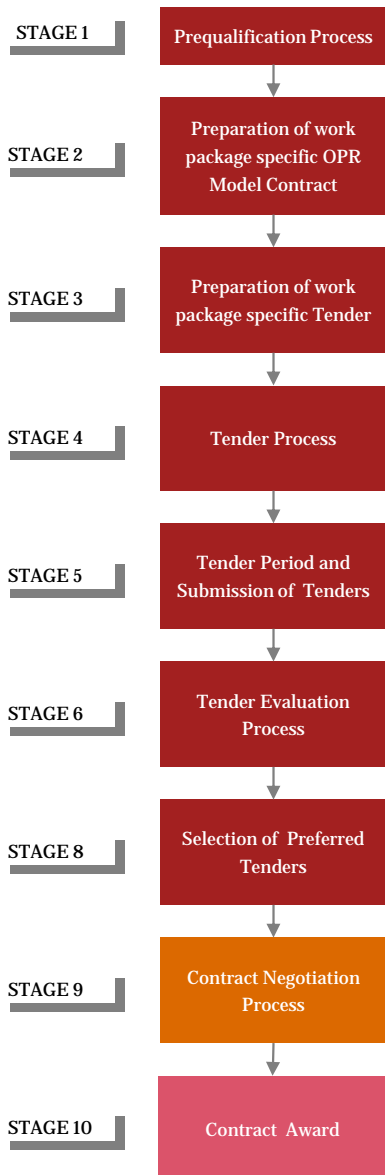
6 Project scope included

[insert scope of project]

7 Tender process

7.1 Tender and award process

In general, competitive tenders will be sought with local Contractors, suppliers and manufacturers to be given full, fair and reasonable opportunity where possible. Where sole sourcing is proposed by exception for items not listed in this Plan, a sole source justification will be required to be approved by the Owner prior to initiating negotiations, in accordance with authority levels to be established by the Project and approved by the Owner.



Note on diagram: There are various “toll gates” in the contracting process that will require the prior approval of the Owner before they can proceed to the following stage.

Prior to formal tenders being called, all proposed tenderers will be formally pre-qualified by the Project. The pre-qualification process will ensure that any organisation given the opportunity to submit a formal tender for the Project will be:

- capable of providing a substantive tender
- financially capable to undertake the proposed scope of work
- will have the resources and technical capability to perform the works.

The pre-qualification process will ensure that no tenderers are included on approved tender lists that are not capable of meeting the above criteria.

The tender selection process will address the following key areas:

- Health and Safety
- Technical Evaluation
- Contractor Capabilities
- Resources Capabilities Availability
- Schedule Requirements
- Pricing
- Financial Capacity
- Key Personnel
- Environmental Impacts
- Commitment to Indigenous employment opportunities
- Local (Australian) Content.

Compliance will be required with developed Project standards:

- Environmental
- Health and Safety
- Industrial Relations
- Cultural Heritage
- Community Relations
- Ethics and Governance.

Where deemed appropriate following initial tender evaluations, tenderers may be short-listed for further detail negotiations, or re-pricing.

Specific emphasis during tender evaluations will be placed on Contractor safety records, systems and previous industry experience. In particular tenderers will be required to demonstrate a thorough understanding of safety

requirements for the Project. Short-listed tenderers will be required to submit further detail of their proposed management process for the safe implementation and management of the contract.

Tenderers will also be required to demonstrate their ability to meet key milestone dates applicable in the contract schedule.

A recommendation for award addressing all of the above with a capital appropriation request will be raised for approval and signing by the relevant Project personnel, in accordance with levels of authority to be established by the Project.

Prior to contract award, the recommended tenderer will attend site visits to become familiarised with specific site conditions, scope of work, safety requirements and potential interface issues.

Wherever possible all contracts will be awarded on the basis of a fully conformed contract document. Notices of Award or other forms of written commitment will only be used by exception where schedule demands on the Project critical path outweigh this Principal. No such commitment will be made unless it has been approved in accordance with the levels of authority to be established by the Project.

Following contract award, a kick-off meeting will be held to discuss key items and information requirements, including contract close out issues.

7.2 Confidentiality

Tenders will be submitted in sealed packages and be delivered to a locked tender box in a secure area by the nominated tender closing date.

Tenders will be opened in accordance with a formal procedure as part of the Contract Procedures which will be developed for the Project.

Unpriced copies of tenders will only be used by the lead engineers to evaluate technical aspects of the tender submissions.

7.3 Sole sourcing policy

Contracts or supply packages may be sole sourced by exception where:

- there is proven price competitiveness
- it is necessary or significantly advantageous to the Project schedule
- it provides for a commonality of spares throughout the Owner's operations
- commercial terms and conditions are advantageous
- for specialist works or where Contractors with proprietary equipment or technology are required
- Contractors or suppliers are suitably prequalified.

7.4 Customs duty and Australian participation

The Project contracts and procurement team shall assist in identifying and minimising any exposure to customs duties. The procurement process will ensure Australian participation is maximised in accordance with the Australian Industry Participation Plan. This will involve ensuring that full consideration is given to existing Australian capabilities to provide local personnel, suppliers, fabricators, and Contractors. Full, fair and reasonable opportunity will also be given to Australian capabilities to supply equipment, bulk materials, specialised materials and services to the Project. This commitment is to allow Australian participation to be maximised and for Australian talents, skills and economic regards to be advanced. Therefore:

- preference will be given to Australian suppliers, fabricators and Contractors where technical, schedule and commercial aspects are equal to or superior to off shore providers
- project design will be based on industry requirements which incorporate Australian standards and engineering practices so as to ensure maximum participation of Australian maintenance Contractors during the lifetime of the facilities
- Australian content opportunities will be identified in the Contracts and Procurement Plan developed for each package.

Appendix 2 Sample risk register and action plan

Risk matrix						
		Consequences				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
Likelihood	5 Almost Certain:	M	H	H	VH	VH
	4 Likely:	M	M	H	H	VH
	3 Possible:	L	M	H	H	H
	2 Unlikely:	L	L	M	M	H
	1 Rare:	L	L	M	M	H

Consequences

		Consequence types						
		Financial (including impacts of delays)	Health and safety	Natural environment	Social/cultural Heritage	Community/reputation/media	Legal/govt.	Variance from Business performance objectives
Severity level	Catastrophic	>\$50M	Multiple fatalities, or significant irreversible effects	Very serious, long-term environmental impairment of ecosystem functions	Extreme social issues. Catastrophic damage to structures/items of cultural significance		Significant prosecution and fines Very serious litigation including class action	>30% variance from business objectives/KPI's
	Major	\$10M – \$50M	Single fatality and/or severe irreversible disability (>30%) to one or more persons	Significant harm with local effect	On-going serious social issues. Significant damage to structures/items of cultural significance	Serious public or media outcry (international coverage)	Major breach of regulation. Major litigation	10% – 30% variance from business objectives/KPI's
	Moderate	\$2M – \$10M	Serious injury/disabling injury	Serious medium term environmental effects		Significant adverse national media/public/NGO attention	Serious breach of regulation with investigation or report to authority with prosecution and/or moderate fine possible	5% – 10% variance from business objectives/KPI's
	Minor	\$50,000M – \$2M	Minor injury/medical treatment	Moderate, short-term effects but not affecting ecosystem functions	On-going social issues. Permanent damage to items of cultural significance	Attention from media and/or heightened concern by local community. Criticism by NGOs	Minor legal issues, non-compliances and breaches or regulations	2% – 5% variance from business objectives/KPI's
	Insignificant	<\$50,000	First aid/minor health impact	Minor effects on biological or physical environment	Minor medium-term social impacts on local population. Mostly repairable	Minor Adverse local public or media attention or complaints		<2% variance from business objectives/KPI's

Likelihood

	Description	Frequency	Probability
Almost certain	The event will occur on an annual basis	Once a year	>95%
Likely	The event has occurred several times in your career	Once every 1-5 years	60% – 95%
Possible	The event might occur once in your career	Once every 5 – 10 years	30% – 60%
Unlikely	The event does occur somewhere from time to time	Once every 10 – 30 years	5% – 30%
Rare	Heard of something like the event occurring elsewhere	Once every 30 years	<5%

Risk levels and actions

		Actions required
Risk levels	VH:	Very high risk – CEO/Board attention needed, action plans and management responsibility specified
	H:	High risk – senior executive management attention needed, action plans and management responsibility specified
	M:	Medium risk – manage by specific monitoring or response procedures, with management responsibility specified
	L:	Low risk – manage by routine procedures, unlikely to need specific application of resources

Risk Register & Action Plan – Marketing & Offtake Workstream

Number	Risk description (event and consequence)	Assessed category	Project phase	Existing controls	Risk severity before treatment			Rank	Risk treatment plan	Risk severity after treatment			Rank	Responsible person	Status of risk treatment plan
					Consequence	Likelihood	Risk Level before treatment			Consequence	Likelihood	Risk level after treatment			
1	Significant changes in product quality demands (eg: less flake graphite demanded)														
2	Material default and termination of cornerstone/ foundation customer offtake agreement (eg take or pay obligations cannot be enforced)														
3															
4															
5															
6															
7															
8															
9															
10															

Risk Register & Action Plan – Geology, Mining, Processing and O&M Workstream

Number	Risk description (event and consequence)	Assessed category	Project phase	Existing controls	Risk severity before treatment		Risk severity after treatment		Responsible person	Status of risk treatment plan
					Rank	Risk treatment plan	Rank			
1	The operating and realisation expenditure cost estimates for the for each of mining, process, tailings and overhead activities have been categorised into labour, Contractors, stores, power, water, distribution, and overheads included in the DFS are exceed									
2	Significant increase in costs of production, eg: concrete, steel, engineering costs, salaries, equipment prices, etc.									
2	Insufficient electrical and/or diesel power for mining and processing									
3	Insufficient water for mining and the processing plants									

Sample risk register and action plan

NU mb	Risk	Assessed	Project	Existing	Risk severity before treatment	Ra nk	Risk	Risk severity after treatment	Ra nk	Responsible	Status of
4	Lack of availability of competent personnel for plant operation and maintenance										
5	Unsuitable ground conditions for haulage and due to lack of maintenance and increasing traffic, thus generating dust, reduces visibility. Scarcity of water may hamper water spraying.										
6	Errors in the structural model, including the dip and dip direction of faults and discontinuity sets										
7	Errors in geotechnical model based on the RQD data from limited geotechnical logged boreholes, with the remaining parameters subject to many assumptions.										

Sample risk register and action plan

NU mb	Risk	Assessed	Project	Existing	Risk severity before treatment	Ra nk	Risk	Risk severity after treatment	Ra nk	Responsible	Status of
8	Hydrogeologic al model unavailable. Assumptions made of the location of the pre-mining water table and the drawdown, affecting slope stability										
9	Lack of security and theft of diesel and equipment storage areas are safety and security concerns, and may lead to production delays										
10	Lack of experienced mechanical fitters onsite to maintain mobile and fixed mining equipment and plant										

Risk Register & Action Plan – Marketing & Offtake Workstream

Number	Risk description (event and consequence)	Assessed category	project phase	Existing controls	Risk severity before treatment			Risk treatment plan	Risk severity after treatment			Responsible person	Status of risk treatment plan
					Consequence	Likelihood	Risk Level before treatment		Consequence	Likelihood	Risk level after treatment		
1	Significant changes in product quality demands (eg: less flake graphite demanded)												
2	Material default and termination of cornerstone/ foundation customer offtake agreement (eg take or pay obligations cannot be enforced)												
3													
4													
5													
6													
7													
8													
9													
10													

Risk Register & Action Plan – Port Access, Transport and Logistics Workstream

Number	Risk description (event and consequence)	Assessed category	Project phase	Existing controls	Risk severity before treatment		Risk severity after treatment		Responsible person	Status of risk treatment plan
					Rank	Risk treatment plan	Rank			
1	Insufficient marine and landside infrastructure, stockpiling areas and/or operating capability at the port to meet the mine short and mid term capacity requirements									
2	Insufficient marine and landside infrastructure, stockpiling areas and/or operating capability at the port to meet the mine expansion capacity requirements									
3	Inadequate mine to port road and drainage infrastructure to meet initial and expansions capacity during all seasons									
4	Blockades at the port by workers/ dissatisfied local community									

Sample risk register and action plan

NU mb	Risk	Assessed	Project	Existing	Risk severity before treatment	Ra nk Risk	Risk severity after treatment	Ra nk Responsible	Status of
5	Default by Port Operator under Port Access Agreement (eg unable to provide capacity)								
6	Port Operator seeks to renegotiate terms of Port Access Agreement once substantial mine capital expenditure has been made								
7	Port Operators at inbound ports refuse to unload product due to movement of product during shipping								
8									
9									
10									

Risk Register & Action Plan – Land Tenure and Approvals Workstream

Number	Risk description (event and consequence)	Assessed category	Project phase	Existing controls	Risk severity before treatment		Risk severity after treatment		Responsible person	Status of risk treatment plan
					Rank	Risk treatment plan	Rank			
1	Expropriation of assets by Government once mine infrastructure has been completed – see also Government Stability Workstream									
2	Government seeks to renegotiate more favourable terms of Lease and/or Royalty Agreement once substantial mine capital expenditure has been made – see also Government Stability Workstream									
3	Key project permits and approvals on the project critical path are delayed resulting in significant overall project delays and [INSERT]not being able to meet commitments to off-takers									

Sample risk register and action plan

NU mb	Risk	Assessed	Project	Existing	Risk severity before treatment	Ra nk Risk	Risk severity after treatment	Ra nk Responsible	Status of
4	Breach of environmental approvals during construction or operations result in fines and critical path delays to the overall project programme and [INSERT] not being able to meet commitments to offtakers								
5									
6									
7									
8									
9									
10									

Risk Register & Action Plan – Government Stability Workstream

Number	Risk description (event and consequence)	Assessed category	Project phase	Existing controls	Risk severity before treatment			Rank	Risk treatment plan	Risk severity after treatment			Rank	Responsible person	Status of risk treatment plan
					Consequence	Likelihood	Risk level before treatment			Consequence	Likelihood	Risk level after treatment			
1	Change in Government results in withdrawal of tenure, mining licences and/or expropriation of assets once mine infrastructure has been completed – see also Tenure and Approvals Workstream														
2															
3															
4															
5															
6															
7															
8															
9															
10															

Risk Register & Action Plan – Contracting, Procurement & Project Implementation Workstream

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status
					Consequence	Likelihood	Risk Level Before Treatment	Consequence	Likelihood			Risk Level After Treatment							
1	The capital expenditure cost estimates for the mine and associated permanent and temporary infrastructure included in the DFS are exceeded by >30% resulting in [INSERT] needing to raise significant additional equity and debt and which in turn significantly	Financial and Schedule	Post Financial Close – Implementation	1 Project Scope (and all associated infrastructure) upon which DFS cost estimates will be based is currently being defined in parallel with further geology, geotechnical and processing studies 2 DFS Study Scope currently being prepared to include clear	4	Major	3	Possible	12	High	1 Final Project Scope (and all associated infrastructure) to be locked down before DFS cost estimates are finalised 2 Cost estimate sign offs and peer reviews to be completed in line with final approved DFS Study Scope 3 Confirmation to be provided	4	Major	2	Unlikely	8	Medium		
2	The Lenders' requirements in respect of time and cost certainty and transferring design and construction risk to Contractors, results in a sub-optimal project delivery model under current market conditions and unacceptable risk contingency included in the	Financial and Schedule	Pre-Financial Close – Study	1 Financial and legal advisors have been engaged to advise on Lender requirements 2 Contracting and Procurement Plan initiated that will identify how the Lender requirements will be met 3 Market sounding/informal discussions with Contractors on what	4	Major	3	Possible	12	High	1 Complete the Contracting and Procurement Plan with input from financial advisors on Lender requirements and what is achievable in the current finance market 2 Works packages are currently to be structured (bundled) under an EPC Contract to minimise t	4	Major	2	Unlikely	6	Medium		
3	EPC Contractor does not ultimately demonstrate to [INSERT] or the Lenders during the DFS that it has the capacity or resources to deliver all of the Works Packages, leading to a re-examination of the DFS estimate and delays in achieving estimate deadlines	Financial and schedule	Pre-Financial Close – Study	1 Market sounding and selection of major Chinese Contractor with proven track record to participate in DFS study 2 Initial due diligence carried out on balance sheet and capability	4	Major	3	Possible	12	High	1 Further due diligence on EPC Contractor's capability and balance sheet (and that of it parent companies) to be carried as early as possible in the DFS 2 Ongoing senior management engagement with shortlisted EPC Contractor 3 Market sounding to be ca	4	Major	2	Unlikely	8	Medium		

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status
					Consequence	Likelihood		Risk Level Before Treatment	Consequence			Likelihood		Risk Level After Treatment					
4	EPC Contractor will not accept full lump sum/fixed time and cost risk for all of the Works Packages resulting in [INSERT] not being able to get accurate or competitive prices for the DFS and/or prices include unacceptable risk contingency, leading to a	Financial and Schedule	Pre-Financial Close – Study	<ol style="list-style-type: none"> Contracting and Procurement Plan initiated that will identify the limited scope of work to be let on SOR basis Market sounding/informal discussions with Contractors on what is achievable in the market Existing consultants and internal advice 	4	Major	4	Likely	16	High	<ol style="list-style-type: none"> Complete the Contracting and Procurement Plan Ongoing senior management engagement with shortlisted EPC Contractor Market sounding to be carried out to identify fall back position and alterative EPC Contractors Seek ongoing advice from exis 	4	Major	2	Unlikely	8	Medium		
5	EPC study Contractor and other Contractors not prepared to make investment in tendering, early works, etc. on an unapproved project or they refuse to accept commercial conditions associated with the tender validity period, resulting in [INSERT] not getting	1	Pre-Financial Close – Study	<ol style="list-style-type: none"> Market sounding/informal discussions with Contractors on interest in the market [INSERT] has identified and interested EPC Contractor who is participating in the DFS Engineering and design is being progress to an advanced stage so that the 	3	Moderate	3	Possible	9	High	<ol style="list-style-type: none"> [INSERT] senior management to continue engagement with EPC study Contractor and engage with other major Contractors and suppliers to build strategic relationships as early as possible Utilise PCM Contractors strategic relationships with Contractor 	4	Moderate	2	Unlikely	6	Medium		
6	Inability to prepare sufficiently scoped work packages for the DFS estimate resulting in unacceptable risk contingency being included in the DFS estimate and leading to a re-examination of the estimate to ensure project viability and delays I achieving e	Financial and schedule	Pre-Financial Close – Study	<ol style="list-style-type: none"> Time has been allocated to progress engineering and design to an advanced stage (rather than the fast tracked design and procurement model) so that the scopes of works can be defined in sufficient detail to enable Contractors to provide firm prices when 	3	Moderate	3	Possible	9	High	<ol style="list-style-type: none"> Continue to allow sufficient time (as opposed to fast-track delivery) to progress engineering and design to an advanced stage so that the scopes of works and [INSERT] requirements for the packages can be defined in sufficient detail to enable Contractor 	3	Moderate	2	Unlikely	6	Medium		

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status
					Consequence	Likelihood		Risk Level Before Treatment	Consequence			Likelihood		Risk Level After Treatment					
7	Despite due diligence being carried out on the shortlisted EPC Contractor during the DFS, given the size of the Works Package the EPC Contractor does not ultimately have the capacity or resources to deliver all of the Works Packages on time, leading to de	Financial and Schedule	Post Financial Close – Construction	Refer to actions listed in risk 3 above.	4	Major	4	Likely	16	High	1 PCM to be engaged to supervise and closely monitor performance of EPC Contractor 2 Robust security package to be included in EPC Contract with parent company guarantee and appropriate amount of performance security in the form of enforceable on-demand	4	Major	2	Unlikely	8	Medium		
8	Not having fully documented EPC Contract scope of work and performance specification at the time of awarding the EPC Contract, leading to uncertainty and [INSERT] paying unacceptable Contractor claims.	Financial and schedule	Post Financial Close – Construction	1 Time has been allocated to progress engineering and design to an advanced stage (rather than the fast tracked design and procurement model) so that the scopes of works can be defined in sufficient detail to enable Contractors to provide firm prices when	3	Moderate	3	Possible	9	High	1 Allow sufficient time and don't go to the market until the tender packages are advanced and the scopes of works and contractual terms for the packages have been defined in sufficient detail to enable Contractors to provide firm prices where possible 2	3	Moderate	2	Unlikely	6	Medium		
9	[INSERT] may not be able to transfer all of the existing design prepared in the DFS and responsibility for timely delivery of all design going forward to the EPC Contract, leading to gaps in design liability and delays in delivering the design.	Financial and schedule	Post Financial Close – Construction	1 Gap analysis of design risk has been initiated; 2 Using proven technology where possible; 3 Shortlisted EPC Contractor has been engaged to prepare concept design for the DFS	3	Moderate	3	Possible	9	High	1 PCM model whereby the PCM Contractor/other engineering specialists will peer review critical design prepared by EPC Contractor 2 Starting point in EPC Contract is that EPC Contractor accepts responsibility for all design on a full turnkey basis; 3 E	3	Moderate	2	Unlikely	6	Medium		

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status	
					Consequence	Likelihood	Risk Level Before Treatment	Consequence	Likelihood			Risk Level After Treatment								
10	The interests of [INSERT] and the PCM Contractor are not sufficiently aligned to drive Project outcomes that are consistent with [INSERT] objectives in respect of cost, time, quality, safety etc.	Financial and Schedule	Post-Financial Close – Construction	<ol style="list-style-type: none"> Incentivised PCM contract model is being proposed; [INSERT] existing consultant and internal advice is being sought on what is achievable on KPI incentive regimes on past projects and in the current market. 	4	Major	3	Possible	12	High	1	Allow sufficient time so that [INSERT] requirements and objectives for the PCM contract can be defined in sufficient detail to enable [INSERT] and the PCM Contractor to agree a target man hour schedule and estimated target cost so the PCM Contractor can	3	Moderate	2	Unlikely	6	Medium		
11	Inefficiencies and difficulties arising from [INSERT] appointing multiple PCM Contractors, including having different management systems, agreeing on standard form contracts, quality of services, approach to KPIs etc.	Financial and schedule	Post-Financial Close – Construction	<ol style="list-style-type: none"> Single PCM contract model is being proposed. 	2	Minor	4	Likely	8	Medium	<ol style="list-style-type: none"> Single PCM Contractor to be appointed [INSERT] to engage internal resource to match PCM structure and systems 	2	Minor	2	Unlikely	4	Low			
12	DFS estimate will include duplication of overheads and contingencies causing re-examination of estimate and delays in achieving a robust DFS estimate by the deadlines.	Schedule	Pre-Financial Close – Study	<ol style="list-style-type: none"> [INSERT] have engaged Internal and external technical, legal, commercial and insurance resources; External peer reviews are being conducted; Engineering and design is being progress to an advanced stage so that the scopes of works and [INSERT] r 	2	Minor	3	Possible	6	Medium	<ol style="list-style-type: none"> Further value engineering analysis to be completed Estimate figures are not to be released until the value engineering process is complete Allow sufficient time to complete value engineering process External peer review to be completed 	2	Minor	2	Unlikely	4	Low			
13	Industrial Relations implications and renegotiation of labour agreements has adverse impact on contracting and procurement.	Financial and schedule	Post-Financial Close – Construction	<ol style="list-style-type: none"> [INSERT] considering engaging external IR consultant with specific regional expertise. 	2	Minor	3	Possible	6	Medium	<ol style="list-style-type: none"> IR Strategy document to be prepared Establish project wide minimum IR requirements Include status of Contractor's IR agreements and consider renegotiation cycles in the tender evaluation process; IR risk to be assumed by Contractors under co 	2	Minor	2	Unlikely	4	Low			

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status
					Consequence	Likelihood		Risk Level Before Treatment	Consequence			Likelihood		Risk Level After Treatment					
14	Difficulty procuring suitably priced project wide insurance to meet Lenders requirements.	Financial	Post Financial Close – Construction	1 [INSERT] have engaged insurance broker to advise on insurance available in the market	2	Minor	2	Unlikely	4	Low	1 Insurance strategy to be prepared including an assessment of the benefits and risks of [INSERT] vs. Contractor procured insurance strategy; 2 Gap analysis on Contractor insurances to establish residual project insurance cover required.	2	Minor	1	Rare	3	Low		
15	Contractors are not prepared to tender because of the nature of the [INSERT] SPV set up for the project entering into the Works Packages, resulting in [INSERT] not getting a suitable level of engagement to create a truly competitive environment and leading	Financial and schedule	Pre-Financial Close – Study	1 Market sounding and selection of major Chinese Contractor with proven track record to participate in DFS study 2 Initial due diligence carried out on balance sheet and capability	4	Major	3	Possible	12	High	1 Ongoing senior management engagement with shortlisted EPC Contractor; 2 Explanation given to EPC Contractor regarding financing arrangements to provide further comfort it will get paid; 3 Consider advance payments for mobilisation and long lead procu	4	Major	2	Unlikely	12	Medium		
16	Single PCM Contractor is not able to provide adequate resources or suitably experienced personnel.	Financial and schedule	Post Financial Close – Construction	1 [INSERT] existing consultant and internal advice is being sought on what is available in the current market	4	Major	3	Possible	12	High	1 Market testing and sounding through EO1 process; 2 Resources and key personnel will be key criteria in the EO1 and tender evaluation processes; 3 LDs and/or KPI incentive payments for resourcing and key personnel to be incorporated into the PCM cont	4	Major	2	Unlikely	8	Medium		

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status
					Consequence	Likelihood			Risk Level Before Treatment			Consequence	Likelihood			Risk Level After Treatment			
17	Delay and disruption caused by loss of continuity in progress, knowledge and resource if [INSERT] does not appoint the current lead and other study Contractors during the implementation phase.	Financial and Schedule	Post Financial Close – Construction	<ol style="list-style-type: none"> Market sounding and selection of team of DFS Contractors with proven track record to participate in DFS study; Initial due diligence carried out on balance sheet and capability; 	4	Major	3	Possible	12	High	<ol style="list-style-type: none"> Further due diligence on EPC Contractor's capability and balance sheet (and that of its parent companies) to be carried as early as possible in the DFS Ongoing senior management engagement with shortlisted EPC Contractor; Market sounding to be carried out 	4	Major	2	Unlikely	6	Medium		
18	[INSERT] is not able to source adequate resources or suitably experienced personnel.	Financial and schedule	Post Financial Close – Construction		4	Major	3	Possible	12	High	<ol style="list-style-type: none"> [INSERT] internal resourcing/employment strategy to be prepared Ongoing market testing of availability of key personnel; Engage HR resource to prepare strategy and locate key personnel. 	3	Major	2	Unlikely	6	Medium		
19	EPC Contractor unable to fund start up working capital on such a large scope of work, resulting in [INSERT] having to fund significant advance payments.	Financial	Post Financial Close – Construction	<ol style="list-style-type: none"> Financial and legal advisors have been engaged to advise on Lender requirements; Market sounding/informal discussions with Contractors on what is expected in the market; [INSERT] existing consultants and internal advice is being sought on what 	3	Moderate	3	Possible	9	High	<ol style="list-style-type: none"> Complete the Contracting and Procurement Plan with input from financial advisors on Lender requirements and what is achievable in the current finance market (eg debt funding for the advance payment) Ongoing engagement with shortlisted EPC Contractor 	3	Moderate	2	Unlikely	8	Medium		

Sample risk register and action plan

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment					Rank	Risk Treatment Plan	Risk Severity After Treatment					Rank	Responsible Person	Status		
					Consequence	Likelihood			Risk Level Before Treatment			Consequence	Likelihood		Risk Level After Treatment						
20	Contractors do not finish on time causing [INSERT] to incur additional accommodation and overheads associated with [INSERT] workers accommodation camps.	Financial	Post Financial Close – Construction	1 [INSERT] existing consultants and internal team are analysis potential risk and cost implications.	4	Major	4	Likely	16	High		1 Prepare Accommodation Plan 2 Pass on costs to Contractors in construction contracts through LDs and indemnities; 3 Allow contingency in DFS estimate to fund additional costs until recovered from Contractors.	2	Minor	3	Possible	6	Medium			

Risk Register & Action Plan – Financing Workstream

Number	Risk Description (Event and Consequence)	Assessed Category	Project Phase	Existing Controls	Risk Severity Before Treatment			Rank	Risk Treatment Plan	Risk Severity After Treatment			Rank	Responsible Person	Status of Risk Treatment Plan
					Consequence	Likelihood	Risk Level Before Treatment			Consequence	Likelihood	Risk Level After Treatment			
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

EPC and EPCM Contracts

5 *EPC Contracts in the oil and gas sector*

Introduction

Engineering, procurement and construction (EPC) contracts are a common form of contract used to undertake construction works by the private sector on large-scale and complex oil and gas projects.¹ Under an EPC Contract a Contractor is obliged to deliver a complete facility to a Developer who need only turn a key to start operating the facility, hence EPC Contracts are sometimes called turnkey construction contracts. In addition to delivering a complete facility, the Contractor must deliver that facility for a guaranteed price by a guaranteed date and it must perform to the specified level. Failure to comply with any requirements will usually result in the Contractor incurring monetary liabilities.

It is timely to examine EPC Contracts and their use in oil and gas projects given the bad publicity they have received, particularly in contracting circles. A number of Contractors have suffered heavy losses and, as a result, a number of Contractors now refuse to enter into EPC Contracts in certain jurisdictions. This problem has been exacerbated by a substantial tightening in the insurance market. Further, some project proponents believe that the project delivery methods such as engineering, procurement, and construction management (EPCM) contracts give them greater flexibility and that they have the expertise and experience required to control costs in an EPCM Contract.

However, because of their flexibility, the value and the certainty Sponsors and Lenders derive from EPC Contracts, the authors believe EPC Contracts will continue to be a pre-eminent form of construction contract used on large-scale oil and gas projects in most jurisdictions.²

This paper will only focus on the use of EPC Contracts in the oil and gas sector. However, the majority of the issues raised are applicable to EPC Contracts used in all sectors.

Prior to examining power project EPC Contracts in detail, it will be useful to explore the basic features of an oil and gas project.

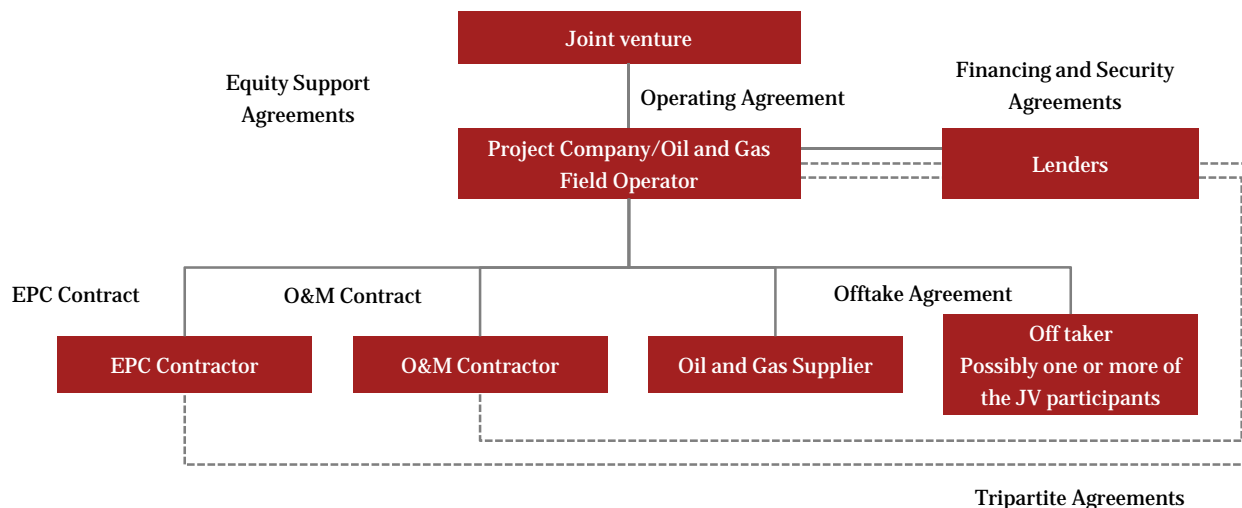
¹ By this we mean oil, gas and derivatives of the same such as methanol, fertiliser etc. See also David Roe, *LNG Trade: A Review of Markets, Projects and Issues in the Changing World of LNG*, (SMI Publishing Ltd, 2003), 119.

² Some jurisdictions, such as the USA, use alternative structures which separate the work into various components.

Basic features of an oil and gas project

The contractual structure

The diagram below illustrates the basic contractual structure of a simple project-financed oil and gas project using an EPC Contract.³



The detailed contractual structure will vary from project to project. However, most projects will have the basic structure illustrated above.⁴ As can be seen from the diagram, the operating company will usually enter into agreements which cover the following elements:

- An operating agreement with the joint venture (**JV**) participants which gives the operating company the right to construct and operate the oil and gas facility. Usually, each JV participant will sell its own share of the product. This is even the case if participants jointly market the product. Traditionally the operating agreement is a joint operating agreement (**JOA**) between the JV participants whereby one of the participants operates the facility.

There is a significant advantage in this structure as it means that one body is responsible for the delivery of projects, relationships with government, customers and Contractors. The JOA governs how liability is spread amongst participants with respect to any liabilities or obligations incurred by the Operator. Generally, the participants have several liabilities and the Operator makes cash calls on them in proportion to their respective JV shares to fund capital expenditure. A special purpose vehicle can also be created to fulfil this role but usually the control of this vehicle will be in the hands of one of the JV participants.

- Many oil and gas companies have the ability to use corporate finance from the balance sheet, however this is not always the case. There are a number of smaller oil and gas companies looking to develop assets that are regarded as stranded or too small for the larger companies to operate profitably. These companies require finance to carry out these developments. In these cases, the EPC Contractor must be a large, experienced participant in the industry which the Sponsors and Lenders are confident can successfully deliver the project, and is large enough to cope with losses if it does not. Further, companies with a successful track record mean that insurance for the project is easier to obtain. The larger Owners will still use an EPC Contract or design and construct contract for parts of large projects even if self-management, EPCM or other project management contracts are used for the balance of the project.

³ An LNG project would also usually involve a shipping deal and/or pipeline aspects.

⁴ Even if the project is developed by a large conglomerate there are usually contracts between the various entities. For example, where the proponent will also be the supplier there will often be a supply agreement put in place so that the new project is properly defeasible and business property accountable

- There are a number of contractual approaches that can be taken to construct an oil and gas facility. An EPC Contract is one approach. Another option is to have a supply contract, a design agreement and construction contract with or without a project management agreement. The project management can be, and often is, carried out by the proponent itself. Alternatively, an EPCM or other project management contract can be used for managing the project. The choice of contracting approach will depend on a number of factors including the time available, the Lender's requirements, the sophistication of the proponent, and the identity of the Contractor(s). The major advantage of the EPC Contract over the other possible approaches is that it provides for a single point of responsibility. This is discussed in more detail below.

Interestingly, on large project-financed derivative projects the Contractor is increasingly becoming one of the Sponsors (ie an equity participant) in the Project Company. This is not the case in traditional oil and gas projects. Contractors will ordinarily sell down their interest after financial close because, generally speaking, Contractors will not wish to tie up their capital in operating projects. In addition, once construction is complete the rationale for having the Contractor included in the Ownership consortium often no longer exists. Similarly, once construction is complete a project will normally be reviewed as lower risk than a project in construction, therefore, all other things being equal, the Contractor should achieve a good return on its investments.

- Large overarching operating and maintenance agreements (**O&M Agreements**) are uncommon in the oil and gas industry. Industry participants are generally in the business of managing these facilities. However, components of the operations are usually contracted out.
- Offtake agreements govern the sale of the product of the project. For gas projects and hydrocarbon derivative projects these agreements are crucial to the development proceeding. Financiers will not lend the funds and boards will not approve the project if there are no customers locked in to take the product. The impact of the offtake agreement is on practical completion. If there are take or pay agreements it is vital that the project is ready to deliver product from inception date of the offtake agreement or it will face penalties. It may even have to buy product on the open market to meet its obligations. As these markets are usually thinly traded these can be a costly exercise. Oil projects can be underpinned by long-term contracts but it is not the norm.
- Financing and security agreements with the Lenders to finance the development of the project.

Accordingly, the construction contract is only one of a suite of documents on an oil and gas project. Importantly, the promoter or the JV participants of the project operate and earn revenues under contracts other than the construction contract. Therefore, the construction contract must, where practical, be tailored so as to be consistent with the requirements of the other project documents. As a result, it is vital to properly manage the interfaces between the various types of agreements. These interface issues are discussed in more detail later in this paper.

Bankability

A bankable contract is a contract with a risk allocation between the Contractor and the Project Company that satisfies the Lenders. Lenders focus on the ability (or more particularly the lack thereof) of the Contractor to claim additional costs and/or extensions of time as well as the security provided by the Contractor for its performance. The less comfortable the Lenders are with these provisions the greater amount of equity support the Sponsors will have to provide. In addition, Lenders will have to be satisfied as to the technical risk. Obviously price is also a consideration but that is usually considered separately to the bankability of the contract because the contract price (or more accurately the capital cost of the project facility) goes more directly to the economic bankability of the project as a whole.

Before examining the requirements for bankability it is worth briefly considering the appropriate financing structures and lending institutions. Historically, the most common form of financing for oil and gas projects is project financing. Project financing is a generic term that refers to financing secured only by the assets of the project itself. Therefore, the revenue generated by the project must be sufficient to support the financing. Project financing is also often referred to as either "non-recourse" financing or "limited recourse" financing.

The terms "non-recourse" and "limited recourse" are often used interchangeably, however, they mean different things. "Non-recourse" means there is no recourse to the project Sponsors at all and "limited recourse" means, as the name suggests, there is limited recourse to the Sponsors. The recourse is limited both in terms of when it

can occur and how much the Sponsors are forced to contribute. In practice, true non-recourse financing is rare. In most projects the Sponsors will be obliged to contribute additional equity in certain defined situations.

Traditionally, project financing was provided by commercial Lenders. However, as projects became more complex and financial markets more sophisticated project finance also developed. In addition, as well as bank borrowings, Sponsors are also using more sophisticated products like credit-wrapped bonds, securitisation of future cash flows and political, technical and completion risk insurance to provide a portion of the necessary finance.

In assessing bankability, Lenders will look at a range of factors and assess a contract as a whole. Therefore, in isolation it is difficult to state whether one approach is or is not bankable. However, generally speaking, the Lenders will require the following:

- a fixed completion date
- a fixed completion price
- no or limited technology risk
- output guarantees
- liquidated damages for both delay and performance
- security from the Contractor and/or its parent
- large caps on liability (ideally, there would be no caps on liability, however, given the nature of EPC Contracting and the risks to the Contractors involved there are almost always caps on liability)
- restrictions on the ability of the Contractor to claim extensions of time and additional costs.

An EPC Contract delivers all of the requirements listed above in one integrated package. This is one of the major reasons why they are the predominant form of construction contract used on large-scale project financed infrastructure projects and why they can be effective on a variety of oil and gas projects.

Basic features of an EPC Contract

The key clauses in any construction contract are those which impact on:

- time
- cost
- quality.

The same is true of EPC Contracts. However, EPC Contracts tend to deal with issues with greater sophistication than other types of construction contracts. This is because, as mentioned above, an EPC Contract is designed to satisfy the Lenders' requirements for bankability.

EPC Contracts provide for:

- **A single point of responsibility:** The Contractor is responsible for all design, engineering, procurement, construction, commissioning and testing activities. Therefore, if any problems occur the Project Company need only look to one party – the Contractor – to fix the problem and provide compensation. As a result, if the Contractor is a consortium comprising several entities the EPC Contract must state that those entities are jointly and severally liable to the Project Company.
- **A fixed contract price:** Risk of cost overruns and the benefit of any cost savings are to the Contractor's account. The Contractor usually has a limited ability to claim additional money which is limited to

circumstances where the Project Company has delayed the Contractor or has ordered variations to the works.

- **A fixed completion date:** EPC Contracts include a guaranteed completion date that is either a fixed date or a fixed period after the commencement of the EPC Contract. If this date is not met the Contractor is liable for delay liquidated damages (DLDs). DLDs are designed to compensate the Project Company for loss and damage suffered as a result of late completion of the facility. To be enforceable in common law jurisdictions, DLDs must be a genuine pre-estimate of the loss or damage that the Project Company will suffer if the facility is not completed by the target completion date. The genuine pre-estimate is determined by reference to the time the contract was entered into.

DLDs are usually expressed as a rate per day which represents the estimated extra costs incurred (such as extra insurance, supervision fees and financing charges) and losses suffered (revenue forgone) for each day of delay. In addition, the EPC Contract must provide for the Contractor to be granted an extension of time when it is delayed by the acts or omissions of the Project Company.

- **Performance guarantees:** The Project Company's revenue will be earned by operating the facility. Therefore, it is vital that the facility performs as required in terms of output, efficiency and reliability. Therefore, EPC Contracts contain performance guarantees backed by performance liquidated damages (PLDs) payable by the Contractor if it fails to meet the performance guarantees.

PLDs must also be a genuine pre-estimate of the loss and damage that the Project Company will suffer over the life of the project if the facility does not achieve the specified performance guarantees. As with DLDs, the genuine pre-estimate is determined by reference to the time the contract was signed.

It is possible to have a separate contract that sets out the performance requirements, testing regime and remedies. However, this can create problems where the EPC and the performance guarantees do not match. In our view, the preferred option is to have the performance guarantees in the EPC Contract itself.

PLDs and the performance guarantee regime and its interface with the DLDs and the delay regime is discussed in more detail in the section on key performance clauses.

- **Caps on liability:** As mentioned above most EPC Contractors will not, as a matter of company policy, enter into contracts with unlimited liability. Therefore, EPC Contracts for oil and gas projects cap the Contractor's liability at a percentage of the contract price. This varies from project to project, however, a cap of 100 percent of the contract price is common. In addition, there are normally subcaps on the Contractor's liquidated damages liability. For example, DLDs and PLDs might each be capped at 20 percent of the contract price with an overall cap on both types of liquidated damages of 30 percent of the contract price.

There will also likely be a prohibition on the claiming of consequential losses. Put simply, consequential losses are those losses which do not flow directly from a breach of contract but which were in the reasonable contemplation of the parties at the time the contract was entered into. This used to mean heads of damage like loss of profit. However, loss of profit is now usually recognised as a direct loss on project-financed projects and, therefore, would be recoverable under a contract containing a standard exclusion of consequential loss clause. Nonetheless, care should be taken to state explicitly that liquidated damages can include elements of consequential loss. Given the rate of liquidated damages is pre-agreed most Contractors will not object to this exception.

In relation to both caps on liability and exclusion of liability it is common for there to be some exceptions. The exceptions may apply to either or both the cap on liability and the prohibition on claiming consequential losses. The exceptions themselves are often project specific, however, some common examples include cases of fraud or wilful misconduct, in situations where the minimum performance guarantees have not been met and the cap on delay liquidated damages has been reached and breaches of the intellectual property warranties.

- **Security:** It is standard for the Contractor to provide performance security to protect the Project Company if the Contractor does not comply with its obligations under the EPC Contract. The security takes a number of forms including:

- A bank guarantee or bond for a percentage, normally in the range of 5–15 percent, of the contract price. The actual percentage will depend on a number of factors including the other security available to the Project Company, the payment schedule (because the greater the percentage of the contract price unpaid by the Project Company at the time it is most likely to draw on security ie to satisfy DLD and PLD obligations the smaller the bank guarantee can be), the identity of the Contractor and the risk of it not properly performing its obligations, the price of the bank guarantee and the extent of the technology risk.
 - Retention ie withholding a percentage (usually 5–10 percent) of each payment. Provision is often made to replace retention monies with a bank guarantee (sometimes referred to as a retention guarantee (bond)).
 - Advance payment guarantee, if an advance payment is made.
 - A parent company guarantee – this is a guarantee from the ultimate parent (or other suitable related entity) of the Contractor which provides that it will perform the Contractor’s obligations if, for whatever reason, the Contractor does not perform.
- **Variations:** The Project Company has the right to order variations and agree to variations suggested by the Contractor. If the Project Company wants the right to omit works either in their entirety or to be able to engage a different Contractor this must be stated specifically. In addition, a properly drafted variations clause should make provision for how the price of a variation is to be determined. In the event the parties do not reach agreement on the price of a variation the Project Company or its representative should be able to determine the price. This determination is subject to the dispute resolution provisions. In addition, the variations clause should detail how the impact, if any, on the performance guarantees is to be treated. For some larger variations the Project Company may also wish to receive additional security. If so, this must also be dealt with in the variations clause.
 - **Defects liability:** The Contractor is usually obliged to repair defects that occur in the 12 to 24 months following completion of the performance testing. Defects liability clauses can be tiered ie the clause can provide for one period for the entire facility and a second, extended period, for more critical items.
 - **Intellectual property:** The Contractor warrants that it has rights to all the intellectual property used in the execution of the works and indemnifies the Project Company if any third parties’ intellectual property rights are infringed.
 - **Force majeure:** The parties are excused from performing their obligations if a *force majeure* event occurs.
 - **Suspension:** The Project Company usually has the right to suspend the works.
 - **Termination:** This sets out the contractual termination rights of both parties. The Contractor usually has very limited contractual termination rights. These rights are limited to the right to terminate for non-payment or for prolonged suspension or prolonged *force majeure* and will be further limited by the tripartite or direct agreement between the Project Company, the Lenders and the Contractor. The Project Company will have more extensive contractual termination rights. They will usually include the ability to terminate immediately for certain major breaches or where the Contractor becomes insolvent, and the right to terminate after a cure period for other breaches. In addition, the Project Company may have a right to terminate for convenience. It is likely the Project Company’s ability to exercise its termination rights will also be limited by the terms of the financing agreements.
 - **Performance specification:** Unlike a traditional construction contract, an EPC Contract usually contains a performance specification. The performance specification details the performance criteria that the Contractor must meet, but does not dictate how they must be met. This is left to the Contractor to determine. A delicate balance must be maintained. The specification must be detailed enough to ensure the Project Company knows what it is contracting to receive but not so detailed that if problems arise the Contractor can argue they are not its responsibility.

Whilst there are, as described above, numerous advantages to using an EPC Contract, there are some disadvantages. These include the fact that it can result in a higher contract price than alternative contractual structures. This higher price is a result of a number of factors not least of which is the allocation of almost all the construction risk to the Contractor. This has a number of consequences, one of which is that the Contractor

will have to factor in to its price the cost of absorbing those risks. This will result in the Contractor building contingencies into the contract price for events that are unforeseeable and/or unlikely to occur. If those contingencies were not included the contract price would be lower. However, the Project Company would bear more of the risk of those unlikely or unforeseeable events. Sponsors have to determine, in the context of their particular project, whether the increased price is worth paying.

As a result, Sponsors and their advisers must critically examine the risk allocation on every project. Risk allocation should not be an automatic process. Instead, the Project Company should allocate risk in a sophisticated way that delivers the most efficient result. For example, if a project is being undertaken in an area with unknown geology and without the time to undertake a proper geotechnical survey, the Project Company may be best served by bearing the site condition risk itself as it will mean the Contractor does not have to price a contingency it has no way of quantifying. This approach can lower the risk premium paid by the Project Company. Alternatively, the opposite may be true. The Project Company may wish to pay for the contingency in return for passing on the risk which quantifies and caps its exposure. This type of analysis must be undertaken on all major risks prior to going out to tender.

Another consequence of the risk allocation is the fact that there are relatively few engineering and construction companies that can and are willing to enter into EPC Contracts. As mentioned in the Introduction some bad publicity and a tightening insurance market have further reduced the pool of potential EPC Contractors. The scarcity of EPC Contractors can also result in relatively high contract prices.

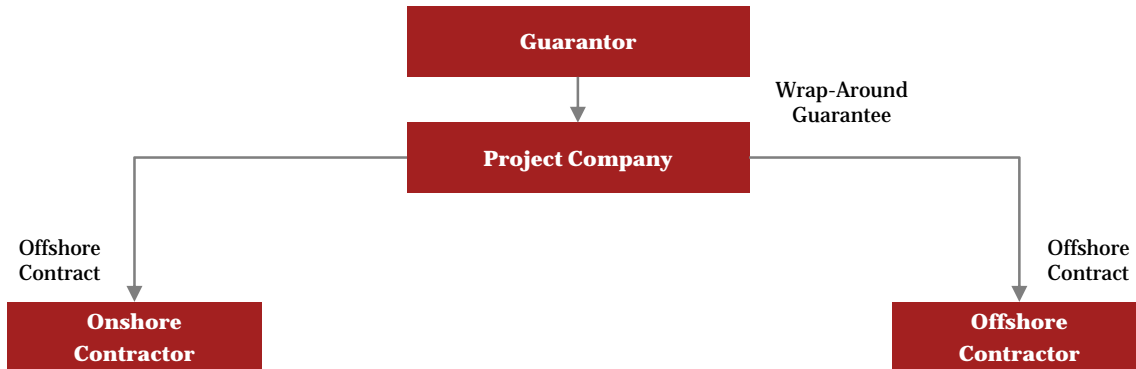
Another major disadvantage of an EPC Contract becomes evident when problems occur during construction. In return for receiving a guaranteed price and a guaranteed completion date, the Project Company cedes most of the day-to-day control over the construction. Therefore, Project Companies have limited ability to intervene when problems occur during construction. The more a Project Company interferes during the construction, the greater the likelihood of the Contractor claiming additional time and costs. In addition, interference by the Project Company will make it substantially easier for Contractors to defeat claims for liquidated damages and defective works.

Obviously, ensuring the project is completed satisfactorily is usually more important than protecting the integrity of the contractual structure. However, if a Project Company interferes with the execution of the works they will, in most circumstances, have the worst of both worlds. They will have a contract that exposes them to liability for time and costs incurred as a result of their interference without any corresponding ability to hold the Contractor liable for delays in completion or defective performance. The same problems occur even where the EPC Contract is drafted to give the Project Company the ability to intervene. In many circumstances, regardless of the actual drafting, if the Project Company becomes involved in determining how the Contractor executes the works then the Contractor will be able to argue that it is not liable for either delayed or defective performance.

As a result, it is vitally important that great care is taken in selecting the Contractor and in ensuring the Contractor has sufficient knowledge and expertise to execute the works. Given the significant monetary value of EPC Contracts, and the potential adverse consequences if problems occur during construction, the lowest price should not be the only factor used when selecting Contractors.

Split EPC Contract

Particularly in the Middle East and South Asia region (eg Egypt, India), one common variation to the basic EPC Contract structure illustrated above is a split EPC Contract. Under a split EPC Contract, the EPC Contract is, as the name implies, split into two or more separate contracts. The basic split structure involves splitting the EPC Contract into an onshore construction contract and an offshore supply contract:



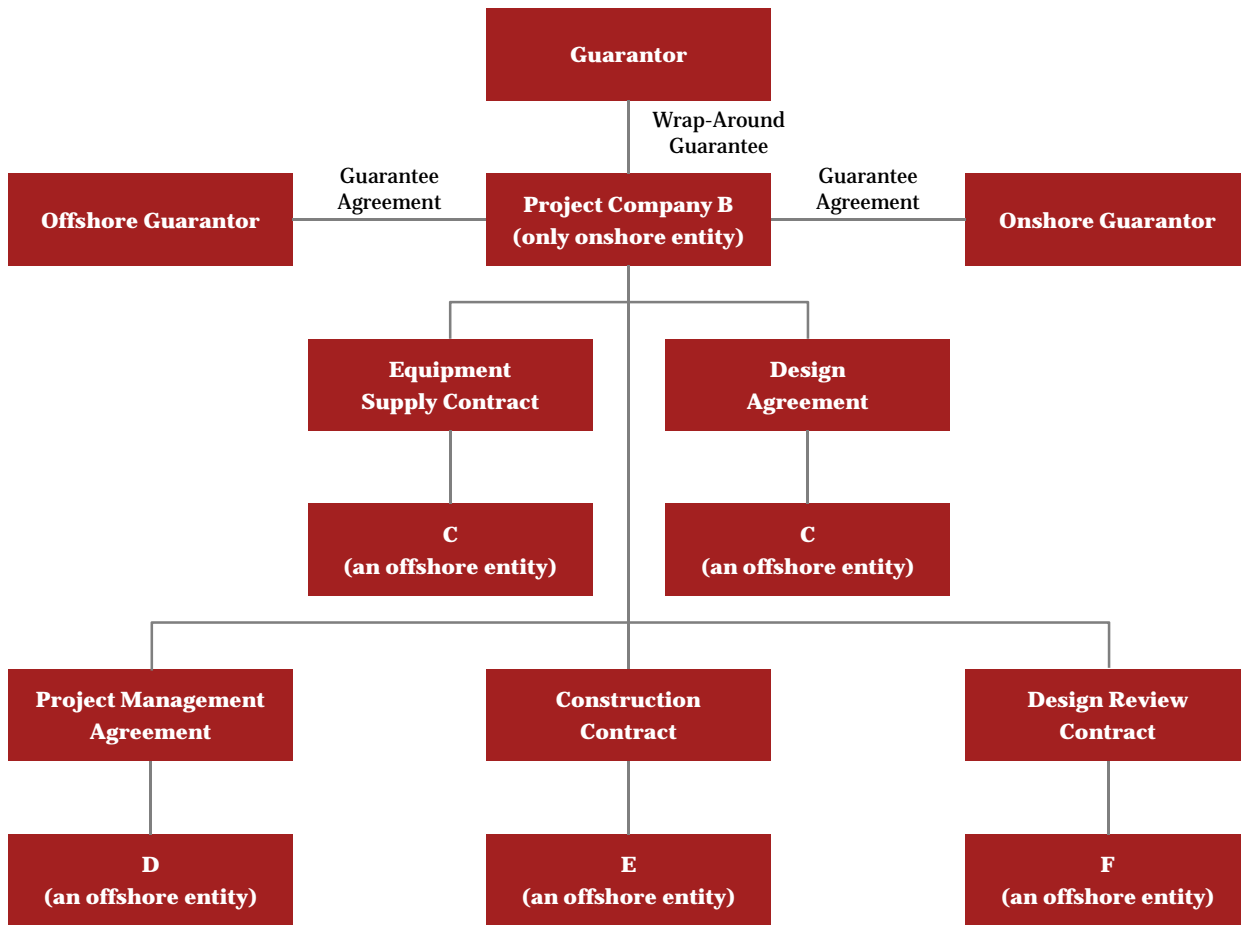
Example simple split EPC Contract structure

There are two main reasons for using a split contract. The first is because it can result in a lower contract price as it allows the Contractor to make savings in relation to onshore taxes, in particular on indirect and corporate taxes in the onshore jurisdiction. The second is because it may reduce the cost of complying with local licensing regulations by having more of the works, particularly the design works, undertaken offshore.⁵ In addition, in some countries which impose restrictions on who can carry out certain activities like engineering and design services, splitting the EPC Contract can also be advantageous because it can make it easier to repatriate profits. Below is a diagram illustrating a more complex split EPC structure we have used previously that dealt with both tax and licensing issues.

Example complex split EPC Contract structure

Whilst a split EPC Contract can result in cost savings, there are risks to the Project Company in using such a structure. This mainly arises because of the derogation from the principle of single point responsibility.

⁵ We have prepared a paper that deals with the variations and complications in split EPC contracts in the MESA region. You should consult that paper if you want more information on this topic.



Unlike a standard EPC Contract, the Project Company cannot look only to a single Contractor to satisfy all the contractual obligations (in particular, design, construction and performance). Under a split structure, there are at least two entities with those obligations. Therefore, a third agreement, a wrap-around guarantee,⁶ is used to deliver a single point of responsibility despite the split.

Under a wrap-around guarantee, an entity, usually either the offshore Supplier or the parent company of the contracting entities, guarantees the obligations of both Contractors. This delivers a single point of responsibility to the Project Company and the Lenders. The contracting entities will then enter into a separate agreement to determine how, as between themselves, liability is to be apportioned. However, that agreement is not relevant for the purposes of this paper.

In addition, the wrap-around guarantee will, if properly drafted, prevent the various Contractors from relying on the defaults of the other parties to avoid performing their contractual obligations – a tactic known as a “horizontal defence.” The wrap-around guarantee should also prevent a Contractor from relying on the Project Company’s default where the Project Company’s default was a result, either directly or indirectly, of the non-performance, underperformance or delay in performance of any of the other Contractors under their respective contracts.

⁶ Modularisation is now a common form of construction and is an example where a split EPC contract may be particularly appropriate.

In addition to horizontal defences, the wrap-around guarantee should deal with the following matters:

- **Guarantees and indemnities:** the Guarantor must guarantee the performance of the totality of the works and the ability of the separate parts to work seamlessly.
- **Liquidated damages:** This is linked to the issue of horizontal defences discussed above. The wrap-around guarantee must ensure that liquidated damages are paid regardless of which Contractor is late and which Contractor fails to perform. Similarly, the aggregate cap of liability in the wrap-around guarantee must override any caps on liability in the split contracts themselves.
- **Provision of a performance bond by the Guarantor or its parent:** It is usually prudent to have the Guarantor provide security for their obligations under the wrap-around guarantee. This may be in addition to or in replacement of the security provided under the EPC Contracts themselves. It will depend on the particular requirements of each project.
- **Liability (and limitation of liability) of the Guarantor:** The Guarantor's liability should be equal to the aggregate liability of the contracting entities under the split EPC Contracts.
- **Duration of the wrap-around guarantee:** The wrap-around guarantee should remain in force for as long as possible to offer the Project Company additional protection in the event latent defects occur. In any event, it should remain in force until the expiry of the defects liability period or the resolution of any dispute arising out of or in connection with the construction of the facility, whichever is the later.
- **Dispute resolution:** The procedures should be identical to those in the project documents and allow the Project Company to consolidate claims.
- **Termination:** Termination of an EPC Contract should automatically terminate the other EPC Contract(s) and the wrap-around guarantee (except in respect of accrued liability).
- **Tax indemnity:** Ideally the Contractor(s) should indemnify the Project Company for any taxes or penalties payable as a result of the split.

In addition, the wrap-around guarantee should contain provisions dealing with the practical consequences of splitting the contract and how the contracts and the project should be administered. For example, there should also be clauses dealing with more mundane issues like notices. Notices issued under one contract should be deemed to be notices under the other contracts.

Whenever an EPC Contract is split the primary driver both of the general structure of the split and the particular drafting approach must be achieving a tax-effective structure. Therefore, tax advice from experts in the relevant jurisdiction must be obtained and those experts must review the split contracts and the wrap-around guarantee.

Key oil – and gas-specific clauses in oil and gas EPC Contract

General interface issues

As noted in the previous section, an EPC Contract is one of a suite of agreements necessary to develop an oil and gas project. Therefore, it is vital that the EPC Contract properly interfaces with those other agreements. In particular, care should be taken to ensure the following issues interface properly:

- commencement and completion dates
- liquidated damages amounts and trigger points
- caps on liability
- indemnities
- entitlements to extensions of time

- insurance
- *force majeure*
- intellectual property.

Obviously, not all these issues will be relevant for all agreements. In addition to these general interface issues that apply to most types of projects, there are also oil and gas project issues that must be considered. These issues are many and varied and depend largely on the nature of the project. For example, on a methanol project the facility must be ready and able to accept feedstock; process it to meet rigorous occupational health, safety and environmental guidelines; and export methanol to meet Supplier and customer demands and contractual obligations. An oil project handling a light sweet crude is usually more simple. They are discussed in more detail below.

Some major oil – and gas-specific interface issues are:

- access for the Contractor to the feedstock and to a receiving vessel⁷ to allow timely completion of construction, commissioning and testing
- consistency of commissioning and testing regimes⁸
- feedstock, product and by-product (such as greenhouse emissions) specification requirements
- interface issues between the relevant government agencies and System Operator and the Contractor. In particular, whilst the Project Company must maintain a long-term/comfortable relationship with either the government or the System Operator the Contractor does not.

Feedstock and product storage

Usually, EPC Contracts will not provide for the handover of the facility to the Project Company until all commissioning and reliability trialling has been successfully completed.^{8,9,10} This raises the important issue of the supply of feedstock and other consumables (such as water) and receipt of product during testing and commissioning and the need for the EPC Contract to clearly define the obligations of the Project Company in providing feedstock and sufficient storage or product demand to fully and properly commission and test the facility.

Lenders need to be able to avoid the situation where the Project Company's obligation to ensure feedstock and storage (or demand) is uncertain. This will result in protracted disputes with the Contractor concerning the Contractor's ability to commission and test the facility at design conditions and to obtain extensions of time in situations where delay has been caused as a result of the failure or otherwise of the Project Company to provide sufficient (or sufficient quality) feedstock or storage.

⁷ This is also called a coordination agreement, an administration agreement or an umbrella deed.

⁸ Or a sufficient source of demand.

⁹ Some owners will, however, carry out the commissioning themselves.

¹⁰ This sounds basic but it has been a relatively common error. The same issue arises if the testing, using this example, was contingent on another related facility being able to accept some or all of the product.

With respect to the obligation to ensure the availability of sufficient feedstock, the Project Company is the most appropriate party to bear this risk vis-à-vis the Contractor, since the Project Company usually either builds the infrastructure itself or has it provided through the relevant supply agreement. Issues that must be considered include:

- (a) Where is the feedstock from, an existing facility or a new facility?
- (b) If it is a new facility, what is the timing for completion of that facility – will it fit in with the timing under the EPC Contract? What are the risks, and what can be done if it is not finished?
- (c) What happens if insufficient feedstock is available or not available at all? Contractors will usually want the test to be deemed complete in these circumstances.
- (d) What happens if the feedstock does not meet the specification? The contract should provide an adjustment mechanism to cope with this.

With respect to the Contractor's ability to export product, the EPC Contract must adequately deal with this risk and satisfactorily answer the following questions to ensure the smooth testing, commissioning and achieving commercial operation:

- (a) What is the extent of the product export obligation? It will usually be an obligation to provide storage or demand for the product for a fixed period of time.
- (b) What is the timing for the commencement of this obligation? Does the obligation cease at the relevant target date of completion? If not, does its nature change after the date has passed?
- (c) What is the obligation of the Project Company to provide demand or storage in cases where the Contractor's commissioning/plant is unreliable – is it merely a reasonableness obligation?
- (d) What happens if the Project Company fails to provide sufficient storage or demand? Contractors will usually seek to have the test deemed complete.

Many EPC Contracts are silent on these matters or raise far more questions than they actually answer. Given that the Project Company's failure will stem from restrictions imposed on it under its supply or offtake agreements, the best answer is to back-to-back the Project Company's obligations under the EPC Contract (usually to provide an extension of time and/or costs) with its supply and offtake agreements. This approach will not eliminate the risk associated with commissioning and testing issues but will make it more manageable.

Our experience in a variety of projects has taught us that the issue of availability and quality of feedstock, and availability of storage or demand is a matter which must be resolved at the contract formation stage.

Interfacing of commissioning and testing regimes

It is also important to ensure the commissioning and testing regimes in the EPC Contract mirror the requirements of any supply and offtake agreements. Mismatches only result in delays, lost revenue and liability for damages under the EPC Contract, supply or offtake agreements, all of which have the potential to cause disputes. This is even more important where the EPC Contract is part of a larger development, say a methanol plant on the back of a new gas processing plant. For example, the gas processing plant might need the methanol plant to take its product as much as the methanol plant needs its product. If the interface is not carefully thought through and agreed in the contracts then this interface becomes a ripe area for disputes.

Testing/trialling requirements under any related contracts must provide the necessary Project Company satisfaction under the EPC Contract and the offtake and supply contracts. Relevant testing issues which must be considered include:

- Will any related facilities be required for the tests/trialling?
- Is there consistency between obtaining handover from the Contractor under the EPC Contract and commercial operation. It is imperative to ensure that there is a sufficient window for the EPC Contract facility and any related facilities to be tested. Contractors will usually want an agreement that where the

testings/trials cannot be undertaken, through no fault of its own, in a reasonable time frame the test/trials are deemed to be completed. It must not be forgotten that various certifications will be required at the Lender level. The last thing the Lenders will want is the process to be held up by their own requirements for certification. To avoid delays and disruption it is important that the Lenders' engineer is acquainted with the details of the project and, in particular, any potential difficulties with the testing regime. Therefore, any potential problems can be identified early and resolved without impacting on the commercial operation of the facility.

- Is the basis of the testing to be undertaken mirrored under both the EPC Contract and related facility? Using the methanol example above, is the gas processing plant required to produce the same quality gas that the methanol plant is to be tested/trialled, and ultimately operated on?
- On what basis are various environmental tests to be undertaken?
- What measurement methodology is being used? Are the correction factors to be applied under the relevant documents uniform? Are references to international standards or guidelines to a particular edition or version?
- Are all tests necessary for the Contractor to complete under the EPC Contract able to be performed as a matter of practice?

Significantly, if the relevant specifications are linked to guidelines such as the international environmental guidelines, consideration must be given to changes which may occur in these guidelines. The EPC Contract reflects a snapshot of the standards existing at a time when that contract was signed. It may be a number of years post that date in which the actual construction of the project is undertaken thus allowing for possible mismatches should the legislative/guidelines have changed as regards environmental concerns. It is important that there is certainty as to which standard applies. Is it the standard at the time of entering the EPC Contract or is it the standard which applies at the time of testing?

Consideration must therefore be given to the appropriate mechanism to deal with potential mismatches between the ongoing obligation of complying with laws and the Contractor's obligation to build to a specification agreed at a previous time. Consideration must be given to requiring satisfaction of guidelines as "amended from time to time"¹³. The breadth of any change of law provision will be at the forefront of any review.

The above issues raise the importance of the testing schedules to the EPC Contract. The size and importance of the various projects to be undertaken must mean that the days where schedules are attached at the last minute without being subject to review are gone as they are part and parcel of the EPC Contract.

Discrepancies between the relevant testing and commissioning requirements will only serve to delay and distract all parties from the successful completion of testing and reliability trials.

These are all areas where lawyers can add value to the successful completion of projects by being alert to and dealing with such issues at the contract formation stage.

Feedstock specification issues

The nature of the feedstock to be supplied to the Contractor under the EPC Contract is also another important issue. Where there is a supply agreement^{13,14} it is vitally important that adequate review is done at the EPC Contract level to ensure that the feedstock being provided under the supply agreement meets the requirements of the EPC Contract. Similar consideration will need to be given to any Project Company where it will be

¹¹ It is often the case that if amendments to the design are required as a result the contractor will be entitled to extensions of time and/or variations.

¹² As opposed to the situations of the operator of the new plant also supplying the feedstock, which presents its own problems.

¹³ This can be in the form of steady state testing.

¹⁴ It can be termed that handover will not occur until the performance guarantees are met and there will be a regime by which this may be waived.

supplying the feedstock itself. This is a common area of dispute where the facility fails to meet the specification in test/trials.

Differing feedstock specification requirements can only result in delay, cost claims and extension of time claims at the EPC Contract level. Feedstock specification issues will be hidden away in the schedules. Again, watch out for those schedules.

In addition, where certain tests require specific types or quality of feedstock the review should check that there are arrangements in place for that type of quality of feedstock to be provided. If the specification calls for a wide range of feedstock and provision is made for it to be tested as such, it will be meaningless if the test cannot be undertaken. For example, the production plan might show an increase in a certain contaminant over the life of the project so a test on the lower quality feedstock may be appropriate, but only if it is possible to do so.

Interface issues between a supply or Offtaker and the EPC Contractor

At a fundamental level, it is imperative that the appropriate party corresponds with the relevant Supplier or Offtaker/System Operator during construction on issues such as the provision of offtake facilities/feedstock requirements/testing requirements and timing.

The Project Company must ensure the EPC Contract states clearly that it is the appropriate party to correspond with the Supplier or Offtaker and the System Operator. Any uncertainty in the EPC Contract may unfortunately see the EPC Contractor dealing with the Supplier or Offtaker and/or the System Operator thus possibly risking the relationship of the Project Company with its customer. Significantly, it is the Project Company which must develop and nurture an ongoing and long-term relationship with the Offtaker. On the other hand, it is the Contractor's prime objective to complete the project on time or earlier at a cost which provides it with significant profit. The clash of these conflicting objectives in many cases does not allow for such a smooth process. Again, the resolution of these issues at the EPC Contract formation stage is imperative.

Key Performance clauses in oil and gas EPC Contract

Rationale for imposing liquidated damages

Almost every construction contract will impose liquidated damages for delay and impose standards in relation to the quality of construction. Most, however, do not impose PLDs. EPC Contracts impose PLDs because the achievement of the performance guarantees has a significant impact on the ultimate success of a project. Similarly, it is important that the facility commences operation on time because of the impact on the success of the project and because of the liability the Project Company will have under other agreements. This is why DLDs are imposed. DLDs and PLDs are both sticks used to motivate the Contractor to fulfil its contractual obligations.

The law of liquidated damages

As discussed above, at common law liquidated damages must be a genuine pre-estimate of the Project Company's loss. If liquidated damages are more than a genuine pre-estimate they will be a penalty and unenforceable. There is no legal sanction for setting a liquidated damages rate below that of a genuine pre-estimate, however, there are the obvious financial consequences.

In addition to being unenforceable as a penalty, liquidated damages can also be void for uncertainty or unenforceable because they breach the Prevention Principle. Void for uncertainty means, as the term suggests, that it is not possible to determine how the liquidated provisions work. In those circumstances, a court will void the liquidated damages provisions. The Prevention Principle was developed by the courts to prevent Employers ie Project Companies from delaying Contractors and then claiming DLDs. It is discussed in more detail below in the context of extensions of time.

Prior to discussing the correct drafting of liquidated damages clauses to ensure they are not void or unenforceable, it is worth considering the consequences of an invalid liquidated damages regime. If the EPC Contract contains an exclusive remedies clause the result is simple – the Contractor will have escaped liability unless the contract contains an explicit right to claim damages at law if the liquidated damages regime fails.

If, however, the EPC Contract does not contain an exclusive remedies clause the non-challenging party should be able to claim at law for damages they have suffered as a result of the challenging party's non-defective or defective performance. What then is the impact of the caps in the now invalidated liquidated damages clauses?

Unfortunately, the position is unclear in common law jurisdictions and a definitive answer cannot be provided based upon the current state of authority. It appears the answer varies depending upon whether the clause is invalidated due to its character as a penalty, or because of uncertainty or unenforceability. Our view of the current position is set out below. We note that whilst the legal position is not settled the position presented below does appear logical.

Clause invalidated as a penalty: When liquidated damages are invalidated because they are a penalty (ie they do not represent a genuine pre-estimate of loss), the cap on liquidated damages will not act as a cap on damages claims at general law. We note that it is rare for a court to find liquidated damages are penalties in contracts between two sophisticated, well-advised parties.

Clause invalidated due to acts of prevention by the Principal: Where a liquidated damages clause is invalidated due to an act of prevention by the Principal for which the Contractor is not entitled to an extension of time, the liquidated damages or its cap will not act as a cap on damages claims at general law.

Clause void for uncertainty: A liquidated damages clause which is unworkable or too uncertain to ascertain what the parties intended is severed from the EPC Contract in its entirety, and will not act as a cap on the damages recoverable by the Principal from the Contractor. Upon severance, the clause is, for the purposes of contractual interpretation, ignored.

However, it should be noted that the threshold test for rendering a clause void for uncertainty is high, and courts are reluctant to hold that the terms of a contract, in particular a commercial contract where performance is well advanced, are uncertain.

Drafting of liquidated damages clauses

Given the role liquidated damages play in ensuring EPC Contracts are bankable, and the consequences detailed above of the regime not being effective, it is vital to ensure they are properly drafted to ensure Contractors cannot avoid their liquidated damages liability on a legal technicality.

Therefore, it is important, from a legal perspective, to ensure DLDs and PLDs are dealt with separately. If a combined liquidated damages amount is levied for late completion of the works, it risks being struck out as a penalty because it will overcompensate the Project Company. However, a combined liquidated damages amount levied for underperformance may undercompensate the Project Company.

Our experience shows that there is a greater likelihood of delayed completion than there is of permanent underperformance. One of the reasons why projects are not completed on time is Contractors are often faced with remedying performance problems. This means, from a legal perspective, if there is a combination of DLDs and PLDs, the liquidated damages rate should include more of the characteristics of DLDs to protect against the risk of the liquidated damages being found to be a penalty.

If a combined liquidated damages amount includes an NPV or performance element the Contractor will be able to argue that the liquidated damages are not a genuine pre-estimate of loss when liquidated damages are levied for late completion only. However, if the combined liquidated damages calculation takes on more of the characteristics of DLDs the Project Company will not be properly compensated if there is permanent underperformance.

Where there is significant under-performance such as a failure to meet the minimum performance guarantees, an EPC contract will generally provide for remedies other than the payments of PLDs. For example, the range of remedies usually included in an EPC contract in relation to the minimum performance guarantees not being met are:

- The contractor is required to replace the facility or any part of the facility and repeating the performance tests until the minimum performance guarantees are met
- Termination of the contract with the project company completing the facility or engaging a third party to do so
- Rejection of the facility or part of the facility in which case the contractor must repay all sums paid by the project company and the cost of dismantling and clearing the facility or part of the facility
- Issuing a certificate of completing despite the contractor not meeting the minimum performance guarantees with a corresponding reduction in the contract price.

It is also important to differentiate between the different types of PLDs to protect the Project Company against arguments by the Contractor that the PLDs constitute a penalty. For example, if a single PLDs rate is only focused on output and not efficiency, problems and uncertainties will arise if the output guarantee is met but one or more of the efficiency guarantees are not. In these circumstances, the Contractor will argue that the PLDs constitute a penalty because the loss the Project Company suffers if the efficiency guarantees are not met are usually smaller than if the output guarantees are not met.

Drafting of the performance guarantee regime

Now that it is clear that DLDs and PLDs must be dealt with separately it is worth considering, in more detail, how the performance guarantee regime should operate. A properly drafted performance testing and guarantee regime is important because the success or failure of the project depends, all other things being equal, on the performance of the oil and gas facility.

The major elements of the performance regime are:

- testing
- guarantees
- liquidated damages

Liquidated damages were discussed above. Testing and guarantees are discussed below.

Testing

Performance tests may cover a range of areas. Three of the most common are:

Functional tests: These test the functionality of certain parts of the facility. For example, pumps, valves, pressure vessels etc. They are usually discrete tests which do not test the facility as a whole. Liquidated damages do not normally attach to these tests. Instead, they are absolute obligations that must be complied with. If not, the facility will not reach the next stage of completion (for example, mechanical completion or provisional acceptance).

Emissions tests: These test compliance against environmental requirements. Again, these are normally absolute obligations because the consequences of failure can be as severe as being forced to shut down the facility. These tests should ensure the most stringent obligations imposed on the Project Company, whether by government regulations or by Lenders, are met. Emissions tests occur at various times, including during and after guarantee tests. Liquidated damages are sometimes levied if the Contractor fails the emissions tests. However, given emissions tests are usually related to environmental approvals, it is likely that the facility will not be able to operate if the emissions tests are failed. Therefore, passing the emissions tests is usually an absolute obligation not linked to liquidated damages.

Guarantee tests: These test the ability of the facility to meet the performance criteria specified in the contract. There are often minimum and guaranteed levels of performance specified and, as discussed above, providing the minimum levels are met the consequence of failure is normally the payment of PLDs. Satisfaction of the minimum performance guarantees¹² is normally an absolute obligation. The minimum performance guarantees should be set at a level of performance at which it is economic to accept the facility. Lenders' input will be vital in determining this level. However, it must be remembered that Lenders have different interests to the Sponsors. Lenders will, generally speaking, be prepared to accept a facility that provides sufficient income to service the debt. However, in addition to covering the debt service obligations, Sponsors will also want to receive a return on their equity investment. If that will not be provided via the sale of product because the Contractor has not met the performance guarantees, the Sponsors will have to rely on the PLDs to earn their return. In some projects, the guarantee tests occur after handover of the facility to the Project Company. This means the Contractor no longer has any liability for DLDs during performance testing.

In our view, it is preferable, especially on project-financed projects, for handover to occur after completion of performance testing. This means the Contractor continues to be liable for DLDs until either the facility operates at the guaranteed level or the Contractor pays PLDs where the facility does not operate at the guaranteed level. Obviously, DLDs will be capped (usually at 20 percent of the contract price) therefore, the EPC Contract should give the Project Company the right to call for the payment of the PLDs and accept the facility. If the Project Company does not have this right the problem mentioned above will arise, namely, the Project Company will not have received its facility and will not be receiving any DLDs as compensation.

It is common for the Contractor to be given an opportunity to modify the facility if it does not meet the performance guarantees on the first attempt. This is because the PLD amounts are normally very large and most Contractors would prefer to spend the time and the money necessary to remedy performance instead of paying PLDs. Not giving Contractors this opportunity will likely lead to an increased contract price both because Contractors will over-engineer the facility and will build a contingency for paying PLDs into the contract price. The second reason is because in most circumstances the Project Company will prefer to receive a facility that operates at 100 per cent capacity and efficiency. The right to modify and retest is another reason why DLDs should be payable up to the time the performance guarantees are satisfied.

If the Contractor is to be given an opportunity to modify and retest the EPC Contract must deal with who bears the costs of the additional feedstock and consumables required to undertake the retesting. The cost of the feedstock in particular can be significant and should, in normal circumstances, be to the Contractor's account because the retesting only occurs if the performance guarantees are not met at the first attempt.

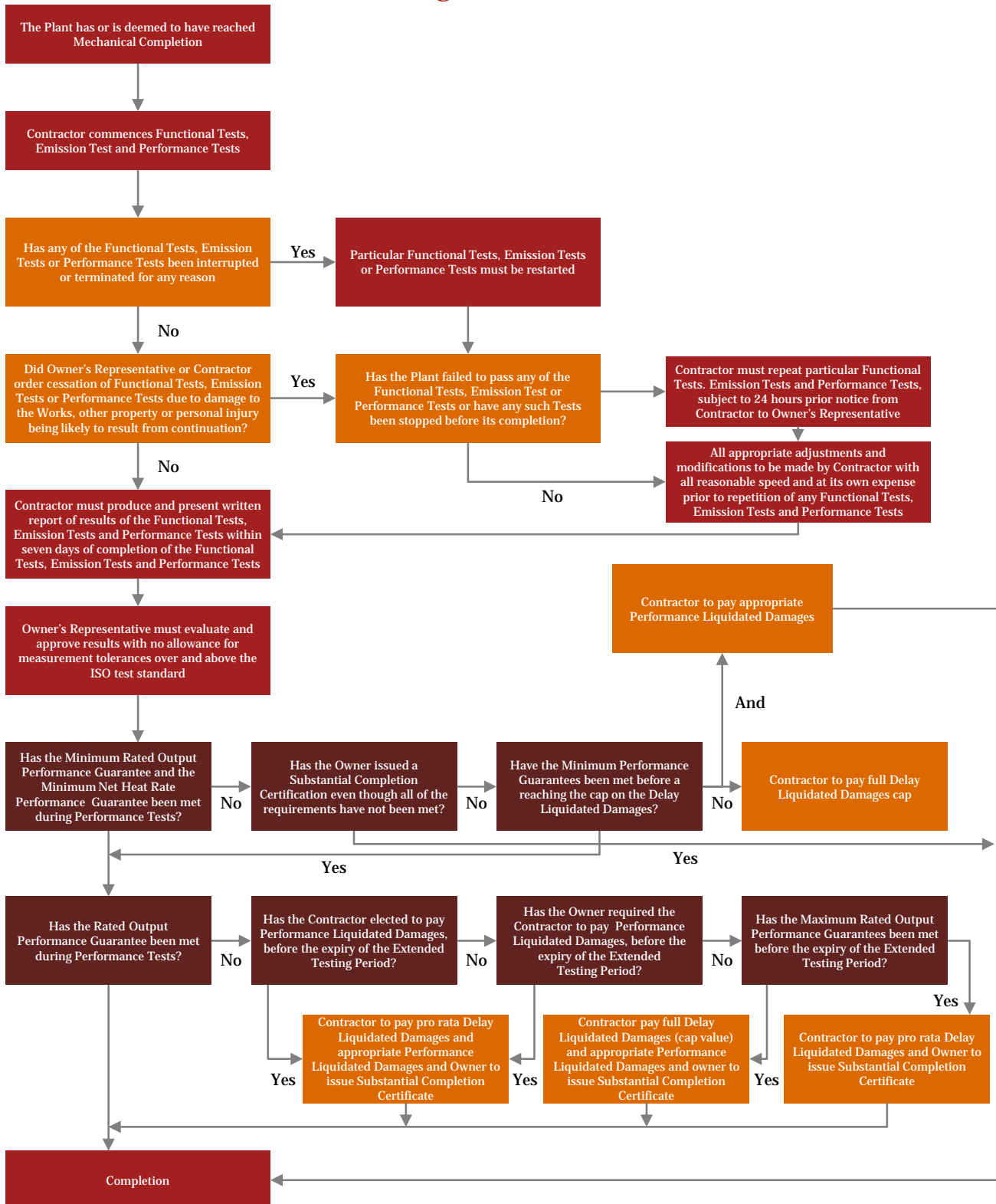
Technical issues

Ideally, the technical testing procedures should be set out in the EPC Contract. However, for a number of reasons, including the fact that it is often not possible to fully scope the testing programme until the detailed design is complete, the testing procedures are usually left to be agreed during construction by the Contractor, the Project Company's representative or engineer and, if relevant, the Lenders' engineer. However, a properly drafted EPC Contract should include the guidelines for testing.

¹⁵ It can arise in civil law countries as well, it will depend on the relevant provisions of the code in those countries. For example, the UAE Civil Code contains a number of articles that entitle a contractor to an extension of time for employer-caused delays. For further information on liability in EPC contracts under Australian law, refer to our paper entitled "Position Paper on Liability".

¹⁶ The critical path is the path on the construction programme that shows the dates when certain activities must be completed by in order to achieve completion by the specified date.

Performance Guarantees and Testing



The complete testing procedures must, as a minimum, set out details of:

- **Testing methodology:** Reference is often made to standard methodologies, for example, the American Society of Mechanical Engineers methodology.
- **Testing equipment:** Who is to provide it, where it is to be located, how sensitive must it be.

- **Tolerances:** What is the margin of error.
- **Ambient conditions:** What atmospheric conditions are assumed to be the base case (testing results will need to be adjusted to take into account any variance from these ambient conditions).
- **Steady state testing:** Using ordinary parameters to avoid running the plant at unsustainable short-term rates.

Provision of consumables and feedstock

The responsibility for the provision of consumables and feedstock required to carry out the performance tests must be clearly set out in the EPC Contract. In general, the Project Company will be responsible for the provision of both consumables and feedstock.

As the proper interpretation of the Project Company's obligation to supply consumables is often a matter of dispute between the Project Company and Contractor, it is important for the EPC Contract to precisely identify the quality and quantity of consumables to be provided as well as the time for provision of those consumables (which should be linked to the progress of the works rather than a specific date). The responsibility for the cost of providing consumables and feedstock must also be clearly identified. This is discussed in more detail in the section on feedstock specification issues.

An example of the performance testing and guarantee regime we have used on a number of projects is included in Appendix 1 of this paper.

These example clauses are only extracts from a complete contract and ideally should be read as part of that entire contract and, in particular, with the clauses that deal with DLDs, PLDs, liability, the scope of the Contractor's obligations, including any fitness for purpose warranties and termination. Nonetheless, they do provide an example of the way a performance testing and liquidated damages regime can operate.

The process is best illustrated diagrammatically. Refer to the flowchart below to see how the various parts of the performance testing regime should interface.

Delay and extensions of time in EPC Contract

Delay and extensions of time

The Prevention Principle

As noted previously, one of the advantages of an EPC Contract is that it provides the Project Company with a fixed completion date. If the Contractor fails to complete the works by the required date it is liable for DLDs. However, in some circumstances the Contractor is entitled to an extension of the date for completion. Failure to grant that extension can void the liquidated damages regime and set time at large. This means the Contractor is only obliged to complete the works within a reasonable time.

This is the situation under common law-governed contracts¹⁴ due to the Prevention Principle. The Prevention Principle was developed by the courts to prevent Employers ie Project Companies from delaying Contractors and then claiming DLDs.

The legal basis of the Prevention Principle is unclear and it is uncertain whether you can contract out of the Prevention Principle. Logically, given most commentators believe the Prevention Principle is an equitable principle, explicit words in a contract should be able to override the principle. However, the courts have tended to apply the Prevention Principle even in circumstances where it would not, on the face of it, appear to apply. Therefore, there is a certain amount of risk involved in trying to contract out of the Prevention Principle. The more prudent and common approach is to accept the existence of the Prevention Principle and provide for it the EPC Contract.

The Contractor's entitlement to an extension of time is not absolute. It is possible to limit the Contractor's rights and impose pre-conditions on the ability of the Contractor to claim an extension of time. A relatively standard extension of time (**EOT**) clause would entitle the Contractor to an EOT for:

- an act, omission, breach or default of the Project Company
- suspension of the works by the Project Company (except where the suspension is due to an act or omission of the Contractor)
- a variation (except where the variation is due to an act or omission of the Contractor)
- force majeure.

which cause a delay on the critical path¹⁵ and about which the Contractor has given notice within the period specified in the contract. It is permissible (and advisable) to make both the necessity for the delay to impact the critical path and the obligation to give notice of a claim for an extension of time conditions precedent to the Contractor's entitlement to receive an EOT. In addition, it is usually good practice to include a general right for the Project Company to grant an EOT at any time. However, this type of provision must be carefully drafted because some judges have held (especially when the Project Company's representative is an independent third party) the inclusion of this clause imposes a mandatory obligation on the Project Company to grant an extension of time whenever it is fair and reasonable to do so, regardless of the strict contractual requirements. It must be made clear that the Project Company has complete and absolute discretion to grant an EOT and that it is not required to exercise its discretion for the benefit of the Contractor.

Similarly, following some recent common law decisions, the Contractor should warrant that it will comply with the notice provisions that are conditions precedent to its right to be granted an EOT.

We recommend using the clause in part 2 of Appendix 1.

Concurrent delay

You will note that in the suggested EOT clause, one of the subclauses refers to concurrent delays. This is relatively unusual because most EPC Contracts are silent on this issue. For the reasons explained below we do not agree with that approach.

A concurrent delay occurs when two or more causes of delay overlap. It is important to note that it is the overlapping of the causes of the delays not the overlapping of the delays themselves. In our experience, this distinction is often not made. This leads to confusion and sometimes disputes. More problematic is when the contract is silent on the issue of concurrent delay and the parties assume the silence operates to their benefit. As a result of conflicting case law it is difficult to determine who, in a particular fact scenario, is correct. This can also lead to protracted disputes and outcomes contrary to the intention of the parties.

There are a number of different causes of delay which may overlap with delay caused by the Contractor. The most obvious causes are the acts or omissions of a Project Company.

A Project Company may have obligations to provide certain materials or infrastructure to enable the Contractor to complete the works. The timing for the provision of that material or infrastructure (and the consequences for failing to provide it) can be affected by a concurrent delay.

For example, the Project Company may be obliged, as between the Project Company and the Contractor, to provide a pipeline or vessel to connect to the facility by the time the Contractor is ready to commission the facility. Given the construction of the pipeline or the chartering of a vessel can be expensive, the Project Company is likely to want to incur that expense as close as possible to the date commissioning is due to commence. For this reason, if the Contractor is in delay the Project Company is likely to further delay incurring the expense of building the pipeline or chartering the vessel. In the absence of a concurrent delay clause, this action by the Project Company, in response to the Contractor's delay, could entitle the Contractor to an extension of time.

Concurrent delay is dealt with differently in the various international standard forms of contract. Accordingly, it is not possible to argue that one approach is definitely right and one is definitely wrong. In fact, the right approach will depend on which side of the table you are sitting.

In general, there are three main approaches for dealing with the issue of concurrent delay.

These are:

- **Option one:** The Contractor has no entitlement to an extension of time if a concurrent delay occurs.
- **Option two:** The Contractor has an entitlement to an extension of time if a concurrent delay occurs.
- **Option three:** The causes of delay are apportioned between the parties and the Contractor receives an extension of time equal to the apportionment. For example, if the causes of a 10-day delay are apportioned 60:40 Project Company:Contractor, the Contractor would receive a six-day extension of time.

Each of these approaches is discussed in more detail below.

Option one: Contractor not entitled to an extension of time for concurrent delays

A common, Project Company-friendly, concurrent delay clause for this option one is:

*If more than one event causes concurrent delays and the cause of at least one of those events, but not all of them, is a cause of delay which would not entitle the Contractor to an extension of time under [EOT clause], then **to the extent of the concurrency**, the Contractor will not be entitled to an extension of time.*

The most relevant words are in bold.

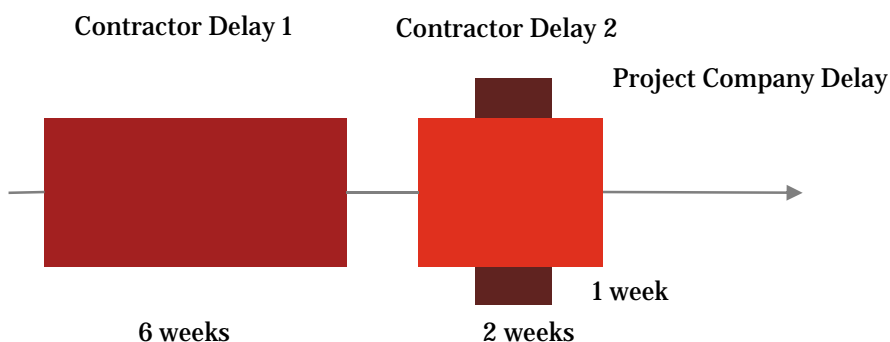
Nothing in the clause prevents the Contractor from claiming an extension of time under the general extension of time clause. What the clause does do is to remove the Contractor's entitlement to an extension of time when there are two or more causes of delay and at least one of those causes would not entitle the Contractor to an extension of time under the general extension of time clause.

For example, if the Contractor's personnel were on strike and during that strike the Project Company failed to approve drawings, in accordance with the contractual procedures, the Contractor would not be entitled to an extension of time for the delay caused by the Project Company's failure to approve the drawings.

The operation of this clause is best illustrated diagrammatically.

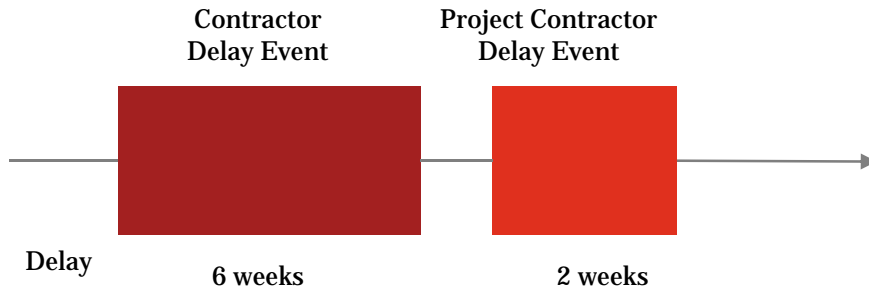
Example 1: Contractor not entitled to an extension of time for Project Company-caused delay

In this example, the Contractor would not be entitled to any extension of time because the Contractor Delay 2 overlaps entirely the Project Company Delay. Therefore, using the example clause above, the Contractor is not entitled to an extension of time to the extent of the concurrency. As a result, at the end of the Contractor Delay 2 the Contractor would be in eight weeks' delay (assuming the Contractor has not, at its own cost and expense, accelerated the works).



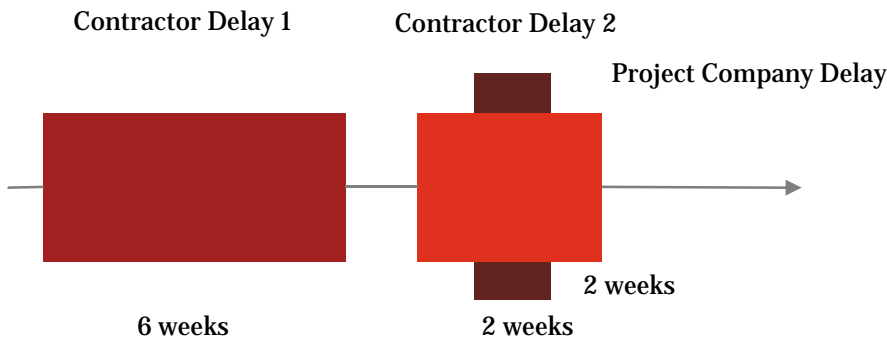
Example 2: Contractor entitled to an extension of time for Project Company-caused delay

In this example, there is no overlap between the Contractor and Project Company Delay Events where the Contractor would be entitled to a two-week extension of time for the Project Company Delay. Therefore, at the end of the Project Company Delay the Contractor will remain in six weeks' delay, assuming no acceleration.



Example 3: Contractor entitled to an extension of time for a portion of the Project Company-caused delay

In this example, the Contractor would be entitled to a one-week extension of time because the delays overlap for one week. Therefore, the Contractor is entitled to an extension of time for the period when they do not overlap ie when the extent of the concurrency is zero. As a result, after receiving the one-week extension of time, the Contractor would be in seven weeks’ delay, assuming no acceleration.



From a Project Company’s perspective, we believe, this option is both logical and fair. For example, if, in example 2, the Project Company Delay was a delay in the approval of drawings and the Contractor Delay was the entire workforce being on strike, what logic is there in the Contractor receiving an extension of time? The delay in approving drawings does not actually delay the works because the Contractor could not have used the drawings given its workforce was on strike. In this example, the Contractor would suffer no detriment from not receiving an extension of time. However, if the Contractor did receive an extension of time it would effectively receive a windfall gain.

The greater number of obligations the Project Company has the more reluctant the Contractor will likely be to accept option one. Therefore, it may not be appropriate for all projects.

Option two: Contractor entitled to an extension of time for concurrent delays

Option two is the opposite of option one and is the position in many of the Contractor-friendly standard forms of contract. These contracts also commonly include extension of time provisions to the effect that the Contractor is entitled to an extension of time for any cause beyond its reasonable control which, in effect, means there is no need for a concurrent delay clause.

The suitability of this option will obviously depend on which side of the table you are sitting. This option is less common than option one but is nonetheless sometimes adopted. It is especially common when the Contractor has a superior bargaining position.

Option three: Responsibility for concurrent delays is apportioned between the parties

Option three is a middle ground position that has been adopted in some of the standard form contracts. For example, the Australian Standards construction contract AS4000 adopts the apportionment approach. The AS4000 clause states:

34.4 Assessment

When both non-qualifying and qualifying causes of delay overlap, the Superintendent shall apportion the resulting delay to WUC according to the respective causes' contribution.

In assessing each EOT the Superintendent shall disregard questions of whether:

- a) WUC can nevertheless reach practical completion without an EOT; or*
- b) the Contractor can accelerate, but shall have regard to what prevention and mitigation of the delay has not been effected by the Contractor.*

We appreciate the intention behind the clause and the desire for both parties to share responsibility for the delays they cause. However, we have some concerns about this clause and the practicality of the apportionment approach in general. It is easiest to demonstrate our concerns with an extreme example. For example, what if the qualifying cause of delay was the Project Company's inability to provide access to the site and the non-qualifying cause of delay was the Contractor's inability to commence the works because it had been black banned by the unions. How should the causes be apportioned? In this example, the two causes are both 100 percent responsible for the delay.

In our view, an example like the above where both parties are at fault has two possible outcomes. Either:

- the delay is split down the middle and the Contractor receives 50 percent of the delay as an extension of time
- the delay is apportioned 100 percent to the Project Company and therefore the Contractor receives 100 percent of the time claimed.

The delay is unlikely to be apportioned 100 percent to the Contractor because a judge or arbitrator will likely feel that that is unfair, especially if there is a potential for significant liquidated damages liability. We appreciate the above is not particularly rigorous legal reasoning, however, the clause does not lend itself to rigorous analysis.

In addition, option three is only likely to be suitable if the party undertaking the apportionment is independent from both the Project Company and the Contractor.

Exclusive remedies and fail-safe clauses

It is common for Contractors to request the inclusion of an exclusive remedies clause in an EPC Contract. However, from the perspective of a Project Company, the danger of an exclusive remedies clause is that it prevents the Project Company from recovering any type of damages not specifically provided for in the EPC Contract.

An EPC Contract is conclusive evidence of the agreement between the parties to that contract. If a party clearly and unambiguously agrees that its only remedies are those within the EPC Contract, it will be bound by those terms. However, the courts have been reluctant to come to this conclusion without clear evidence of an intention of the parties to the EPC Contract to contract out of their legal rights. This means if the common law right to sue for breach of the EPC Contract is to be contractually removed, it must be done by very clear words.

Contractor's perspective

The main reason for a Contractor insisting on a Project Company being subject to an exclusive remedies clause is to have certainty about its potential liabilities. The preferred position for a Contractor will be to confine its liabilities to what is specified in the EPC Contract. For example, an agreed rate of liquidated damages for delay

and, where relevant, underperformance of the facility. A Contractor will also generally require the amount of liquidated damages to be subject to a cap and for the EPC Contract to include an overall cap on its liability.

Project company's perspective

The preferred position for a Project Company is for it not to be subject to an exclusive remedies clause. An exclusive remedies clause limits the Project Company's right to recover for any failure of the Contractor to fulfil its contractual obligations to those remedies specified in the EPC Contract. For this reason, an exclusive remedies clause is an illogical clause to include in an EPC Contract from the perspective of a Project Company because it means that the Project Company has to draft a remedy or exception for each obligation – this represents an absurd drafting position. For example, take the situation where the EPC Contract does not have any provision for the recovery of damages other than liquidated damages. In this case, if the Contractor has either paid the maximum amount of liquidated damages or delivered the facility in a manner that does not require the payment of liquidated damages (ie it is delivered on time and performs to specification) but subsequent to that delivery the Project Company is found to have a claim, say for defective design which manifests itself after completion, the Project Company will have no entitlement to recover any form of damages as any remedy for latent defects has been excluded.

The problem is exacerbated because most claims made by a Project Company will in some way relate to performance of the facility and PLDs were expressed to be the exclusive remedy for any failure of the facility to perform in the required manner. For example, any determination as to whether the facility is fit for purpose will necessarily depend on the level and standard of the performance of the facility. In addition to claims relating to fitness for purpose, a Project Company may also wish to make claims for, amongst other things, breach of contract, breach of warranty or negligence. The most significant risk for a Project Company in an EPC Contract is where there is an exclusive remedies clause and the only remedies for delay and underperformance are liquidated damages. If, for whatever reason, the liquidated damages regimes are held to be invalid, the Project Company would have no recourse against the Contractor as it would be prevented from recovering general damages at law and the Contractor would escape liability for late delivery and underperformance of the facility.

Fail-safe clauses

In contracts containing an exclusive remedies clause, the Project Company must ensure all necessary exceptions are expressly included in the EPC Contract. In addition, drafting must be included to allow the Project Company to recover general damages at law for delay and underperformance if the liquidated damages regimes in the EPC Contract are held to be invalid. To protect the position of a Project Company (if liquidated damages are found for any reason to be unenforceable and there is an exclusive remedies clause), we recommend the following clauses be included in the EPC Contract:

[] .1 If clause [delay liquidated damages] is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Project Company from claiming delay liquidated damages, the Project Company is entitled to claim against the Contractor damages at law for the Contractor's failure to complete the works by the date for practical completion.

[] .2 If [] .1 applies, the damages claimed by the Project Company must not exceed the amount specified in Item [] of Appendix [] for any one day of delay and in aggregate must not exceed the percentage of the EPC Contract price specified in item [] of Appendix [] .

These clauses (which would also apply to PLDs) mean that if liquidated damages are held to be unenforceable for any reason the Project Company will not be prevented from recovering general damages at law. However, the amount of damages recoverable at law may be limited to the amount of liquidated damages that would have been recoverable by the Project Company under the EPC Contract if the liquidated damages regime had not been held to be invalid. For this reason, the suggested drafting should be commercially acceptable to a Contractor as its liability for delay and underperformance will be the same as originally contemplated by the parties at the time of entering into the EPC Contract.

In addition, if the EPC Contract excludes the parties' rights to claim their consequential or indirect losses, these clauses should be an exception to that exclusion. The rationale being that the rates of liquidated damages are likely to include an element of consequential or indirect losses.

Force Majeure

What is force majeure?

Force majeure clauses are almost always included in EPC Contracts. However, they are rarely given much thought unless and until one or more parties seek to rely on them. Generally, the assumption appears to be that “the risk will not affect us” or “the *force majeure* clause is a legal necessity and does not impact on our risk allocation under the contract.” Both of these assumptions are inherently dangerous, and, particularly in the second case, incorrect. Therefore, especially in the current global environment, it is appropriate to examine their application.

Force majeure is a civil law concept that has no real meaning under the common law. However, *force majeure* clauses are used in contracts because the only similar common law concept – the doctrine of frustration – is of limited application. For that doctrine to apply the performance of a contract must be radically different from what was intended by the parties. In addition, even if the doctrine does apply, the consequences are unlikely to be those contemplated by the parties. An example of how difficult it is to show frustration is that many of the leading cases relate to the abdication of King Edward VIII before his coronation and the impact that had on contracts entered into in anticipation of the coronation ceremony.

Given *force majeure* clauses are creatures of contract their interpretation will be governed by the normal rules of contractual construction. *Force majeure* provisions will be construed strictly and in the event of any ambiguity the contra proferentem rule will apply. *Contra proferentem* literally means “against the party putting forward”. In this context, it means that the clause will be interpreted against the interests of the party that drafted and is seeking to rely on it. The parties may contract out of this rule.

The rule of *ejusdem generis* which literally means “of the same class” may also be relevant. In other words, when general wording follows a specific list of events, the general wording will be interpreted in light of the specific list of events. In this context it means that when a broad catch-all phrase, such as “anything beyond the reasonable control of the parties,” follows a list of more specific *force majeure* events the catch-all phrase will be limited to events analogous to the listed events. Importantly, parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions.

The underlying test in relation to most *force majeure* provisions is whether a particular event was within the contemplation of the parties when they made the contract. The event must also have been outside the control of the contracting party. There are generally three essential elements to *force majeure*:

- it can occur with or without human intervention
- it cannot have reasonably been foreseen by the parties
- it was completely beyond the parties’ control and they could not have prevented its consequences

Given the relative uncertainty surrounding the meaning of *force majeure* we favour explicitly defining what the parties mean. This takes the matter out of the hands of the courts and gives control back to the parties. Therefore, it is appropriate to consider how *force majeure* risk should be allocated.

Drafting force majeure clauses

The appropriate allocation of risk in project agreements is fundamental to negotiations between the Project Company and its Contractors. Risks generally fall into the following categories:

- risks within the control of the Project Company
- risks within the control of the Contractor
- risks outside the control of both parties

The negotiation of the allocation of many of the risks beyond the control of the parties, for example, latent site conditions and change of law, is usually very detailed so that it is clear which risks are borne by the Contractor. The same approach should be adopted in relation to the risks arising from events of *force majeure*.

There are two aspects to the operation of *force majeure* clauses:

- the definition of *force majeure* events
- the operative clause that sets out the effect on the parties' rights and obligations if a *force majeure* event occurs.¹⁶¹⁷

The events which trigger the operative clause must be clearly defined. As noted above, given the common law meaning of the term *force majeure* is not certain and is open to interpretation of the courts, it is in the interests of both parties to ensure that the term *force majeure* is clearly defined.

The preferred approach for a Project Company is to define *force majeure* events as being any of the events in an exhaustive list set out in the contract. In this manner, both parties are aware of which events are *force majeure* events and which are not. Clearly, defining *force majeure* events makes the administration of the contract and, in particular, the mechanism within the contract for dealing with *force majeure* events simpler and more effective.

An example exhaustive definition is:

An event of force majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent provided that event or circumstance is limited to the following:

- riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), acts of terrorism, civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any governmental or competent authority*
- ionising radiation or contamination, radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive, toxic, explosive or other hazardous properties of any explosive assembly or nuclear component*
- pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds*
- earthquakes, flood, fire or other physical natural disaster, but excluding weather conditions regardless of severity*
- strikes at national level or industrial disputes at a national level, or strike or industrial disputes by labour not employed by the affected party, its sub contractors or its Suppliers and which affect an essential portion of the works but excluding any industrial dispute which is specific to the performance of the works or this contract.*

An operative clause will act as a shield for the party affected by the event of *force majeure* so that a party can rely on that clause as a defence to a claim that it has failed to fulfil its obligations under the contract.

An operative clause should also specifically deal with the rights and obligations of the parties if a *force majeure* event occurs and affects the project. This means the parties must consider each of the events it intends to include in the definition of *force majeure* events and then deal with what the parties will do if one of those events occurs.

¹⁷ A common failing of force majeure in some negotiations is to focus on the definitional issues rather than the consequences. Both issues are important.

An example of an operative clause is:

- [].1 *Neither party is responsible for any failure to perform its obligations under this contract, if it is prevented or delayed in performing those obligations by an event of force majeure.*
- [].2 *Where there is an event of force majeure, the party prevented from or delayed in performing its obligations under this contract must immediately notify the other party giving full particulars of the event of force majeure and the reasons for the event of force majeure preventing that party from, or delaying that party in performing its obligations under this contract and that party must use its reasonable efforts to mitigate the effect of the event of force majeure upon its or their performance of the contract and to fulfil its or their obligations under the contract.*
- [].3 *Upon completion of the event of force majeure the party affected must as soon as reasonably practicable recommence the performance of its obligations under this contract. Where the party affected is the Contractor, the Contractor must provide a revised programme rescheduling the works to minimise the effects of the prevention or delay caused by the event of force majeure.*
- [].4 *An event of force majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.*
- [].5 *The Contractor has no entitlement and the Project Company has no liability for:*
- (a) *any costs, losses, expenses, damages or the payment of any part of the contract price during an event of force majeure*
 - (b) *any delay costs in any way incurred by the Contractor due to an event of force majeure.*

In addition to the above clause, it is critical to appropriately deal with other issues that will arise if a *force majeure* event occurs. For example, as noted above, it is common practice for a Contractor to be entitled to an extension of time if a *force majeure* event impacts on its ability to perform the works. Contractors also often request costs if a *force majeure* event occurs. In our view, this should be resisted. *Force majeure* is a neutral risk in that it cannot be controlled by either party. Therefore, the parties should bear their own costs and neither party should be penalised.

Another key clause that relates to *force majeure* type events is the Contractor's responsibility for care of the works and the obligation to reinstate any damage to the works prior to completion. A common example clause is:

- [].1 *The Contractor is responsible for the care of the site and the works from when the Project Company makes the site available to the Contractor until 5.00pm on the date of commercial operation.*
- [].2 *The Contractor must promptly make good loss from, or damage to, any part of the site and the works while it is responsible for their care.*
- [].3 *If the loss or damage is caused by an event of force majeure, the Project Company may direct the Contractor to reinstate the works or change the works. The cost of the reinstatement work or any change to the works arising from a direction by the Project Company under this clause will be dealt with as a variation except to the extent that the loss or damage has been caused or exacerbated by the failure of the Contractor to fulfil its obligations under this contract.*
- [].4 *Except as contemplated in clause [].3, the cost of all reinstatement works will be borne by the Contractor.*

This clause is useful because it enables the Project Company to, at its option, have the damaged section of the project rebuilt as a variation to the existing EPC Contract. This will usually be cheaper than recontracting for construction of the damaged sections of the works.

Operation and maintenance

Operating and maintenance manuals

The Contractor is usually required to prepare a detailed operating and maintenance manual (**O&M Manual**). The EPC Contract should require the Contractor to prepare a draft of the O&M Manual within a reasonable time to enable the Project Company, the Operator and possibly the Lenders to provide comments, which can be incorporated into a final draft at least six months before the start of commissioning.

The draft should include all information which may be required for start-up, all modes of operation during normal and emergency conditions and maintenance of all systems of the facility.

Operating and maintenance personnel

It is common for the Contractor to partake in the training of the operations and maintenance staff supplied by the Project Company. The cost of this training will be built into the contract price. It is important to ensure the training is sufficient to enable such staff to be able to efficiently, prudently, safely and professionally operate the facility upon commercial operation. Therefore, the framework for the training should be described in the Appendix dealing with the scope of work (in as much detail as possible). This should include the standards of training and the timing for training.

The Project Company's personnel trained by the Contractor will also usually assist in the commissioning and testing of the facility. They will do this under the direction and supervision of the Contractor. Therefore, absent specific drafting to the contrary, if problems arise during commissioning and/or testing the Contractor can argue they are entitled to an extension of time etc. We recommend inserting the following clause:

[].1 The Project Company must provide a sufficient number of competent and qualified operating and maintenance personnel to assist the Contractor to properly carry out commissioning and the commercial operation performance tests.

[].2 Prior to the date of commercial operation, any act or omission of any personnel provided by the Project Company pursuant to GC [].1 is, provided those personnel are acting in accordance with the Contractor's instructions, directions, procedures or manuals, deemed to be an act or omission of the Contractor and the Contractor is not relieved of its obligations under this contract or have any claim against the Project Company by reason of any act or omission.

Spare parts

The Contractor is usually required to provide, as part of its scope of works, a full complement of spare parts (usually specified in the appendices (the scope of work or the specification)) to be available at the commencement of commercial operation.

Further, the Contractor should be required to replace any spare parts used in rectifying defects during the defects liability period, at its sole cost. There should also be a time limit imposed on when these spare parts must be back in the store. It is normally unreasonable to require the spare parts to have been replaced by the expiry of the defects liability period because that may, for some long lead time items, lead to an extension of the defects liability period.

The Project Company also may wish to have the option to purchase spares parts from the Contractor on favourable terms and conditions (including price) during the remainder of the concession period. In that case it would be prudent to include a term which deals with the situation where the Contractor is unable to continue to manufacture or procure the necessary spare parts. This provision should cover the following points:

- written notification from the Contractor to the Project Company of the relevant facts, with sufficient time to enable the Project Company to order a final batch of spare parts from the Contractor
- the Contractor should deliver to, or procure for the Project Company (at no charge to the Project Company), all drawings, patterns and other technical information relating to the spare parts

- the Contractor must sell to the Project Company (at the Project Company's request) at cost price (less a reasonable allowance for depreciation) all tools, equipment and moulds used in manufacturing the spare parts, to the extent they are available to the Contractor provided it has used its reasonable endeavours to procure them.

The Contractor should warrant that the spare parts are fit for their intended purpose and that they are of merchantable quality. At worst, this warranty should expire on the later of:

- the manufacturer's warranty period on the applicable spare part
- the expiry of the defects liability period.

Dispute Resolution

Dispute resolution provisions for EPC Contracts could fill another entire paper. There are numerous approaches that can be adopted depending on the nature and location of the project and the particular preferences of the parties involved.

However, there are some general principles which should be adopted. They include:

- having a staged dispute resolution process that provides for internal discussions and meetings aimed at resolving the dispute prior to commencing action (either litigation or arbitration)
- obliging the Contractor to continue to execute the works pending resolution of the dispute
- not permitting commencement of litigation or arbitration, as the case may be, until after commercial operation of the facility. This provision must make provision for the parties to seek urgent interlocutory relief ie injunctions and to commence proceedings prior to the expiry of any limitations period. If the provision does not include these exceptions it risks being unenforceable
- providing for consolidation of any dispute with other disputes which arise out of or in relation to the construction of the facility. The power to consolidate should be at the Project Company's discretion.

Appendix 1 Example clause: part 1 – Performance testing and guarantee regime

1 Commissioning tests and mechanical completion

- 1.1 After the Contractor has provided the Owner's representative with the marked up as-built contract documents [*defined in the contract*] the Contractor must carry out the commissioning tests for the relevant system.
- 1.2 The commissioning tests:
- (a) for each system must:
 - (i) be performed on a system-by-system basis
 - (ii) include the inspection and checking of equipment and supporting subsystems, trial operation of supporting equipment, initial operation of the system, operation of the system to obtain data, perform system calibration and corrective works and shutdown inspection and correction of defects and non-conforming works identified during the commissioning tests
 - (b) must demonstrate:
 - (i) the capability of major sections of the works to operate in all modes of start-up, steady state, transients, plant changeovers, shutdowns, trips and the like
 - (ii) the technical suitability of the works and its control equipment and the capability of the operational procedures recommended by the Contractor.
- [Clause 1.2 is optional. The commissioning testing regime can be included in the general testing regime in clause 1.3. The reference to a "system" is a reference to a discrete part of the works that contains several elements but which can be tested independently of the entire works. Examples include the fire safety system, distributed control system and compressors etc.]
- 1.3 In carrying out any test which requires the Contractor to export product the Contractor must:
- (a) issue a notice to the Owner's representative at least 24 hours prior to the time at which it wishes to so supply, detailing the testing or commissioning and including the Contractor's best estimate of the total period and quantity of product that will be supplied during the test;
 - (b) promptly notify the Owner's representative if there is any change in the information contained in such notice; and
 - (c) do all things necessary to assist the Owner, including but not limited to cooperating with third parties, so that the Owner can comply with its obligations with respect to the test.

Mechanical completion

- 1.4 As soon as the facility has, in the opinion of the Contractor, reached the stage of mechanical completion, the Contractor must give notice to the Owner's representative.
- 1.5 The Owner's representative must, promptly, and no later than three days after receipt of the Contractor's notice under GC 1.4, either issue a facility certificate of mechanical completion in the form specified in Appendix [] stating that the facility has reached mechanical completion or notify the Contractor of any defects and/or deficiencies.
- 1.6 If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct such defects and/or deficiencies and must repeat the procedure described in GC 1.4.
- 1.7 If the Owner's representative is satisfied that the facility has reached mechanical completion, the Owner's representative must promptly, and no later than three days after receipt of the Contractor's repeated notice, issue a certificate of mechanical completion stating that the facility has reached mechanical completion as at the date stated in that certificate.
- 1.8 If the Owner's representative is not so satisfied, then it must notify the Contractor of any defects and/or deficiencies within three days after receipt of the Contractor's repeated notice and the above procedure must be repeated.
- 1.9 If the Owner's representative fails to issue the certificate of mechanical completion and fails to inform the Contractor of any defects and/or deficiencies within six days after receipt of the Contractor's notice under GC 1.4 or within three days after receipt of the Contractor's repeated notice under GC 1.6, then the facility is deemed to have reached mechanical completion as at the date of the Contractor's notice or repeated notice, as the case may be.

2 Functional tests, emission tests, performance tests and substantial completion

Tests

- 2.1 Upon receipt of the certificate of mechanical completion, or when the facility is deemed to have reached mechanical completion under GC 1.9, the Contractor must carry out the functional tests, emission tests and performance tests, provided the Contractor gives at least 48 hours' notification to the Owner's representative prior to commencing such tests.
- 2.2 The Contractor must not commence any of the functional tests, emission tests or performance tests prior to mechanical completion.
- 2.3 For the avoidance of doubt, it is a condition precedent to the achievement of substantial completion that the emission tests must be passed.

Procedure

- 2.4
 - (a) If a functional test, emission test or performance test is interrupted or terminated, for any reason, such test must be restarted from the beginning, unless otherwise approved by the Owner's representative.
 - (b) The Owner's representative or the Contractor is entitled to order the cessation of any functional test, emission test or performance test if damage to the works, or other property or personal injury, is likely to result from continuation.
 - (c) If the facility (or part thereof) fails to pass any of the functional tests, emission tests or performance tests (or any repetition thereof in the event of prior failure) or if any functional test, emission test or

performance test is stopped before its completion, such functional test, emission test or performance test must, subject to 48 hours' prior notice having been given by the Contractor to the Owner's representative, be repeated as soon as practicable thereafter. All appropriate adjustments and modifications are to be made by the Contractor with all reasonable speed and at its own expense before the repetition of any functional test, emission test or performance test.

- (d) The results of the functional tests, emission tests and performance tests must be presented in a written report produced by the Contractor and delivered to the Owner's representative within seven days of the completion of the functional tests, emission tests or performance tests. Such results will be evaluated and approved by the Owner's representative. In evaluation of such results, no additional allowance will be made for measurement tolerances over and above those specified in the applicable test standard.
- (e) The report provided in accordance with clause 2.4(d) above shall be in a form agreed by the parties. If no agreement is reached then the report is to be in the form as provided by the Owner's representative. If the parties fail to agree on a form and the Owner's representative fails to provide a form of report then the report shall be in a form that complies with best industry practices and contains the information required for the Owner to meet all relevant standards.

Substantial completion

- 2.5 As soon as the facility has, in the opinion of the Contractor, reached the stage of substantial completion, the Contractor must give notice to the Owner's representative.
- 2.6 The Owner's representative must, promptly, and no later than three days after receipt of the Contractor's notice under GC 2.5, either issue a substantial completion certificate in the form specified in Appendix [] stating that the facility has reached substantial completion or notify the Contractor of any defects and/or deficiencies.
- 2.7 If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct such defects and/or deficiencies and must repeat the procedure described in GC 2.5.
- 2.8 If the Owner's representative is satisfied that the facility has reached substantial completion, the Owner must, promptly, and no later than three days after receipt of the Contractor's repeated notice, issue a substantial completion certificate stating that the facility has reached substantial completion as at the date stated in that certificate.
- 2.9 If the Owner's representative is not so satisfied, then it must notify the Contractor of any defects and/or deficiencies within three days after receipt of the Contractor's repeated notice and the above procedure must be repeated.
- 2.10 Notwithstanding that all the requirements for the issuing of a substantial completion certificate have not been met, the Owner's representative may at any time, in its absolute discretion, issue a substantial completion certificate. The issue of a substantial completion certificate in accordance with this GC 2.10 will not operate as an admission that all the requirements of substantial completion have been met, and does not prejudice any of the Owner's rights, including the right to require the Contractor to satisfy all of the requirements of the contract.

4 Performance guarantees

Output performance guarantees

- 4.1 The Contractor guarantees that, during the same performance tests, the facility and all parts will meet the **[describe output guarantees]**.

Minimum performance guarantees not met

- 4.2 If, for reasons not attributable to the Owner, either or both of the minimum performance guarantees are not met, the Contractor must, at its cost and expense, make such changes, modifications and/or

additions to the facility or any part as may be necessary so as to meet at least the minimum [**describe minimum standard here**]. The Contractor must notify the Owner upon completion of the necessary changes, modifications and/or additions and must repeat, subject to the Owner's rights under GCs 4.3 and 4.6.2(a)(iii) [**termination**], the relevant performance tests until the minimum [*describe*] respectively have been met. Nothing in this GC 4.2 derogates from the Contractor's obligation to meet the [**output guarantees**].

- 4.3 Notwithstanding this GC 4 or any other provision of this contract, if for reasons not attributable to the Owner at any time after the Contractor has repeated the performance tests the Contractor does not meet either or both minimum performance guarantees, the Owner may require the Contractor to pay:
- (a) in relation to the minimum performance guarantee(s) that has/have met performance liquidated damages calculated in accordance with section 2.1(a) or section 2.2(a) of Appendix Y; and/or
 - (b) if the minimum [**output guarantee**] has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual rated output of the facility was equal to 95 percent of the [output guarantee] as specified in section 2.1(a) of Appendix Y; and
 - (ii) performance liquidated damages calculated in accordance with section 2.1(b) of Appendix Y; and/or
 - (c) if the minimum [other output guarantee – probably emission] has not been met:
 - (i) an amount equal to the amount the Contractor would have been liable for if the actual net heat rate of the facility was equal to 105 percent of the [**other output guarantee**] as specified in section 2.2(a) of Appendix Y; and
 - (ii) performance liquidated damages calculated in accordance with section 2.2(b) of Appendix Y.
- 4.4 The payment of performance liquidated damages under GC 4.3 will be in complete satisfaction of the Contractor's guarantees under GC 4.1.

Minimum performance guarantees met, but not performance guarantees

- 4.5 Subject to GCs 4.3, 4.6 and 4.7, if, for reasons not attributable to the Owner, both of the [**describe the guarantees**] are not met but both the minimum performance guarantees are met during the same performance test, the Contractor must, prior to the expiration of the extended testing period:
- (a) at its cost and expense make such changes, modifications and/or additions to the facility or any part as may be necessary so as to meet the [**describe the guarantees**] respectively;
 - (b) notify the Owner upon completion of the necessary changes, modifications and/or additions; and
 - (c) repeat the performance tests until the [**describe the guarantees**] respectively have been met during the same performance test.
- 4.6 If, during the same performance test, the Contractor has met both the minimum performance guarantees, but not both the [**describe the guarantees**] by the expiration of the extended testing period, the Contractor must pay the respective performance liquidated damages to the Owner.

4.7

- (a) Notwithstanding GC 4.5 and 4.6, the Contractor may at any time during the extended testing period elect to pay performance liquidated damages to the Owner in respect of the failure to meet either or both of the [**describe the guarantee**] provided the minimum performance guarantees are met.
 - (b) Notwithstanding GCs 4.5 and 4.6, and subject to GC 4.3, the Owner may, provided that the date for commercial operation has passed, require the Contractor to pay performance liquidated damages to the Owner in respect of the failure to meet the [**describe the output guarantees**].
- 4.8 The payment of performance liquidated damages under GC 4.6 or GC 4.7 will be in complete satisfaction of the Contractor's guarantees under GC 4.1, provided that the facility meets both the minimum [**describe the minimum guarantees**] as at the date of payment of such performance liquidated damages.

Guaranteed availability

- 4.9 The Contractor guarantees that the facility either in whole or in part will operate at the guaranteed availability for a period of 12 months from not later than two months after the date of commercial operation.
- 4.10 If at the actual availability period actual output measured is less than the guaranteed availability, the Contractor will pay performance liquidated damages to the Owner as specified in Appendix Y.
- 4.11 The aggregate liability of the Contractor for performance liquidated damages under GC 4.10 will not exceed the amount calculated in accordance with Appendix [].

General

- 4.12 Performance liquidated damages will be invoiced by the Owner and payment will be due within 21 days of issue of such invoice. At the expiration of 21 days the amount invoiced is a debt due and payable to the Owner on demand and may be deducted from any payments otherwise due from the Owner to the Contractor and the Owner may also have recourse to the security provided under this contract.
- 4.13 The parties agree that the performance liquidated damages in Appendix Y are a fair and reasonable pre-estimate of the damages likely to be sustained by the Owner as a result of the Contractor's failure to meet the performance guarantees.
- 4.14 The payment of performance liquidated damages under this GC 4 is in addition to any liability of the Contractor for delay liquidated damages under GC [].
- 4.15 The aggregate liability of the Contractor for delay liquidated damages and performance liquidated damages (provided the Contractor has met both minimum performance guarantees) will not exceed the amount calculated in accordance with section 3 of Appendix Y. The aggregate liability of the Contractor under this GC 4.15 will not apply if the Owner requires the Contractor to pay performance liquidated damages pursuant to GC 4.3.
- 4.16 If this GC 4 (or any part thereof) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming performance liquidated damages, the Owner is entitled to claim against the Contractor damages at law for the Contractor's failure to meet any or all of the performance guarantees. Such damages must not exceed:
- (a) [**set out parameters**]
- 4.17 The Contractor is not entitled to the benefit of the exclusion in GC [] [prohibition on claiming consequential loss] in any claim for damages at law by the Owner against the Contractor pursuant to GC 4.16 for the Contractor's failure to meet any or all of the performance guarantees.

Appendix 2 Example clause: part 2 – Extension of time regime

- [].1 The Contractor must immediately give notice to the Project Company of all incidents and/or events of whatsoever nature affecting or likely to affect the progress of the works.
- [].2 Within 15 days after an event has first arisen the Contractor must give a further notice to the Project Company which must include:
- (a) the material circumstances of the event including the cause or causes;
 - (b) the nature and extent of any delay;
 - (c) the corrective action already undertaken or to be undertaken;
 - (d) the effect on the critical path noted on the programme;
 - (e) the period, if any, by which in its opinion the date for commercial operation should be extended; and
 - (f) a statement that it is a notice pursuant to this GC [].2.
- [].3 Where an event has a continuing effect or where the Contractor is unable to determine whether the effect of an event will actually cause delay to the progress of the works so that it is not practicable for the Contractor to give notice in accordance with GC [].2, a statement to that effect with reasons together with interim written particulars (including details of the likely consequences of the event on progress of the works and an estimate of the likelihood or likely extent of the delay) must be submitted in place of the notice required under GC [].2. The Contractor must then submit to the Project Company, at intervals of 30 days, further interim written particulars until the actual delay caused (if any) is ascertainable, whereupon the Contractor must as soon as practicable but in any event within 30 days give a final notice to the Project Company including the particulars set out in GC [].2.
- [].4 The Project Company must, within 30 days of receipt of the notice in GC [].2 or the final notice in GC [].3 (as the case may be), issue a notice notifying the Contractor's representative of its determination as to the period, if any, by which the date for commercial operation is to be extended.
- [].5 Subject to the provisions of this GC [], the Contractor is entitled to an extension of time to the date for commercial operation as the Project Company assesses, where a delay to the progress of the works is caused by any of the following events, whether occurring before, on or after the date for commercial operation:
- (g) any act, omission, breach or default by the Project Company, the Project Company's representative and their agents, employees and Contractors;
 - (h) a variation, except where that variation is caused by an act, omission or default of the Contractor or its sub contractors, agents or employees;
 - (i) a suspension of the works pursuant to GC [], except where that suspension is caused by an act, omission or default of the Contractor or its sub contractors, agents or employees;
 - (j) an event of *force majeure*; or
 - (k) a change of law.
- [].6 Despite any other provisions of this GC [], the Project Company may at any time make a fair and reasonable extension of the date for commercial operation. The Project Company has no obligation to

grant or to consider whether it should grant an extension of time and the Project Company is not required to exercise this discretion for the benefit of the Contractor.

- [].7 The Contractor must constantly use its best endeavours to avoid delay in the progress of the works.
- [].8 If the Contractor fails to submit the notices required under GCs [].1, [].2 and [].3 within the times required then:
 - (a) the Contractor has no entitlement to an extension of time; and
 - (b) the Contractor must comply with the requirements to perform the works by the date for commercial operation.
- [].9 Any principle of law or equity (including those which might otherwise entitle the Contractor to relief and the Prevention Principle) which might otherwise render the date for commercial operation immeasurable and liquidated damages unenforceable will not apply.
- [].10 It is a further condition precedent of the Contractor's entitlement to an extension of time that the critical path noted on the programme is affected in a manner which might reasonably be expected to result in a delay to the works reaching commercial operation by the date for commercial operation.
- [].11 If there are two or more concurrent causes of delay and at least one of those delays would not entitle the Contractor to an extension of time under this GC [] then, to the extent of that concurrency, the Contractor is not entitled to an extension of time.
- [].12 The Project Company may direct the Contractor's representative to accelerate the works for any reason including as an alternative to granting an extension of time to the date for commercial operation.
- [].13 The Contractor will be entitled to all extra costs necessarily incurred by the Contractor in complying with an acceleration direction under GC [].11, except where the direction was issued as a consequence of the failure of the Contractor to fulfil its obligations under this contract. The Project Company must assess and decide as soon as reasonably practical, the extra costs necessarily incurred by the Contractor.

6 *EPC Contracts in the power sector*

Introduction

Engineering, procurement and construction (EPC) contracts are the most common form of contract used to undertake construction works by the private sector on large-scale and complex infrastructure projects¹. Under an EPC Contract a Contractor is obliged to deliver a complete facility to a Developer who need only turn a key to start operating the facility, hence EPC Contracts are sometimes called turnkey construction contracts. In addition to delivering a complete facility, the Contractor must deliver that facility for a guaranteed price by a guaranteed date and it must perform to the specified level. Failure to comply with any requirements will usually result in the Contractor incurring monetary liabilities.

It is timely to examine EPC Contracts and their use on infrastructure projects given the bad publicity they have received, particularly in contracting circles. A number of Contractors have suffered heavy losses and, as a result, a number of Contractors now refuse to enter into EPC Contracts in certain jurisdictions. This problem has been exacerbated by a substantial tightening in the insurance market. Construction insurance has become more expensive due both to significant losses suffered on many projects and the impact of September 11 on the insurance market.

However, because of their flexibility, the value and the certainty Sponsors and Lenders derive from EPC Contracts, and the growing popularity of PFI² projects, the authors believe EPC Contracts will continue to be the predominant form of construction contract used on large-scale infrastructure projects in most jurisdictions.³

This paper will only focus on the use of EPC Contracts in the power sector. However, the majority of the issues raised are applicable to EPC Contracts used in all sectors.

Prior to examining power project EPC Contracts in detail, it is useful to explore the basic features of a power project.

¹ By this we mean industry sectors including power, oil and gas, transport, water and telecommunications.

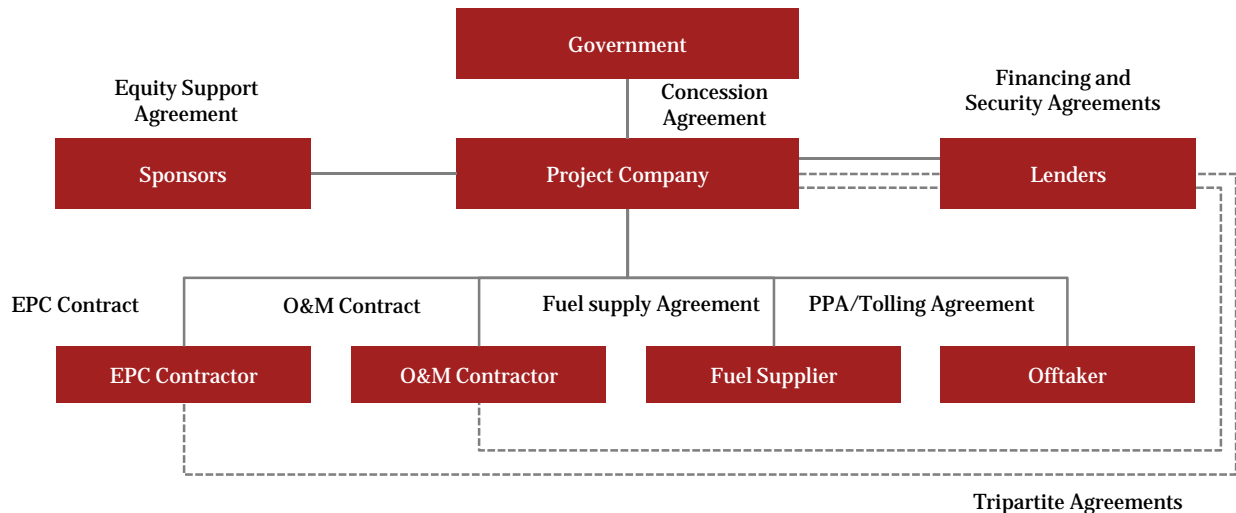
² The terms private finance initiatives (**PFI**) and public private partnerships (**PPP**) are used interchangeably. Sectors which undertake PFI projects include prisons, schools, hospitals, universities and defence.

³ Some jurisdictions, such as the USA, use alternative structures which separate the work into various components.

Basic features of a power project

The contractual structure

The diagram below illustrates the basic contractual structure of a project-financed power project using an EPC contract.



The detailed contractual structure will vary from project to project. However, most projects will have the basic structure illustrated above. As can be seen from the diagram, the Project Company⁴ will usually enter into agreements which cover the following elements:

- An agreement which gives the Project Company the right to construct and operate the power station and sell electricity generated by the power station. Traditionally this was a concession agreement (or project agreement) with a relevant government entity granting the Project Company a concession to build and operate the power station for a fixed period of time (usually between 15 and 25 years), after which it was handed back to the government. This is why these projects are sometimes referred to as build operate transfer (**BOT**) or build own operate transfer (**BOOT**) projects⁵.

However, following the deregulation of electricity industries in many countries, merchant power stations are now being constructed. A merchant power project is a project which sells electricity into an electricity market and takes the market price for that electricity. Merchant power projects do not normally require an agreement between the Project Company and a government entity to be constructed. Instead, they need simply to obtain the necessary planning, environmental and building approvals. The nature and extent of these approvals will vary from place to place. In addition, the Project Company will need to obtain the necessary approvals and licences to sell electricity into the market.

⁴ Given this paper focuses on project-financed infrastructure projects we refer to the Employer as the Project Company. Whilst project companies are usually limited liability companies incorporated in the same jurisdiction as the project is being developed in the actual structure of the Project Company will vary from project to project and jurisdiction to jurisdiction.

⁵ Power projects undertaken by the private sector and, more particularly, by non-utility companies are also referred to as independent power projects. They are undertaken by independent power producers (**IPPs**).

- In traditional project-financed power projects (as opposed to merchant power projects) there is a power purchase agreement (**PPA**) between the Project Company and the local government authority, where the local government authority undertakes to pay for a set amount of electricity every year of the concession, subject to availability, regardless of whether it actually takes that amount of electricity (referred to as a take or pay obligation). Sometimes a tolling agreement is used instead of a PPA. A tolling agreement is an agreement under which the power purchaser directs how the plant is to be operated and despatched. In addition, the power purchaser is responsible for the provision of fuel. This eliminates one risk variable (for the Project Company) but also limits its operational flexibility.

In the absence of a PPA, project companies developing a merchant power plant, and Lenders, do not have the same certainty of cash flow as they would if there was a PPA. Therefore, merchant power projects are generally considered higher risk than non-merchant projects.⁶ This risk can be mitigated by entering into hedge agreements.

Project companies developing merchant power projects often enter into synthetic PPAs or hedge agreements to provide some certainty of revenue. These agreements are financial hedges as opposed to physical sales contracts. Their impact on the EPC Contract is discussed in more detail below.

- **A construction contract governing the construction of the power station:** There are a number of contractual approaches that can be taken to construct a power station. An EPC Contract is one approach. Another option is to have a supply contract, a design agreement and construction contract with or without a project management agreement. The choice of contracting approach will depend on a number of factors including the time available, the Lenders' requirements and the identity of the Contractor(s). The major advantage of the EPC Contract over the other possible approaches is that it provides for a single point of responsibility. This is discussed in more detail below.

Interestingly, on large project-financed projects the Contractor is increasingly becoming one of the Sponsors ie an equity participant in the Project Company. Contractors will ordinarily sell down their interest after financial close because, generally speaking, Contractors will not wish to tie up their capital in operating projects. In addition, once construction is complete the rationale for having the Contractor included in the Ownership consortium no longer exists. Similarly, once construction is complete a project will normally be reviewed as lower risk than a project in construction, therefore, all other things being equal, the Contractor should achieve a good return on its investments.

In our experience most projects and almost all large, private sector, power projects use an EPC Contract.

- **An agreement governing the operation and maintenance of the power station:** This is usually a long-term Operating and Maintenance agreement (O&M agreement) with an Operator for the operation and maintenance of the power station. The term of the O&M agreement will vary from project to project. The Operator will usually be a Sponsor especially if one of the Sponsors is an independent power producer (**IPP**) or utility company whose main business is operating power stations. Therefore, the term of the O&M agreement will likely match the term of the concession agreement. In some financing structures the Lenders will require the Project Company itself to operate the facility. In those circumstances the O&M agreement will be replaced with a technical services agreement under which the Project Company is supplied with the know-how necessary for its own employees to operate the facility.
- **An agreement governing the supply of fuel to the power station:** This is usually a fuel supply agreement, often with the local government authority that regulates the supply of the fuel used to run the power station (eg coal, fuel oil, gas etc.). Obviously, if there is a tolling agreement there is no separate fuel supply agreement. In addition, in some markets and for particular types of projects the Project Company may decide not to enter into a long-term fuel supply agreement but instead elect to purchase fuel in the spot market. This will usually only be feasible for peaking plants and in locations with ample supplies of the necessary fuel. For hydro and wind projects there is also no need for a fuel supply agreement. However, this

⁶ However, because merchant power projects are generally undertaken in more sophisticated and mature markets there is usually a lower level of country or political risk. Conversely, given the move towards privatisation of electricity markets in various countries, this may no longer be the case.

paper focuses on thermal plants. Many of the issues discussed will be applicable to hydro and wind projects, however, those projects have additional risks and issues that need to be taken into account.

- **Financing and security agreements with the Lenders to finance the development of the project**

Accordingly, the construction contract is only one of a suite of documents on a power project. Importantly, the Project Company operates the project and earns revenues under contracts other than the construction contract. Therefore, the construction contract must, where practical, be tailored so as to be consistent with the requirements of the other project documents. As a result, it is vital to properly manage the interfaces between the various types of agreements. These interface issues are discussed in more detail later.

Bankability

A bankable contract is a contract with a risk allocation between the Contractor and the Project Company that satisfies the Lenders. Lenders focus on the ability (or more particularly the lack thereof) of the Contractor to claim additional costs or extensions of time as well as the security provided by the Contractor for its performance. The less comfortable the Lenders are with these provisions the greater amount of equity support the Sponsors will have to provide. In addition, Lenders will have to be satisfied as to the technical risk. Obviously price is also a consideration but that is usually considered separately to the bankability of the contract because the contract price (or more accurately the capital cost of the power station) goes more directly to the bankability of the project as a whole.

Before examining the requirements for bankability it is worth briefly considering the appropriate financing structures and lending institutions. The most common form of financing for infrastructure projects is project financing. Project financing is a generic term that refers to financing secured only by the assets of the project itself. Therefore, the revenue generated by the project must be sufficient to support the financing. Project financing is also often referred to as either non-recourse financing or limited recourse financing.

The terms non-recourse and limited recourse are often used interchangeably, however, they mean different things. Non-recourse means there is no recourse to the project Sponsors at all and limited recourse means, as the name suggests, there is limited recourse to the Sponsors. The recourse is limited both in terms of when it can occur and how much the Sponsors are forced to contribute. In practice, true non-recourse financing is rare. In most projects the Sponsors will be obliged to contribute additional equity in certain defined situations.

Traditionally project financing was provided by commercial Lenders. However, as projects became more complex and financial markets more sophisticated project finance also developed. Whilst commercial Lenders still provide finance, governments now also provide financing either through export credit agencies⁷ or trans – or multi-national organisations like the World Bank, the Asian Development Bank and European Bank for Reconstruction. In addition, as well as bank borrowings Sponsors are also using more sophisticated products like credit wrapped bonds, securitisation of future cash flows and political risk insurance to provide a portion of the necessary finance.

In assessing bankability Lenders will look at a range of factors and assess a contract as a whole. Therefore, in isolation it is difficult to state whether one approach is or is not bankable. However, generally speaking the Lenders will require the following:

- a fixed completion date
- a fixed completion price
- no or limited technology risk
- output guarantees

⁷ Export credit agencies are bodies that provide finance on the condition that the funds are used to purchase equipment manufactured in the country of the export credit agency.

- liquidated damages for both delay and performance
- security from the Contractor and/or its parent
- large caps on liability (ideally, there would be no caps on liability, however, given the nature of EPC Contracting and the risks to the Contractors involved there are almost always caps on liability)
- restrictions on the ability of the Contractor to claim extensions of time and additional costs.

An EPC Contract delivers all of the requirements listed above in one integrated package. This is one of the major reasons why they are the predominant form of construction contract used on large-scale project financed infrastructure projects.

Basic features of an EPC Contract

The key clauses in any construction contract are those which impact on:

- time
- cost
- quality.

The same is true of EPC Contracts. However, EPC Contracts tend to deal with issues with greater sophistication than other types of construction contracts. This is because, as mentioned above, an EPC Contract is designed to satisfy the Lenders' requirements for bankability. EPC Contracts provide for:

- **A single point of responsibility:** The Contractor is responsible for all design, engineering, procurement, construction, commissioning and testing activities. Therefore, if any problems occur the Project Company need only look to one party – the Contractor – to fix both the problem and provide compensation. As a result, if the Contractor is a consortium comprising several entities the EPC Contract must state that those entities are jointly and severally liable to the Project Company.
- **A fixed contract price:** Risk of cost overruns and the benefit of any cost savings are to the Contractor's account. The Contractor usually has a limited ability to claim additional money which is limited to circumstances where the Project Company has delayed the Contractor or has ordered variations to the works.
- **A fixed completion date:** EPC Contracts include a guaranteed completion date that is either a fixed date or a fixed period after the commencement of the EPC Contract. If this date is not met the Contractor is liable for delay liquidated damages (**DLDs**). DLDs are designed to compensate the Project Company for loss and damage suffered as a result of late completion of the power station. To be enforceable in common law jurisdictions, DLDs must be a genuine pre-estimate of the loss or damage that the Project Company will suffer if the power station is not completed by the target completion date. The genuine pre-estimate is determined by reference to the time the contract was entered into.

DLDs are usually expressed as a rate per day which represents the estimated extra costs incurred (such as extra insurance, supervision fees and financing charges) and losses suffered (revenue forgone) for each day of delay.

In addition, the EPC Contract must provide for the Contractor to be granted an extension of time when it is delayed by the acts or omissions of the Project Company. The extension of time mechanism and reasons why it must be included are discussed later.

- **Performance guarantees:** The Project Company's revenue will be earned by operating the power station. Therefore, it is vital that the power station performs as required in terms of output, efficiency and reliability. Therefore, EPC Contracts contain performance guarantees backed by performance liquidated damages (**PLDs**) payable by the Contractor if it fails to meet the performance guarantees.

PLDs must also be a genuine pre-estimate of the loss and damage that the Project Company will suffer over the life of the project if the power station does not achieve the specified performance guarantees. As with DLDs, the genuine pre-estimate is determined by reference to the time the contract was signed.

PLDs are usually a net present value (**NPV**) (less expenses) calculation of the revenue forgone over the life of the project.

For example, if the output of the plant is five MW less than the specification the PLDs are designed to compensate the Project Company for the revenue forgone over the life of the project by being unable to sell that five MW.

PLDs and the performance guarantee regime and its interface with the DLDs and the delay regime are discussed in more detail below.

- **Caps on liability:** As mentioned above most EPC Contractors will not, as a matter of company policy, enter into contracts with unlimited liability. Therefore, EPC Contracts for power projects cap the Contractor's liability at a percentage of the contract price. This varies from project to project, however, an overall liability cap of 100 percent of the contract price is common. In addition, there are normally sub-caps on the Contractor's liquidated damages liability. For example, DLDs and PLDs might each be capped at 20 percent of the contract price with an overall cap on both types of liquidated damages of 30 percent of the contract price.

There will also likely be a prohibition on the claiming of consequential damages. Put simply consequential damages are those damages which do not flow directly from a breach of contract but which were in the reasonable contemplation of the parties at the time the contract was entered into. This used to mean heads of damage like loss of profit. However, loss of profit is now usually recognised as a direct loss on project-financed projects and, therefore, would be recoverable under a contract containing a standard exclusion of consequential loss clause. Nonetheless, care should be taken to state explicitly that liquidated damages can include elements of consequential damages. Given the rate of liquidated damages is pre-agreed most Contractors will not object to this exception.

In relation to both caps on liability and exclusion of liability it is common for there to be some exceptions. The exceptions may apply to either or both the cap on liability and the prohibition on claiming consequential losses. The exceptions themselves are often project specific, however, some common examples include cases of fraud or wilful misconduct, situations where the minimum performance guarantees have not been met and the cap on delay liquidated damages has been reached and breaches of the intellectual property warranties.

- **Security:** It is standard for the Contractor to provide performance security to protect the Project Company if the Contractor does not comply with its obligations under the EPC Contract. The security takes a number of forms including:
 - A bank guarantee for a percentage, normally in the range of 5–15%, of the contract price. The actual percentage will depend on a number of factors including the other security available to the Project Company, the payment schedule (because the greater the percentage of the contract price unpaid by the Project Company at the time it is most likely to draw on security ie, to satisfy DLD and PLD obligations the smaller the bank guarantee can be), the identity of the Contractor and the risk of it not properly performing its obligations, the price of the bank guarantee and the extent of the technology risk.
 - Retention ie withholding a percentage (usually 5 –10%) of each payment. Provision is often made to replace retention monies with a bank guarantee (sometimes referred to as a retention guarantee (bond))
 - Advance payment guarantee, if an advance payment is made
 - A parent company guarantee – this is a guarantee from the ultimate parent (or other suitably related entity) of the Contractor which provides that it will perform the Contractor's obligations if, for whatever reason, the Contractor does not perform.
- **Variations:** The Project Company has the right to order variations and agree to variations suggested by the Contractor. If the Project Company wants the right to omit works either in their entirety or to be able to

engage a different Contractor this must be stated specifically. In addition, a properly drafted variations clause should make provision for how the price of a variation is to be determined. In the event the parties do not reach agreement on the price of a variation the Project Company or its representative should be able to determine the price. This determination is subject to the dispute resolution provisions. In addition, the variations clause should detail how the impact, if any, on the performance guarantees is to be treated. For some larger variations the Project Company may also wish to receive additional security. If so, this must also be dealt with in the variations clause.

- **Defects liability:** The Contractor is usually obliged to repair defects that occur in the 12 to 24 months following completion of the performance testing. Defects liability clauses can be tiered. That is the clause can provide for one period for the entire power station and a second, extended period, for more critical items.
- **Intellectual property:** The Contractor warrants that it has rights to all the intellectual property used in the execution of the works and indemnifies the Project Company if any third parties' intellectual property rights are infringed.
- **Force majeure:** The parties are excused from performing their obligations if a *force majeure* event occurs. This is discussed in more detail below.
- **Suspension:** The Project Company usually has right to suspend the works.
- **Termination:** This sets out the contractual termination rights of both parties. The Contractor usually has very limited contractual termination rights. These rights are limited to the right to terminate for non-payment or for prolonged suspension or prolonged *force majeure* and will be further limited by the tripartite or direct agreement between the Project Company, the Lenders and the Contractor. The Project Company will have more extensive contractual termination rights. They will usually include the ability to terminate immediately for certain major breaches or if the Contractor becomes insolvent and the right to terminate after a cure period for other breaches. In addition, the Project Company may have a right to terminate for convenience. It is likely the Project Company's ability to exercise its termination rights will also be limited by the terms of the financing agreements.
- **Performance specification:** Unlike a traditional construction contract, an EPC Contract usually contains a performance specification. The performance specification details the performance criteria that the Contractor must meet. However, it does not dictate how they must be met. This is left to the Contractor to determine. A delicate balance must be maintained. The specification must be detailed enough to ensure the Project Company knows what it is contracting to receive but not so detailed that if problems arise the Contractor can argue they are not its responsibility.

Whilst there are, as described above, numerous advantages to using an EPC Contract, there are some disadvantages. These include the fact that it can result in a higher contract price than alternative contractual structures. This higher price is a result of a number of factors not least of which is the allocation of almost all the construction risk to the Contractor. This has a number of consequences, one of which is that the Contractor will have to factor into its price the cost of absorbing those risks. This will result in the Contractor building contingencies into the contract price for events that are unforeseeable and/or unlikely to occur. If those contingencies were not included the contract price would be lower. However, the Project Company would bear more of the risk of those unlikely or unforeseeable events. Sponsors have to determine, in the context of their particular project, whether the increased price is worth paying.

As a result, Sponsors and their advisers must critically examine the risk allocation on every project. Risk allocation should not be an automatic process. Instead, the Project Company should allocate risk in a sophisticated way that delivers the most efficient result. For example, if a project is being undertaken in an area with unknown geology and without the time to undertake a proper geotechnical survey, the Project Company may be best served by bearing the site condition risk itself as it will mean the Contractor does not have to price a contingency it has no way of quantifying. This approach can lower the risk premium paid by the Project Company. Alternatively, the opposite may be true. The Project Company may wish to pay for the contingency in return for passing off the risk which quantifies and caps its exposure. This type of analysis must be undertaken on all major risks prior to going out to tender.

Another consequence of the risk allocation is the fact that there are relatively few construction companies that can and are willing to enter into EPC Contracts. As mentioned in the introduction some bad publicity and a tightening insurance market have further reduced the pool of potential EPC Contractors. The scarcity of EPC Contractors can also result in relatively high contract prices.

Another major disadvantage of an EPC Contract becomes evident when problems occur during construction. In return for receiving a guaranteed price and a guaranteed completion date, the Project Company cedes most of the day-to-day control over the construction. Therefore, project companies have limited ability to intervene when problems occur during construction. The more a Project Company interferes the greater the likelihood of the Contractor claiming additional time and costs. In addition, interference by the Project Company will make it substantially easier for Contractors to defeat claims for liquidated damages and defective works.

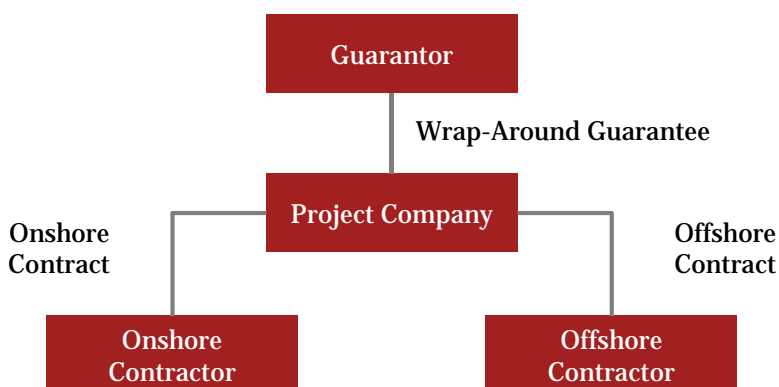
Obviously, ensuring the project is completed satisfactorily is usually more important than protecting the integrity of the contractual structure. However, if a Project Company interferes with the execution of the works they will, in most circumstances, have the worst of both worlds. They will have a contract that exposes them to liability for time and costs incurred as a result of their interference without any corresponding ability to hold the Contractor liable for delays in completion or defective performance. The same problems occur even where the EPC Contract is drafted to give the Project Company the ability to intervene. In many circumstances, regardless of the actual drafting, if the Project Company becomes involved in determining how the Contractor executes the works then the Contractor will be able to argue that it is not liable for either delayed or defective performance.

As a result, it is vitally important that great care is taken in selecting the Contractor and in ensuring the Contractor has sufficient knowledge and expertise to execute the works. Given the significant monetary value of EPC Contracts, and the potential adverse consequences if problems occur during construction, the lowest price should not be the only factor used when selecting Contractors.

Split EPC Contracts

One common variation, particularly in Asia, on the basic EPC structure illustrated above is a split EPC Contract. Under a split EPC Contract, the EPC Contract is, as the name implies, split into two or more separate contracts.

The basic split structure (illustrated below) involves splitting the EPC Contract into an onshore construction contract and an offshore supply contract.⁹



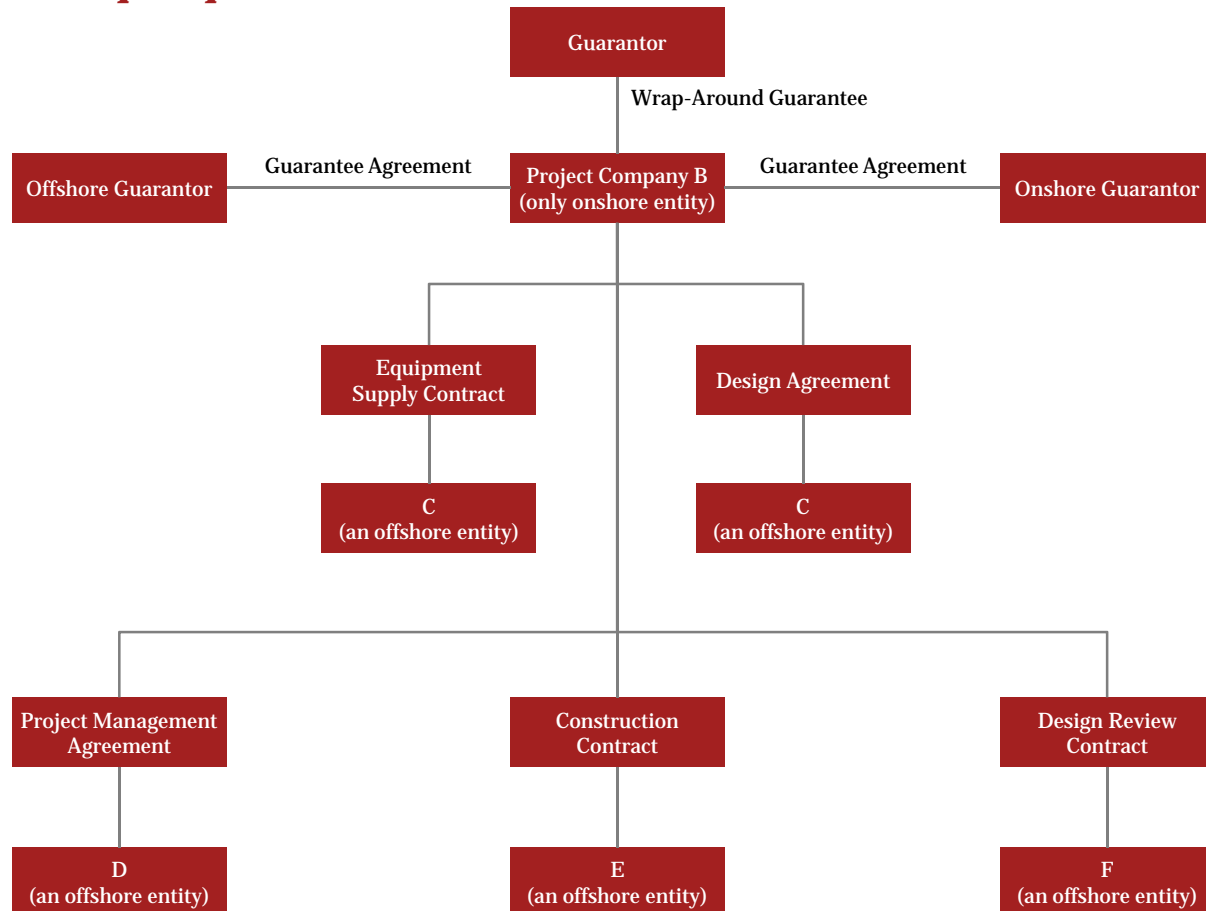
There are two main reasons for using a split contract. The first is because it can result in a lower contract price as it allows the Contractor to make savings in relation to onshore taxes, in particular on indirect and corporate

8 For the purposes of this paper, we have assumed the EPC Contract will be governed by the law of a common law jurisdiction. Where there are differences between jurisdictions we have adopted the English law approach. Therefore, if an EPC Contract is governed by a law other than English law you will need to seek advice from local counsel to ensure the contract is enforceable in the relevant jurisdiction. For further information on liability in EPC Contracts under English law refer to our paper outlined "Position Paper on Liability".

9 We have prepared a paper that deals with the variations and complications in split EPC Contracts. You should consult that paper, or ask us for a copy, if you want more information on this topic.

taxes in the onshore jurisdiction. The second is because it may reduce the cost of complying with local licensing regulations by having more of the works, particularly the design works, undertaken offshore. In addition, in some countries which impose restrictions on who can carry out certain activities like engineering and design services, splitting the EPC Contract can also be advantageous because it can make it easier to repatriate profits. Below is a diagram illustrating a more complex split EPC structure we have used previously that dealt with both tax and licensing issues.

Example split EPC Structure



Whilst a split EPC Contract can result in costs savings, there are risks to the Project Company in using such a structure. This mainly arises because of the derogation from the principle of single point of responsibility.

Unlike a standard EPC Contract, the Project Company cannot look only to a single Contractor to satisfy all the contractual obligations (in particular, design, construction and performance). Under a split structure, there are at least two entities with those obligations. Therefore, a third agreement, a wrap-around guarantee,¹⁰ is used to deliver a single point of responsibility despite the split.

Under a wrap-around guarantee, an entity, usually either the offshore supplier or the parent company of the contracting entities, guarantees the obligations of both Contractors. This delivers a single point of responsibility to the Project Company and the Lenders. The contracting entities will then enter into a separate agreement to determine how, as between themselves, liability is to be apportioned. However, that agreement is not relevant for the purposes of this paper.

¹⁰ This is also called a coordination agreement, an administration agreement or an umbrella deed.

In addition, the wrap-around guarantee will, if properly drafted, prevent the various Contractors from relying on the defaults of the other parties to avoid performing their contractual obligations – a tactic known as a horizontal defence. The wrap-around guarantee should also prevent a Contractor from relying on the Project Company's default where the Project Company's default was a result, either directly or indirectly, of the non-performance, under-performance or delay in performance of any of the other Contractors under their respective contracts.

In addition to horizontal defences, the wrap-around guarantee should deal with the following matters:

- **Guarantees and indemnities:** The Guarantor must guarantee the performance of the totality of the works and the ability of the separate parts to work seamlessly
- **Liquidated damages:** This is linked to the issue of horizontal defences discussed above. The wrap-around guarantee must ensure that liquidated damages are paid regardless of which Contractor is late and which Contractor fails to perform. Similarly, the aggregate cap of liability in the wrap-around guarantee must override any caps on liability in the split contracts themselves
- **Provision of a performance bond by the Guarantor or its parent:** It is usually prudent to have the Guarantor provide security for their obligations under the wrap-around guarantee. This may be in addition to or in replacement of the security provided under the EPC Contracts themselves. It will depend on the particular requirements of each project
- **Liability (and limitation of liability) of the Guarantor:** The Guarantor's liability should be equal to the aggregate liability of the contracting entities under the split EPC Contracts
- **Duration of the wrap-around guarantee:** The wrap-around guarantee should remain in force for as long as possible to offer the Project Company additional protection in the event latent defects occur. In any event, it should remain in force until the expiry of the defects liability period or the resolution of any dispute arising out of or in connection with the construction of the facility, whichever is the later
- **Dispute resolution:** The procedures should be identical to those in the project documents and allow the Project Company to consolidate claims
- **Termination:** Termination of an EPC Contract should automatically terminate the other EPC Contract(s) and the wrap-around guarantee (except in respect of accrued liability)
- **Tax indemnity:** Ideally the Contractor(s) should indemnify the Project Company for any taxes or penalties payable as a result of the split.

In addition, the wrap-around guarantee should contain provisions dealing with the practical consequences of splitting the contract and how the contracts and the project should be administered. For example, there should also be clauses dealing with more mundane issues like notices. Notices issued under one contract should be deemed to be notices under the other contracts.

Whenever an EPC Contract is split the primary driver both of the general structure of the split and the particular drafting approach must be achieving a tax effective structure. Therefore, tax advice from experts in the relevant jurisdiction must be obtained and those experts must review the split contracts and the wrap-around guarantee.

Key power specific clauses in power EPC Contracts

General interface issues

As noted earlier, an EPC Contract is one of a suite of agreements necessary to develop a power project. Therefore, it is vital that the EPC Contract properly interfaces with those other agreements. In particular, care should be taken to ensure the following issues interface properly:

- commencement and completion dates
- liquidated damages amounts and trigger points
- caps on liability
- indemnities
- entitlements to extensions of time
- insurance
- *force majeure*
- intellectual property.

Obviously, not all these issues will be relevant for all agreements. In addition to these general interface issues that apply to most types of projects, there are also power project issues that must be considered. These issues are mainly concerned with the need to burn fuel and export power. They are discussed in more detail below.¹¹

Those major power-specific interface issues are:

- access for the Contractor to the transmission grid to allow timely completion of construction, commissioning and testing (grid access).
- consistency of commissioning and testing regimes
- fuel specification requirements
- interface issues between the relevant government agencies and System Operator and the Contractor. In particular, whilst the Project Company must maintain a long-term or comfortable relationship with either the government or the system Operator the Contractor does not.

Grid access

Clearly, EPC Contracts will not provide for the handover of the power station to the Project Company and the PPA will not become effective until all commissioning and reliability trialling has been successfully completed. This raises the important issue of the Contractor's grid access and the need for the EPC Contract to clearly define the obligations of the Project Company in providing grid access.

Lenders need to be able to avoid the situation where the Project Company's obligation to ensure grid access is uncertain. This will result in protracted disputes with the Contractor concerning the Contractor's ability to place load onto the grid system and to obtain extensions of time in situations where delay has been caused as a result of the failure or otherwise of the Project Company to provide grid access.

Grid access issues arise at two differing levels, namely:

- the obligation to ensure that the infrastructure is in place
- the obligation to ensure that the Contractor is permitted to export power

With respect to the obligation to ensure that the infrastructure is in place, the Project Company is the most appropriate party to bear this risk vis-à-vis the Contractor, since the Project Company usually either builds the infrastructure itself or has it provided through the relevant concession agreement. Issues that must be considered include:

- What are the facilities that are to be constructed and how will these facilities interface with the Contractor's works? Is the construction of these facilities covered by the PPA, concession agreement or any other construction agreement? If so, are the rights and obligations of the Project Company dealt with in a consistent manner?
- What is the timing for completion of the infrastructure – will it fit in with the timing under the EPC Contract?

With respect to the Contractor's ability to export power, the EPC Contract must adequately deal with this risk and satisfactorily answer the following questions to ensure the smooth testing, commissioning and entering of commercial operation:

- What is the extent of the grid access obligation? Is it merely an obligation to ensure that the infrastructure necessary for the export of power is in place or does it involve a guarantee that the grid will take all power which the Contractor wishes to produce?
- What is the timing for the commencement of this obligation? Does the obligation cease at the relevant target date of completion? If not, does its nature change after the date has passed?
- What is the obligation of the Project Company to provide grid access in cases where the Contractor's commissioning/plant is unreliable – is it merely a reasonableness obligation?
- Is the relevant grid robust enough to allow for full testing by the Contractor – for example, the performance of full-load rejection testing?
- What is the impact of relevant national grid codes or legislation and their interaction with both the EPC Contract and the PPA?

Many EPC Contracts are silent on these matters or raise far more questions than they actually answer. Given that the Project Company's failure will stem from restrictions imposed on it under either or both the PPA or the concession agreement, the best answer is to back to back the Project Company's obligations under the EPC Contract (usually to provide an extension of time or costs) with the PPA. This approach will not eliminate the risk associated with grid access issues but will make it more manageable.

A variety of projects we have worked on in Asia, particularly in China and the Philippines, have incurred significant amounts of time and costs in determining the grid access obligations under the EPC Contract. This experience has taught us that it is a matter which must be resolved at the contract formation stage. Therefore, we recommend inserting the clauses in part 3 of Appendix 1.12

Interfacing of commissioning and testing regimes

It is also important to ensure the commissioning and testing regimes in the EPC Contract mirror the requirements for commercial operation under the PPA. Mismatches only result in delays, lost revenue and liability for damages under the PPA or concession agreement, all of which have the potential to cause disputes.

Testing/trialling requirements under both contracts must provide the necessary Project Company satisfaction under the EPC Contract and System Operator/offtaker satisfaction under the PPA. Relevant testing issues which must be considered include:

- Are differing tests/trialling required under the EPC Contract and the PPA? If so, are the differences manageable for the Project Company or likely to cause significant disruption?
- Is there consistency between obtaining handover from the Contractor under the EPC Contract and commercial operation? It is imperative to prescribe back-to-back testing under the relevant PPA and the EPC Contract which will result in a smoother progress of the testing and commissioning and better facilitate all necessary supervision and certification. It must not be forgotten that various certifications will be required at the Lender level. The last thing the Lenders will want is the process to be held up by their own requirements for certification. To avoid delays and disruption it is important that the Lenders' engineer is acquainted with the details of the project and, in particular, any potential difficulties with the testing regime.

Therefore, any potential problems can be identified early and resolved without impacting on the commercial operation of the power station.

- Is the basis of the testing to be undertaken mirrored under both the EPC Contract and the PPA? For example, on what basis are various environmental tests to be undertaken? Are they to be undertaken on a per unit basis or a station output basis?
- What measurement methodology is being used? Are the correction factors to be applied under the relevant documents uniform? Are references to international standards or guidelines to a particular edition or version?
- Are all tests necessary for the Contractor to complete under the EPC Contract able to be performed as a matter of practice?

Significantly, if the relevant specifications are linked to guidelines such as the World Bank environmental guidelines, consideration must be given to changes which may occur in these guidelines. The EPC Contract reflects a snapshot of the standards existing at a time when that contract was signed. It may be a number of years post that date in which the actual construction of the project is undertaken thus allowing for possible mismatches should the legislative/guidelines have changed as regards to environmental concerns. It is important that there is certainty as to which standard applies for both the PPA and the EPC Contract. Is it the standard at the time of entering the EPC Contract or is it the standard which applies at the time of testing?

Consideration must therefore be given to the appropriate mechanism to deal with potential mismatches between the ongoing obligation of complying with laws, and the Contractor's obligation to build to a specification agreed at a previous time. Consideration must be given to requiring satisfaction of guidelines as amended from time to time. The breadth of any change of law provision will be at the forefront of any review.

The above issues raise the importance of the testing schedules to the EPC Contract and the PPA. The size and importance of the various projects to be undertaken must mean that the days where schedules are attached at the last minute without being subject to review are gone.

Discrepancies between the relevant testing and commissioning requirements will only serve to delay and distract all parties from the successful completion of testing and reliability trials.

These are all areas where lawyers can add value to the successful completion of projects by being alert to and dealing with such issues at the contract formation stage.

Fuel specification issues

The nature of the fuel to be supplied to the Contractor under the EPC Contract is also another important issue. Where there is a tolling agreement, as opposed to a PPA, it is vitally important that an adequate review is done at the EPC Contract level to ensure that the fuel being provided under the tolling agreement meets the requirements of the EPC Contract. Similar consideration will need to be given to any Project Company where there is a PPA structure.

Differing fuel specification requirements can only result in delay, cost claims and extension of time claims at the EPC Contract level. Fuel specification issues will be hidden away in the schedules. Again, watch out for those schedules.

In addition, where certain tests require specific types or quality of fuel the review should check that there are arrangements in place for that type of quality of fuel to be provided eg high sulphur fuel may be required to properly test the flue gas desulphurisation equipment.

Interface issues between the offtaker and the EPC Contractor

At a fundamental level, it is imperative that the appropriate party corresponds with the relevant offtaker or System Operator during construction on issues such as the provision of transmission facilities, fuel requirements, testing requirements and timing. The Project Company must ensure the EPC Contract states clearly that it is the appropriate party to correspond with the offtaker and the System Operator. Any uncertainty in the EPC Contract may unfortunately see the EPC Contractor dealing with the offtaker or the System Operator thus possibly risking the relationship of the Project Company with its customer. Significantly, it is the Project Company which must develop and nurture an ongoing and long-term relationship with the offtaker. On the other hand, it is the Contractor's prime objective to complete the project on time or earlier at a cost which provides it with significant profit. The clash of these conflicting objectives in many cases does not allow for such a smooth process. Again, the resolution of these issues at the EPC Contract formation stage is imperative.

Key performance clauses in power EPC Contracts

Rationale for imposing liquidated damages

Almost every construction contract will impose liquidated damages for delay and impose standards in relation to the quality of construction. Most, however, do not impose PLDs. EPC Contracts impose PLDs because the achievement of the performance guarantees has a significant impact on the ultimate success of a project. Similarly, it is important that the power station commences operation on time because of the impact on the success of the project and because of the liability the Project Company will have under other agreements. This is why DLDs are imposed. DLDs and PLDs are both sticks used to motivate the Contractor to fulfil its contractual obligations.

The law of liquidated damages

As discussed above, liquidated damages must be a genuine pre-estimate of the Project Company's loss. If liquidated damages are more than a genuine pre-estimate they will be a penalty and unenforceable. There is no legal sanction for setting a liquidated damages rate below that of a genuine pre-estimate, however, there are the obvious financial consequences.

In addition to being unenforceable as a penalty, liquidated damages can also be void for uncertainty or unenforceable because they breach the Prevention Principle. Void for uncertainty means, as the term suggests, that it is not possible to determine how the liquidated damages provisions work. In those circumstances, a court will void the liquidated damages provisions. The Prevention Principle was developed by the courts to prevent Employers, ie project companies, from delaying Contractors and then claiming DLDs. It is discussed in more detail below in the context of extensions of time.

Prior to discussing the correct drafting of liquidated damages clauses to ensure they are not void or unenforceable it is worth considering the consequences of an invalid liquidated damages regime. If the EPC Contract contains an exclusive remedies clause the result is simple – the Contractor will have escaped liability unless the contract contains an explicit right to claim damages at law if the liquidated damages regime fails. This is discussed in more detail below.

If, however, the EPC Contract does not contain an exclusive remedies clause the non-challenging party should be able to claim at law for damages they have suffered as a result of the challenging party's non – or defective – performance. What then is the impact of the caps in the now invalidated liquidated damages clauses?

Unfortunately, the position is unclear in common law jurisdictions, and a definitive answer cannot be provided based upon the current state of authority. It appears the answer varies depending upon whether the clause is invalidated due to its character as a penalty or because of uncertainty or unenforceability. Our view of the current position is set out below. We note that whilst the legal position is not settled the position presented below does appear logical.

- **Clause invalidated as a penalty:** When liquidated damages are unenforceable because they are a penalty (ie they do not represent a genuine pre-estimate of loss), the liquidated damages or its cap will not act as a cap on damages claims at general law. We note that it is rare for a court to find liquidated damages are penalties in contracts between two sophisticated, well advised parties.

- **Clause invalidated due to acts of prevention by the Principal:** Where a liquidated damages clause is invalidated due to an act of prevention by the Principal for which the Contractor is not entitled to an extension of time, the liquidated damages or its cap will not act as a cap on damages claims at general law.

A liquidated damages clause which is unworkable or too uncertain to ascertain what the parties intended is severed from the EPC Contract in its entirety and will not act as a cap on the damages recoverable by the Principal from the Contractor. Upon severance, the clause is, for the purposes of contractual interpretation, ignored.

However, it should be noted that the threshold test for rendering a clause void for uncertainty is high, and courts are reluctant to hold that the terms of a contract, in particular a commercial contract where performance is well advanced, are uncertain.

Drafting of liquidated damages clauses

Given the role liquidated damages play in ensuring EPC Contracts are bankable and the consequences detailed above of the regime not being effective, it is vital to ensure they are properly drafted to ensure Contractors cannot avoid their liquidated damages liability on a legal technicality.

Therefore, it is important, from a legal perspective, to ensure DLDs and PLDs are dealt with separately. If a combined liquidated damages amount is levied for late completion of the works, it risks being struck out as a penalty because it will overcompensate the Project Company. However, a combined liquidated damages amount levied for underperformance may under-compensate the Project Company.

Our experience shows that there is a greater likelihood of delayed completion than there is of permanent underperformance. One of the reasons why projects are not completed on time is Contractors are often faced with remedying performance problems. This means, from a legal perspective, if there is a combination of DLDs and PLDs, the liquidated damages rate should include more of the characteristics of DLDs to protect against the risk of the liquidated damages being found to be a penalty.

If a combined liquidated damages amount includes an NPV or performance element the Contractor will be able to argue that the liquidated damages are not a genuine pre-estimate of loss when liquidated damages are levied for late completion only. However, if the combined liquidated damages calculation takes on more of the characteristics of DLDs the Project Company will not be properly compensated if there is permanent underperformance.

It is also important to differentiate between the different types of PLDs to protect the Project Company against arguments by the Contractor that the PLDs constitute a penalty. For example, if a single PLDs rate is only focused on output and not efficiency, problems and uncertainties will arise if the output guarantee is met but one or more of the efficiency guarantees are not. In these circumstances, the Contractor will argue that the PLDs constitute a penalty because the loss the Project Company suffers if the efficiency guarantees are not met are usually smaller than if the output guarantees are not met. As a result, power project EPC Contracts normally impose two types of PLDs, one for output (ie how many megawatts the power station produces) and one for heat rate (ie how much fuel the power station burns to generate the required output of electricity).

Drafting of the performance guarantee regime

Now that it is clear that DLDs and PLDs must be dealt with separately it is worth considering, in more detail, how the performance guarantee regime should operate. A properly drafted performance testing and guarantee regime is important because the success or failure of the project depends, all other things being equal, on the performance of the power station.

The major elements of the performance regime are:

- testing
- guarantees
- liquidated damages.

Liquidated damages were discussed above. Testing and guarantees are discussed below.

Testing

Performance tests may cover a range of areas. Three of the most common are:

- **Functional tests:** These test the functionality of certain parts of the power station. For example, pumps, conveyers, pressure vessels etc. They are usually discrete tests which do not test the power station as a whole. Liquidated damages do not normally attach to these tests. Instead, they are absolute obligations that must be complied with. If not, the power station will not reach the next stage of completion (for example, mechanical completion or provisional acceptance).
- **Emissions tests:** These test compliance against environmental requirements. Again, these are normally absolute obligations because the consequences of failure can be as severe as being forced to shut down the power station. These tests should ensure the most stringent obligations imposed on the Project Company, whether by government regulations or by Lenders, are met. Emissions tests occur at various times, including during and after guarantee tests. Liquidated damages are sometimes levied if the Contractor fails the emissions tests. However, given emissions tests are usually related to environmental approvals, it is likely that the power station will not be able to operate if the emissions tests are failed. Therefore, passing the emissions tests is usually an absolute obligation not linked to liquidated damages.
- **Guarantee tests:** These test the ability of the power station to meet the performance criteria specified in the contract. There are often minimum and guaranteed levels of performance specified and, as discussed above, providing the minimum levels are met the consequence of failure is normally the payment of PLDs. Satisfaction of the minimum performance guarantees is normally an absolute obligation. The minimum performance guarantees should be set at a level of performance at which it is economic to accept the power station. Lender's input will be vital in determining what this level is. However, it must be remembered that Lenders have different interests to the Sponsors. Lenders will, generally speaking, be prepared to accept a power station that provides sufficient income to service the debt. However, in addition to covering the debt service obligations, Sponsors will also want to receive a return on their equity investment. If that will not be provided via the sale of electricity because the Contractor has not met the performance guarantees, the Sponsors will have to rely on the PLDs to earn their return. In some projects, the guarantee tests occur after handover of the power station to the Project Company. This means the Contractor no longer has any liability for DLDs during performance testing.

In our view, it is preferable, especially in project-financed projects, for handover to occur after completion of performance testing. This means the Contractor continues to be liable for DLDs until either the power station operates at the guaranteed level or the Contractor pays PLDs where the power station does not operate at the guaranteed level. Obviously, DLDs will be capped (usually at 20 percent of the contract price); therefore, the EPC Contract should give the Project Company the right to call for the payment of the PLDs and accept the power station. If the Project Company does not have this right the problem mentioned above will arise, namely, the Project Company will not have received its power station and will not be receiving any DLDs as compensation.

It is common for the Contractor to be given an opportunity to modify the power station if it does not meet the performance guarantees on the first attempt. This is because the PLD amounts are normally very large and most Contractors would prefer to spend the time and the money necessary to remedy performance instead of paying PLDs. Not giving Contractors this opportunity will likely lead to an increased contract price both because Contractors will over-engineer the power station and will build a contingency for paying PLDs into the contract price. The second reason is because in most circumstances the Project Company will prefer to receive a power station that operates at 100 percent capacity. The right to modify and retest is another reason why DLDs should be payable up to the time the performance guarantees are satisfied.

If the Contractor is to be given an opportunity to modify and retest the EPC Contract must deal with who bears the costs of the additional fuel and consumables required to undertake the retesting. The cost of the fuel in particular can be significant and should, in normal circumstances, be to the Contractor's account because the retesting only occurs if the performance guarantees are not met at the first attempt.

Technical issues

Ideally, the technical testing procedures should be set out in the EPC Contract. However, for a number of reasons, including the fact that it is often not possible to fully scope the testing programme until the detailed design is complete, the testing procedures are usually left to be agreed during construction by the Contractor, the Project Company's representative or engineer and, if relevant, the Lenders' engineer. However, a properly drafted EPC Contract should include the guidelines for testing.

The complete testing procedures must, as a minimum, set out details of:

- **Testing methodology:** Reference is often made to standard methodologies, for example, the American Society of Mechanical Engineers methodology.
- **Testing equipment:** Who is to provide it, where it is to be located, how sensitive must it be?
- **Tolerances:** What is the margin of error?
- **Ambient conditions:** What atmospheric conditions are assumed to be the base case (testing results will need to be adjusted to take into account any variance from these ambient conditions)?

In addition, for power stations with multi-units the testing procedures must state those tests to be carried out on a per unit basis and those on an entire plant basis.

Provision of consumables and fuel

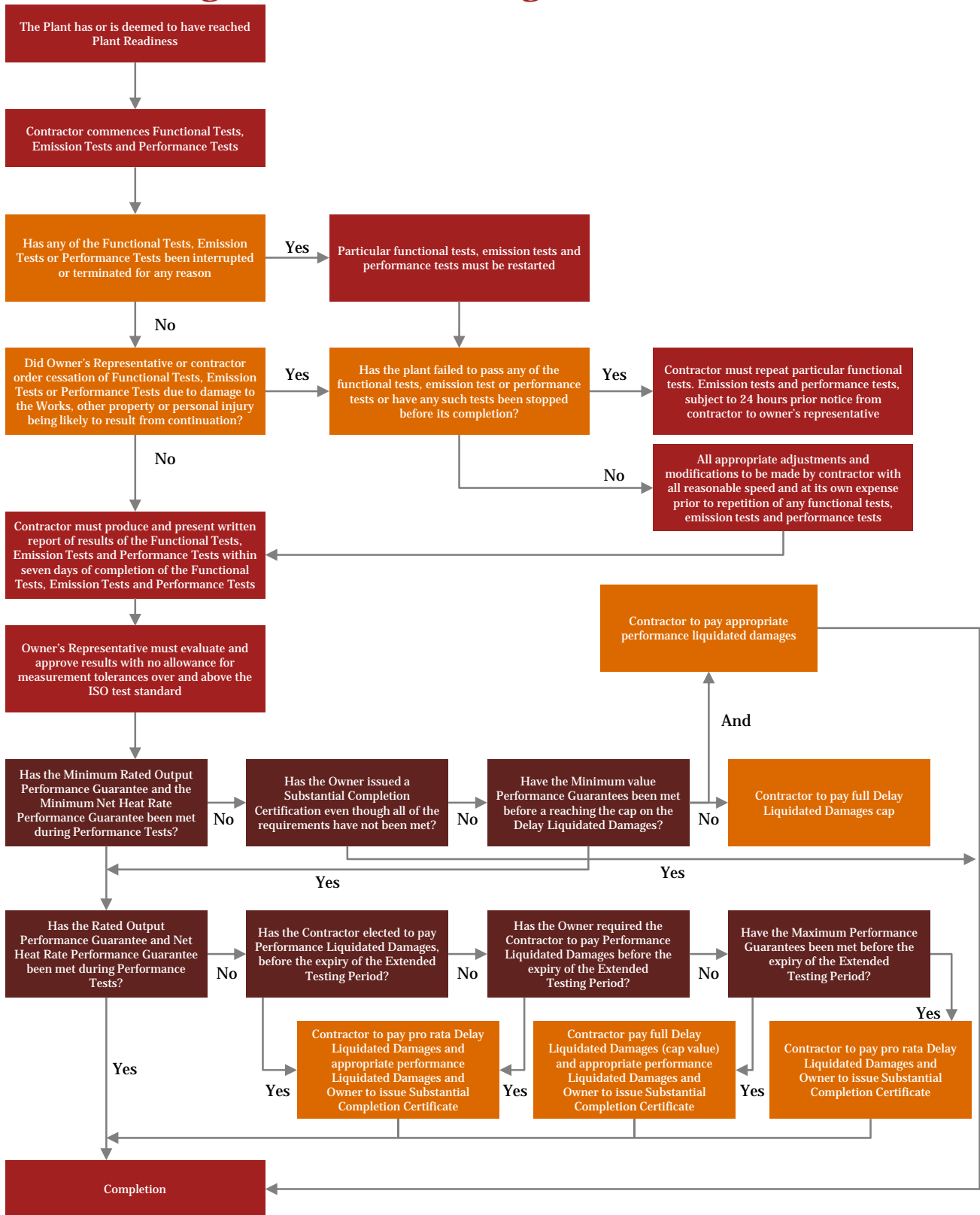
The responsibility for the provision of consumables and fuel required to carry out the performance tests must be clearly set out in the EPC Contract. In general, the Project Company will be responsible for the provision of both consumables and fuel.

As the proper interpretation of the Project Company's obligation to supply consumables is often a matter of dispute between the Project Company and Contractor, it is important for the EPC Contract to precisely identify the quality and quantity of consumables to be provided as well as the time for provision of those consumables (which should be linked to the progress of the works rather than a specific date). The responsibility for the cost of providing consumables and fuel must also be clearly identified. An example of the performance testing and guarantee regime we have used on a number of projects is included in Appendix 1 to this paper.

These example clauses are only extracts from a complete contract and ideally should be read as part of that entire contract and, in particular, with the clauses that deal with DLDs, PLDs, liability, the scope of the Contractor's obligations, including any fitness for purpose warranties and termination. Nonetheless, they do provide an example of the way a performance testing and liquidated damages regime can operate.

The process is best illustrated diagrammatically. Refer to the flowcharts below to see how the various parts of the performance testing regime should interface.

Performance guarantees and testing



Key general clauses in EPC Contracts – Delay and extensions of time

The Prevention Principle

As noted previously, one of the advantages of an EPC Contract is that it provides the Project Company with a fixed completion date. If the Contractor fails to complete the works by the required date it is liable for DLDs. However, in some circumstances the Contractor is entitled to an extension of the date for completion. Failure to grant an extension for a Project Company-caused delay can void the liquidated damages regime and set time at large. This means the Contractor is only obliged to complete the works within a reasonable time.

This is the situation under common law-governed¹¹¹²¹³ contracts due to the Prevention Principle. The Prevention Principle was developed by the courts to prevent Employers ie project companies from delaying Contractors and then claiming DLDs.

The legal basis of the Prevention Principle is unclear and it is uncertain whether you can contract out of the Prevention Principle. Logically, given most commentators believe the Prevention Principle is an equitable principle, explicit words in a contract should be able to override the principle. However, the courts have tended to apply the Prevention Principle even in circumstances where it would not, on the face of it, appear to apply. Therefore, there is a certain amount of risk involved in trying to contract out of the Prevention Principle. The more prudent and common approach is to accept the existence of the Prevention Principle and provide for it in the EPC Contract.

The Contractor's entitlement to an extension of time is not absolute. It is possible to limit the Contractor's rights and impose preconditions on the ability of the Contractor to claim an extension of time. A relatively standard extension of time (EOT) clause would entitle the Contractor to an EOT for:

- an act, omission, breach or default of the Project Company
- suspension of the works by the Project Company (except where the suspension is due to an act or omission of the Contractor)
- a variation (except where the variation is due to an act or omission of the Contractor)
- *force majeure*

Which cause a delay on the critical path¹⁴ and about which the Contractor has given notice within the period specified in the contract. It is permissible (and advisable) from the Project Company's perspective to make both the necessity for the delay to impact the critical path and the obligation to give notice of a claim for an extension of time conditions precedent to the Contractor's entitlement to receive an EOT. In addition, it is usually good practice to include a general right for the Project Company to grant an EOT at any time. However, this type of provision must be carefully drafted because some judges have held (especially when the Project Company's representative is an independent third party) the inclusion of this clause imposes a mandatory obligation on the Project Company to grant an extension of time whenever it is fair and reasonable to do so, regardless of the strict contractual requirements. Accordingly, from the Project Company's perspective it must be made clear that the Project Company has complete and absolute discretion to grant an EOT, and that it is not required to exercise its discretion for the benefit of the Contractor.

11 This discussion assumes the project company will be entering into either a PPA or a tolling agreement. However, some of these issues will also be relevant if the project company is entering into hedging agreements for a merchant project. For example, those hedge agreements will likely mandate a date by which the power station must be capable of commercial operation. Failure to comply with this requirement will incur monetary liability. Similarly there may be availability requirements and certain performance guarantees imposed by the hedge. These requirements must be flowed through to the EPC contract.

12 These clauses will have to be modified to ensure compliance with the relevant regulatory regime.

13 It can arise in civil law countries as well, it will depend on the relevant provisions of the code in those countries. For example, the PRC contract law contains articles that entitle a contractor to an extension of time for employer-caused delays.

14 The critical path is the path on the construction programme that shows the dates when certain activities must be completed by in order to achieve completion by the specified date.

Similarly, following some recent common law decisions, the Contractor should warrant that it will comply with the notice provisions that are conditions precedent to its right to be granted an EOT.

We recommend using the clause in part 2 of Appendix 1.

Concurrent delay

You will note that in the suggested EOT clause, one of the subclauses refers to concurrent delays. This is relatively unusual because most EPC Contracts are silent on this issue. For the reasons explained below we do not agree with that approach.

A concurrent delay occurs when two or more causes of delay overlap. It is important to note that it is the overlapping of the causes of the delays not the overlapping of the delays themselves. In our experience, this distinction is often not made. This leads to confusion and sometimes disputes. More problematic is when the contract is silent on the issue of concurrent delay and the parties assume the silence operates to their benefit. As a result of conflicting case law it is difficult to determine who, in a particular fact scenario, is correct. This can also lead to protracted disputes and outcomes contrary to the intention of the parties.

There are a number of different causes of delay which may overlap with delay caused by the Contractor. The most obvious causes are the acts or omissions of a Project Company.

A Project Company often has obligations to provide certain materials or infrastructure to enable the Contractor to complete the works. The timing for the provision of that material or infrastructure (and the consequences for failing to provide it) can be affected by a concurrent delay.

For example, the Project Company is usually obliged, as between the Project Company and the Contractor, to provide a transmission line to connect to the power station by the time the Contractor is ready to commission the power station. Given the construction of the transmission line can be expensive, the Project Company is likely to want to incur that expense as close as possible to the date commissioning is due to commence. For this reason, if the Contractor is in delay the Project Company is likely to further delay incurring the expense of building the transmission line. In the absence of a concurrent delay clause, this action by the Project Company, in response to the Contractor's delay, could entitle the Contractor to an extension of time.

Concurrent delay is dealt with differently in the various international standard forms of contract. Accordingly, it is not possible to argue that one approach is definitely right and one is definitely wrong. In fact, the right approach will depend on which side of the table you are sitting.

In general, there are three main approaches for dealing with the issue of concurrent delay. These are:

- **Option one:** The Contractor has no entitlement to an extension of time if a concurrent delay occurs.
- **Option two:** The Contractor has an entitlement to an extension of time if a concurrent delay occurs.
- **Option three:** The causes of delay are apportioned between the parties and the Contractor receives an extension of time equal to the apportionment. For example, if the causes of a 10-day delay are apportioned 60:40 Project Company: Contractor, the Contractor would receive a six-day extension of time.

Each of these approaches is discussed in more detail below.

Option one: Contractor not entitled to an extension of time for concurrent delays

A common, Project Company friendly, concurrent delay clause for this option one is:

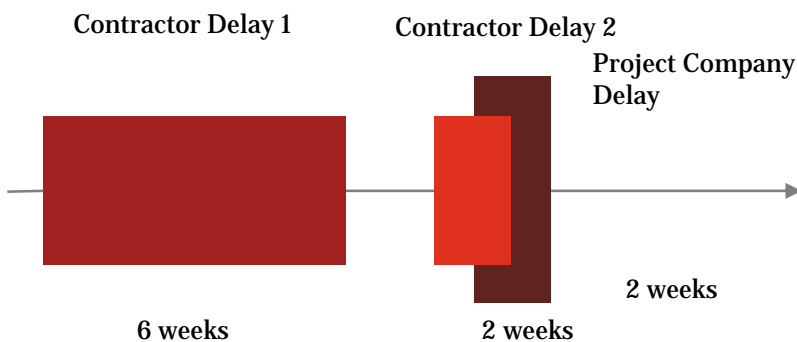
If more than one event causes concurrent delays and the cause of at least one of those events, but not all of them, is a cause of delay which would not entitle the Contractor to an extension of time under [EOT clause], then to the extent of the concurrency, the Contractor will not be entitled to an extension of time.

Nothing in the clause prevents the Contractor from claiming an extension of time under the general extension of time clause. What the clause does do is to remove the Contractor's entitlement to an extension of time when there are two or more causes of delay and at least one of those causes would not entitle the Contractor to an extension of time under the general extension of time clause.

For example, if the Contractor's personnel were on strike and during that strike the Project Company failed to approve drawings, in accordance with the contractual procedures, the Contractor would not be entitled to an extension of time for the delay caused by the Project Company's failure to approve the drawings.

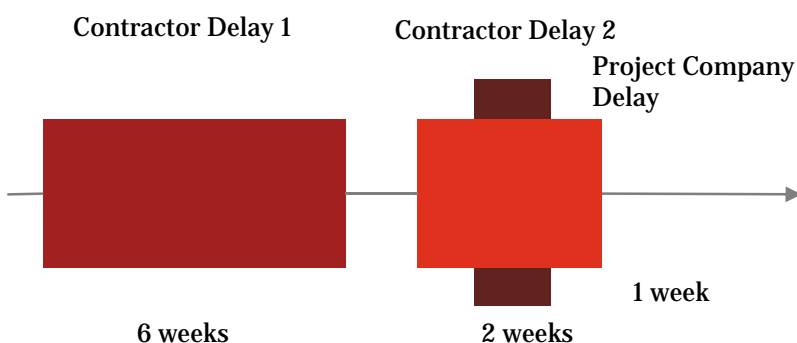
The operation of this clause is best illustrated diagrammatically.

Example 1: Contractor not entitled to an extension of time for Project Company-caused delay



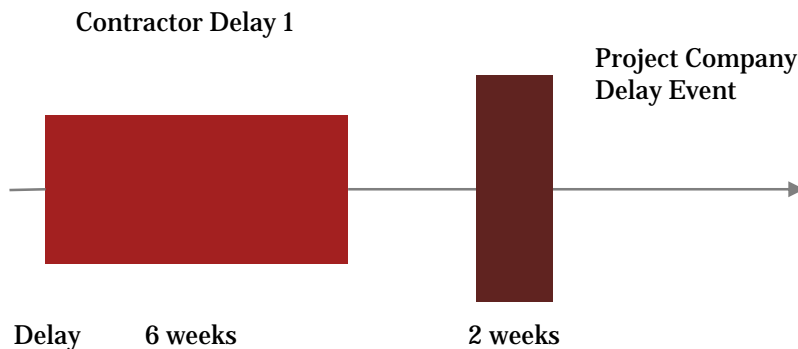
In this example, the Contractor would not be entitled to any extension of time because the Contractor Delay 2 overlap entirely the Project Company delay. Therefore, using the example clause above, the Contractor is not entitled to an extension of time to the extent of the concurrency. As a result, at the end of the Contractor Delay 2 the Contractor would be in eight weeks' delay (assuming the Contractor has not, at its own cost and expense accelerated the works).

Example 2: Contractor entitled to an extension of time for Project Company-caused delay



In this example, where there is no overlap between the Contractor and Project Company delay events the Contractor would be entitled to a two week extension of time for the Project Company delay. Therefore, at the end of the Project Company delay the Contractor will remain in six weeks' delay, assuming no acceleration.

Example 3: Contractor entitled to an extension of time for a portion of the Project Company-caused delay



In this example, the Contractor would be entitled to a one week extension of time because the delays overlap for one week. Therefore, the Contractor is entitled to an extension of time for the period when they do not overlap ie when the extent of the concurrency is zero. As a result, after receiving the one week extension of time, the Contractor would be in seven weeks' delay, assuming no acceleration.

From a Project Company's perspective, we believe, this option is both logical and fair. For example, if, in example 2, the Project Company delay was a delay in the approval of drawings and the Contractor delay was the entire workforce being on strike, what logic is there in the Contractor receiving an extension of time? The delay in approving drawings does not actually delay the works because the Contractor could not have used the drawings given its workforce was on strike. In this example, the Contractor would suffer no detriment from not receiving an extension of time. However, if the Contractor did receive an extension of time it would effectively receive a windfall gain.

The greater number of obligations the Project Company has, the more reluctant the Contractor will likely be to accept option one. Therefore, it may not be appropriate for all projects.

Option two: Contractor entitled to an extension of time for concurrent delays

Option two is the opposite of option one and is the position in many of the Contractor friendly standard forms of contract. These contracts also commonly include extension of time provisions to the effect that the Contractor is entitled to an extension of time for any cause beyond its reasonable control which, in effect, means there is no need for a concurrent delay clause.

The suitability of this option will obviously depend on which side of the table you are sitting. This option is less common than option one but is nonetheless sometimes adopted. It is especially common when the Contractor has a superior bargaining position.

Option three: responsibility for concurrent delays is apportioned between the parties

Option three is a middle ground position that has been adopted in some of the standard form contracts. For example, the Australian Standards construction contract AS4000 adopts the apportionment approach. The AS4000 clause states:

34.4 Assessment

When both non-qualifying and qualifying causes of delay overlap, the superintendent shall apportion the resulting delay to WUC according to the respective causes' contribution.

In assessing each EOT the Superintendent shall disregard questions of whether:

- *WUC can nevertheless reach practical completion without an EOT*

- *the Contractor can accelerate, but shall have regard to what prevention and mitigation of the delay has not been effected by the Contractor.*

We appreciate the intention behind the clause and the desire for both parties to share responsibility for the delays they cause. However, we have some concerns about this clause and the practicality of the apportionment approach in general. It is easiest to demonstrate our concerns with an extreme example. For example, what if the qualifying cause of delay was the Project Company's inability to provide access to the site and the non-qualifying cause of delay was the Contractor's inability to commence the works because it had been black-banned by the unions. How should the causes be apportioned? In this example, the two causes are both 100 percent responsible for the delay.

In our view, an example like the above where both parties are at fault has two possible outcomes. Either:

- the delay is split down the middle and the Contractor receives 50% of the delay as an extension of time
- the delay is apportioned 100% to the Project Company and therefore the Contractor receives 100% of the time claimed.

The delay is unlikely to be apportioned 100% to the Contractor because a judge or arbitrator will likely feel that that is unfair, especially if there is a potential for significant liquidated damages liability. We appreciate the above is not particularly rigorous legal reasoning, however, the clause does not lend itself to rigorous analysis.

In addition, option three is only likely to be suitable if the party undertaking the apportionment is independent from both the Project Company and the Contractor.

Exclusive remedies and fail safe clauses

It is common for Contractors to request the inclusion of an exclusive remedies clause in an EPC Contract. However, from the perspective of a Project Company, the danger of an exclusive remedies clause is that it prevents the Project Company from recovering any type of damages not specifically provided for in the EPC contract.

An EPC Contract is conclusive evidence of the agreement between the parties to that contract.

If a party clearly and unambiguously agrees that their only remedies are those within the EPC Contract, they will be bound by those terms. However, the courts have been reluctant to come to this conclusion without clear evidence of an intention of the parties to the EPC Contract to contract out of their legal rights. This means if the common law right to sue for breach of EPC Contract is to be contractually removed, it must be done by very clear words.

Contractor's perspective

The main reason for a Contractor insisting on a Project Company being subject to an exclusive remedies clause is to have certainty about its potential liabilities. The preferred position for a Contractor will be to confine its liabilities to what is specified in the EPC Contract. For example, an agreed rate of liquidated damages for delay and, where relevant, underperformance of the power station. A Contractor will also generally require the amount of liquidated damages to be subject to a cap and for the EPC Contract to include an overall cap on its liability.

Project company's perspective

The preferred position for a Project Company is for it not to be subject to an exclusive remedies clause. An exclusive remedies clause limits the Project Company's right to recover for any failure of the Contractor to fulfil its contractual obligations to those remedies specified in the EPC Contract. For this reason, an exclusive remedies clause is an illogical clause to include in an EPC Contract from the perspective of a Project Company because it means that the Project Company has to draft a remedy or exception for each obligation – this represents an absurd drafting position. For example, take the situation where the EPC Contract does not have any provision for the recovery of damages other than liquidated damages. In this case, if the Contractor has either paid the maximum amount of liquidated damages or delivered the power station in a manner that does not require the payment of liquidated damages (ie it is delivered on time and performs to specification) but subsequent to that delivery the Project Company is found to have a claim, say for defective design which

manifests itself after completion, the Project Company will have no entitlement to recover any form of damages as any remedy for latent defects has been excluded.

The problem is exacerbated because most claims made by a Project Company will in some way relate to performance of the power station and PLDs were expressed to be the exclusive remedy for any failure of the power station to perform in the required manner. For example, any determination as to whether the power station is fit for purpose will necessarily depend on the level and standard of the performance of the power station. In addition to claims relating to fitness for purpose, a Project Company may also wish to make claims for, amongst other things, breach of contract, breach of warranty or negligence. The most significant risk for a Project Company in an EPC Contract is where there is an exclusive remedies clause and the only remedies for delay and underperformance are liquidated damages. If, for whatever reason, the liquidated damages regimes are held to be invalid, the Project Company would have no recourse against the Contractor as it would be prevented from recovering general damages at law, and the Contractor would escape liability for late delivery and underperformance of the power station.

Fail-safe clauses

In contracts containing an exclusive remedies clause, the Project Company must ensure all necessary exceptions are expressly included in the EPC Contract. In addition, drafting must be included to allow the Project Company to recover general damages at law for delay and underperformance if the liquidated damages regimes in the EPC Contract are held to be invalid. To protect the position of a Project Company (if liquidated damages are found for any reason to be unenforceable and there is an exclusive remedies clause), we recommend the following clauses be included in the EPC Contract:

[] 1 If clause [delay liquidated damages] is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Project Company from claiming delay liquidated damages, the Project Company is entitled to claim against the Contractor damages at law for the Contractor's failure to complete the works by the date for practical completion.

[] 2 If [] 1 applies, the damages claimed by the Project Company must not exceed the amount specified in item [] of Appendix [] for any one day of delay and in aggregate must not exceed the percentage of the EPC Contract price specified in item [] of Appendix [].

These clauses (which would also apply to PLDs) mean that if liquidated damages are held to be unenforceable for any reason the Project Company will not be prevented from recovering general damages at law. However, the amount of damages recoverable at law may be limited to the amount of liquidated damages that would have been recoverable by the Project Company under the EPC Contract if the liquidated damages regime had not been held to be invalid (see discussion above). For this reason, the suggested drafting should be commercially acceptable to a Contractor as its liability for delay and underperformance will be the same as originally contemplated by the parties at the time of entering into the EPC Contract.

In addition, if the EPC Contract excludes the parties' rights to claim their consequential or indirect losses, these clauses should be an exception to that exclusion. The rationale being that the rates of liquidated damages are likely to include an element of consequential or indirect losses.

Force Majeure

What is force majeure?

Force majeure clauses are almost always included in EPC Contracts. However, they are rarely given much thought unless and until one or more parties seek to rely on them. Generally, the assumption appears to be that the risk will not affect us or the *force majeure* clause is a legal necessity and does not impact on our risk allocation under the contract. Both of these assumptions are inherently dangerous, and, particularly in the second case, incorrect. Therefore, especially in the current global environment, it is appropriate to examine their application.

Force majeure is a civil law concept that has no real meaning under the common law. However, *force majeure* clauses are used in contracts because the only similar common law concept – the doctrine of frustration – is of limited application. For that doctrine to apply the performance of a contract must be radically different from what was intended by the parties. In addition, even if the doctrine does apply, the consequences are unlikely to be those contemplated by the parties. An example of how difficult it is to show frustration is that many of the

leading cases relate to the abdication of King Edward VIII before his coronation and the impact that had on contracts entered into in anticipation of the coronation ceremony.

Given *force majeure* clauses are creatures of contract their interpretation will be governed by the normal rules of contractual construction. *Force majeure* provisions will be construed strictly and in the event of any ambiguity the *contra proferentem* rule will apply. *Contra proferentem* literally means “against the party putting forward”. In this context, it means that the clause will be interpreted against the interests of the party that drafted and is seeking to rely on it. The parties may contract out of this rule.

The rule of *ejusdem generis* which literally means “of the same class” may also be relevant. In other words, when general wording follows a specific list of events, the general wording will be interpreted in light of the specific list of events. In this context it means that when a broad catch-all phrase, such as “anything beyond the reasonable control of the parties”, follows a list of more specific *force majeure* events the catch-all phrase will be limited to events analogous to the listed events. Importantly, parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions.

The underlying test in relation to most *force majeure* provisions is whether a particular event was within the contemplation of the parties when they made the contract. The event must also have been outside the control of the contracting party. There are generally three essential elements to *force majeure*:

- it can occur with or without human intervention
- it cannot have reasonably been foreseen by the parties
- it was completely beyond the parties’ control and they could not have prevented its consequences.

Given the relative uncertainty surrounding the meaning of *force majeure* we favour explicitly defining what the parties mean. This takes the matter out of the hands of the courts and gives control back to the parties. Therefore, it is appropriate to consider how *force majeure* risk should be allocated.

Drafting force majeure clauses

The appropriate allocation of risk in project agreements is fundamental to negotiations between the Project Company and its Contractors. Risks generally fall into the following categories:

- risks within the control of the Project Company
- risks within the control of the Contractor
- risks outside the control of both parties.

The negotiation of the allocation of many of the risks beyond the control of the parties, for example, latent site conditions and change of law, is usually very detailed so that it is clear which risks are borne by the Contractor. The same approach should be adopted in relation to the risks arising from events of *force majeure*.

There are two aspects to the operation of *force majeure* clauses:

- the definition of *force majeure* events
- the operative clause that sets out the effect on the parties’ rights and obligations if a *force majeure* event occurs.

The events which trigger the operative clause must be clearly defined. As noted above, it is in the interests of both parties to ensure that the term *force majeure* is clearly defined.

The preferred approach for a Project Company is to define *force majeure* events as being any of the events in an exhaustive list set out in the contract. In this manner, both parties are aware of which events are *force majeure* events and which are not. Clearly, defining *force majeure* events makes the administration of the contract and,

in particular, the mechanism within the contract for dealing with *force majeure* events simpler and more effective.

An example exhaustive definition is:

An event of force majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent provided that event or circumstance is limited to the following:

- a) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not) acts of terrorism, civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any governmental or competent authority*
- b) Ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component*
- c) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds*
- d) Earthquakes, flood, fire or other physical natural disaster, but excluding weather conditions regardless of severity*
- e) Strikes at national level or industrial disputes at a national level, or strike or industrial disputes by labour not employed by the affected party, its subContractors or its suppliers and which affect an essential portion of the works but excluding any industrial dispute which is specific to the performance of the works or this contract.*

An operative clause will act as a shield for the party affected by the event of *force majeure* so that a party can rely on that clause as a defence to a claim that it has failed to fulfil its obligations under the contract. An operative clause should also specifically deal with the rights and obligations of the parties if a *force majeure* event occurs and affects the project. This means the parties must consider each of the events it intends to include in the definition of *force majeure* events and then deal with what the parties will do if one of those events occurs.

An example of an operative clause is:

[].1 Neither party is responsible for any failure to perform its obligations under this contract, if it is prevented or delayed in performing those obligations by an event of force majeure.

[].2 Where there is an event of force majeure, the party prevented from or delayed in performing its obligations under this contract must immediately notify the other party giving full particulars of the event of force majeure and the reasons for the event of force majeure preventing that party from, or delaying that party in performing its obligations under this contract and that party must use its reasonable efforts to mitigate the effect of the event of force majeure upon its or their performance of the contract and to fulfil its or their obligations under the contract.

[].3 Upon completion of the event of force majeure the party affected must as soon as reasonably practicable recommence the performance of its obligations under this contract. Where the party affected is the Contractor, the Contractor must provide a revised programme rescheduling the works to minimise the effects of the prevention or delay caused by the event of force majeure.

[].4 An event of force majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.

[].5 The Contractor has no entitlement and the Project Company has no liability for:

- a) Any costs, losses, expenses, damages or the payment of any part of the contract price during an event for force majeure.*

b) Any delay costs in any way incurred by the Contractor due to an event for force majeure.

In addition to the above clause, it is important to appropriately deal with other issues that will arise if a *force majeure* event occurs. For example, as noted above, it is common practice for a Contractor to be entitled to an extension of time if a *force majeure* event impacts on its ability to perform the works. Contractors also often request costs if a *force majeure* event occurs. In our view, this should be resisted. *Force majeure* is a neutral risk in that it cannot be controlled by either party. Therefore, the parties should bear their own costs.

Another key clause that relates to *force majeure* type events is the Contractor's responsibility for care of the works and the obligation to reinstate any damage to the works prior to completion. A common example clause is:

[].1 The Contractor is responsible for the care of the site and the works from when the Project Company makes the site available to the Contractor until 5.00pm on the date of commercial operation.

[].2 The Contractor must promptly make good loss from, or damage to, any part of the site and the works while it is responsible for their care.

[].3 If the loss or damage is caused by an event of force majeure, the Project Company may direct the Contractor to reinstate the works or change the works. The cost of the reinstatement work or any change to the works arising from a direction by the Project Company under this clause will be dealt with as a variation except to the extent that the loss or damage has been caused or exacerbated by the failure of the Contractor to fulfil its obligations under this contract.

[].4 Except as contemplated in clause [].3, the cost of all reinstatement works will be borne by the Contractor.

This clause is useful because it enables the Project Company to, at its option, have the damaged section of the project rebuilt as a variation to the existing EPC Contract. This will usually be cheaper than recontracting for construction of the damaged sections of the works.

Operation and maintenance

Operating and maintenance manuals

The Contractor is usually required to prepare a detailed operating and maintenance manual (O&M manual).

The EPC Contract should require the Contractor to prepare a draft of the O&M manual within a reasonable time to enable the Project Company, the Operator and possibly the Lenders to provide comments, which can be incorporated into a final draft at least six months before the start of commissioning.

The draft should include all information which may be required for start-up, all modes of operation during normal and emergency conditions and maintenance of all systems of the power station.

Operating and maintenance personnel

It is standard for the Contractor to be obliged to train the operations and maintenance staff supplied by the Project Company. The cost of this training will be built into the contract price. It is important to ensure the training is sufficient to enable such staff to be able to efficiently, prudently, safely and professionally operate the power station upon commercial operation. Therefore, the framework for the training should be described in the Appendix dealing with the scope of work (in as much detail as possible). This should include the standards of training and the timing for training.

The Project Company's personnel trained by the Contractor will also usually assist in the commissioning and testing of the power station. They will do this under the direction and supervision of the Contractor. Therefore, absent specific drafting to the contrary, if problems arise during commissioning and/or testing the Contractor can argue they are entitled to an extension of time etc. We recommend inserting the following clause:

[]1 The Project Company must provide a sufficient number of competent and qualified operating and maintenance personnel to assist the Contractor to properly carry out commissioning and the commercial operation performance tests.

[]2 Prior to the date of commercial operation, any act or omission of any personnel provided by the Project Company pursuant to GC []1 is, provided those personnel are acting in accordance with the Contractor's instructions, directions, procedures or manuals, deemed to be an act or omission of the Contractor and the Contractor is not relieved of its obligations under this contract or have any claim against the Project Company by reason of any act or omission.

Spare parts

The Contractor is usually required to provide, as part of its scope of works, a full complement of spare parts (usually specified in the appendices (the scope of work or the specification)) to be available as at the commencement of commercial operation.

Further, the Contractor should be required to replace any spare parts used in rectifying defects during the defects liability period, at its sole cost. There should also be a time limit imposed on when these spare parts must be back in the store. It is normally unreasonable to require the spare parts to have been replaced by the expiry of the defects liability period because that may, for some long lead time items, lead to an extension of the defects liability period.

The Project Company also may wish to have the option to purchase spare parts from the Contractor on favourable terms and conditions (including price) during the remainder of the concession period. In that case it would be prudent to include a term which deals with the situation where the Contractor is unable to continue to manufacture or procure the necessary spare parts. This provision should cover the following points:

- written notification from the Contractor to the Project Company of the relevant facts, with sufficient time to enable the Project Company to order a final batch of spare parts from the Contractor
- the Contractor should deliver to, or procure for the Project Company (at no charge to the Project Company), all drawings, patterns and other technical information relating to the spare parts
- the Contractor must sell to the Project Company (at the Project Company's request) at cost price (less a reasonable allowance for depreciation) all tools, equipment and moulds used in manufacturing the spare parts, to the extent they are available to the Contractor provided it has used its reasonable endeavours to procure them.

The Contractor should warrant that the spare parts are fit for their intended purpose, and that they are of merchantable quality. At worst, this warranty should expire on the later of:

- the manufacturer's warranty period on the applicable spare part
- the expiry of the defects liability period.

Dispute resolution

Dispute resolution provisions for EPC Contracts could fill another entire paper. There are numerous approaches that can be adopted depending on the nature and location of the project and the particular preferences of the parties involved.

However, there are some general principles which should be adopted. They include:

- having a staged dispute resolution process that provides for internal discussions and meetings aimed at resolving the dispute prior to commencing action (either litigation or arbitration)
- obliging the Contractor to continue to execute the works pending resolution of the dispute
- not permitting commencement of litigation or arbitration, as the case may be, until after commercial operation of the power station. This provision must make exception for the parties to seek urgent

interlocutory relief ie injunctions and to commence proceedings prior to the expiry of any limitations period. If the provision does not include these exceptions it risks being unenforceable

- providing for consolidation of any dispute with other disputes which arise out of or in relation to the construction of the power station. The power to consolidate should be at the Project Company's discretion.

We have prepared a paper which details the preferred approach to be taken in respect of dispute resolution regimes in various Asian jurisdictions including the PRC, Philippines, Thailand, Vietnam and Taiwan. You should consult this paper, or ask us for a copy, if you want more information on this topic.

Appendix 1 Example clause: part 1 – Performance testing and guarantee regime

1 Commissioning tests and power station readiness

1.1 After the Contractor has provided the Owner's representative with the marked-up drawings of the piping and instrumentation diagrams, logic diagrams and electrical single-line diagrams and control schematics for them, the Contractor must carry out the commissioning tests for the relevant system.

1.2 The commissioning tests:

For each system must:

- (a) Be performed on a system-by-system basis.
- (b) Include the inspection and checking of equipment and supporting subsystems, trial operation of supporting equipment, initial operation of the system, operation of the system to obtain data, perform system calibration and corrective works, and shutdown inspection and correction of defects and non-conforming works identified during the commissioning tests.

Must demonstrate:

- The capability of major sections of the works to operate in all modes of start-up, steady state, transients, plant changeovers, shutdowns, trips and the like.
- The technical suitability of the works and its control equipment and the capability of the operational procedures recommended by the Contractor.

[Clause 1.2 is optional. The commissioning testing regime can be included in the general testing regime in clause 1.3. The reference to a system is a reference to a discrete part of the works that contains several elements but which can be tested independently of the entire works. Examples include the fire safety system, a coal conveyor and crusher system etc.]

1.3 In carrying out any test which requires the Contractor to supply electricity to the transmission network, the Contractor must:

- (a) Issue a notice to the Owner's representative at least 24 hours prior to the time at which it wishes to so supply, detailing the testing or commissioning and including the Contractor's best estimate of the total period and quantity (in MWh per half-hour) of that supply
- (b) Promptly notify the Owner's representative if there is any change in the information contained in such notice.
- (c) Do all things necessary to assist the Owner (including but not limited to cooperating with the network service provider), so that the Owner can comply with its obligations under the grid code.

Power station readiness

- 1.4 As soon as the power station has, in the opinion of the Contractor, reached the stage of power station readiness, the Contractor must give notice to the Owner's representative.
- 1.5 The Owner's representative must, promptly, and no later than three days after receipt of the Contractor's notice under GC 1.4, either issue a power station readiness certificate in the form specified in Appendix X stating that the power station has reached power station readiness or notify the Contractor of any defects and/or deficiencies.
- 1.6 If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct such defects and/or deficiencies and must repeat the procedure described in GC 1.4.
- 1.7 If the Owner's representative is satisfied that the power station has reached power station readiness, the Owner's representative must promptly, and no later than three days after receipt of the Contractor's repeated notice, issue a power station readiness certificate stating that the power station has reached power station readiness as at the date stated in that certificate.
- 1.8 If the Owner's representative is not so satisfied, then it must notify the Contractor of any defects and/or deficiencies within three days after receipt of the Contractor's repeated notice and the above procedure must be repeated.
- 1.9 If the Owner's representative fails to issue the power station readiness certificate and fails to inform the Contractor of any defects and/or deficiencies within six days after receipt of the Contractor's notice under GC or within three days after receipt of the Contractor's repeated notice under GC 1.6, then the power station is deemed to have reached power station readiness as at the date of the Contractor's notice or repeated notice, as the case may be.

2 Functional tests, emission tests, performance tests and substantial completion

Tests

- 2.1 Upon receipt of the power station readiness certificate, or when the power station is deemed to have reached power station readiness under GC 1.9, the Contractor must carry out the functional tests, emission tests and performance tests, provided the Contractor gives at least 48 hours' notification to the Owner's representative prior to commencing such tests.
- 2.2 The Contractor must not commence any of the functional tests, emission tests or performance tests prior to power station readiness.
- 2.3 For the avoidance of doubt, it is a condition precedent to the achievement of substantial completion that the emission tests must be passed.

Procedure

- 2.4
 - (a) If a functional test, emission test or performance test is interrupted or terminated, for any reason, such test must be re-started from the beginning, unless otherwise approved by the Owner's representative.
 - (b) The Owner's representative or the Contractor is entitled to order the cessation of any functional test, emission test or performance test if damage to the works, or other property or personal injury are likely to result from continuation.
 - (c) If the power station being tested fails to pass any of the functional tests, emission tests or performance tests (or any repetition thereof in the event of prior failure) or if any functional test, emission test or

performance test is stopped before its completion, such functional test, emission test or performance test must, subject to 48 hours' prior notice having been given by the Contractor to the Owner's representative, be repeated as soon as practicable thereafter. All appropriate adjustments and modifications are to be made by the Contractor with all reasonable speed and at its own expense before the repetition of any functional test, emission test or performance test.

- (d) The results of the functional tests, emission tests and performance tests must be presented in a written report produced by the Contractor and delivered to the Owner's representative within seven days of the completion of the functional tests, emission tests or performance tests. Such results will be evaluated and approved by the Owner's representative. In evaluation of such results, no additional allowance will be made for measurement tolerances over and above those specified in the applicable ISO test standard.

Substantial completion

- 2.5 As soon as the power station has, in the opinion of the Contractor, reached the stage of substantial completion, the Contractor must give notice to the Owner's representative.
- 2.6 The Owner's representative must, promptly, and no later than three days after receipt of the Contractor's notice under GC 2.5, either issue a substantial completion certificate in the form specified in Appendix 13 stating that the power station has reached substantial completion or notify the Contractor of any defects and/or deficiencies.
- 2.7 If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct such defects and/or deficiencies and must repeat the procedure described in GC 2.5.
- 2.8 If the Owner's representative is satisfied that the power station has reached substantial completion, the Owner must, promptly, and no later than three days after receipt of the Contractor's repeated notice, issue a substantial completion certificate stating that the power station has reached substantial completion as at the date stated in that certificate.
- 2.9 If the Owner's representative is not so satisfied, then it must notify the Contractor of any defects and/or deficiencies within three days after receipt of the Contractor's repeated notice and the above procedure must be repeated.
- 2.10 Notwithstanding that all the requirements for the issuing of a substantial completion certificate have not been met, the Owner's representative may at any time, in its absolute discretion, issue a substantial completion certificate. The issue of a substantial completion certificate in accordance with this GC 2.10 will not operate as an admission that all the requirements of substantial completion have been met, and does not prejudice any of the Owner's rights, including the right to require the Contractor to satisfy all these requirements.

3 Reliability test and commercial operation

Reliability test

- 3.1 Upon receipt of the substantial completion certificate the Contractor must carry out the reliability test.
- 3.2 It is a condition precedent to the commencement of the reliability test that the substantial completion certificate has been issued.
- 3.3 If the reliability test is interrupted or terminated by the Owner or the Owner's representative, other than for reason of default by the Contractor, such test must be restarted from the point of interruption or termination. In the case of default by the Contractor, it must be restarted from the beginning or otherwise in accordance with Appendix 1. If the actual rated output specified in the substantial completion certificate is less than the rated output performance guarantee the guaranteed availability in MWh will be recalculated.

Commercial operation

- 3.4 As soon as the power station has, in the opinion of the Contractor, reached the stage of commercial operation, the Contractor must give notice to the Owner's representative.
- 3.5 The Owner's representative must, promptly, and no later than three days after receipt of the Contractor's notice under GC 3.4, either issue a commercial operation certificate in the form specified in Appendix 14 stating that the power station has reached commercial operation or notify the Contractor of any defects and/or deficiencies.
- 3.6 If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct such defects and/or deficiencies and must repeat the procedure described in GC 3.4.
- 3.7 If the Owner's representative is satisfied that the power station has reached commercial operation, the Owner must, promptly, and no later than three days after receipt of the Contractor's repeated notice, issue a commercial operation certificate stating that the power station has reached commercial operation as at the date stated in that certificate.
- 3.8 If the Owner's representative is not so satisfied, then it must notify the Contractor of any defects and/or deficiencies within three days after receipt of the Contractor's repeated notice and the above procedure must be repeated.

4 Performance guarantees

Net heat rate and rated output performance guarantees

- 4.1 The Contractor guarantees that, during the same performance tests, the power station and all parts will meet the rated output performance guarantee and the net heat rate performance guarantee.

Minimum performance guarantees not met

- 4.2 If, for reasons not attributable to the Owner, either or both of the minimum performance guarantees are not met, the Contractor must at its cost and expense make such changes, modifications and/or additions to the power station or any part as may be necessary so as to meet at least the minimum rated output performance guarantee and the minimum net heat rate performance guarantee respectively. The Contractor must notify the Owner upon completion of the necessary changes, modifications and/or additions and must repeat, subject to the Owner's rights under GCs 4.3 and 46.2(a)(iii) [Termination], the relevant performance tests until the minimum rated output performance guarantee and the minimum net heat rate performance guarantee respectively have been met. Nothing in this GC 4.2 derogates from the Contractor's obligation to meet the rated output performance guarantee and the net heat rate performance guarantee.
- 4.3 Notwithstanding this GC 4 or any other provision of this contract, if for reasons not attributable to the Owner at any time after the Contractor has repeated the performance tests the Contractor does not meet either or both minimum performance guarantees, the Owner may require the Contractor to pay
 - (a) In relation to the minimum performance guarantee(s) that has/have been met performance liquidated damages calculated in accordance with section 2.1(a) or section 2.2(a) of Appendix Y.
 - (b) If the minimum rated output performance guarantee has not been met:
 - (i) An amount equal to the amount the Contractor would have been liable for if the actual rated output of the power station was equal to 95 percent of the rated output performance guarantee as specified in section 2.1(a) of Appendix Y.
 - (ii) Performance liquidated damages calculated in accordance with section 2.1(b) of Appendix Y.
 - (c) If the minimum net heat rate performance guarantee has not been met:

- (i) An amount equal to the amount the Contractor would have been liable for if the actual net heat rate of the power station was equal to 105 percent of the net heat rate performance guarantee as specified in section 2.2(a) of Appendix Y.
- (ii) Performance liquidated damages calculated in accordance with section 2.2(b) of Appendix Y.

4.4 The payment of performance liquidated damages under GC 4.3 will be in complete satisfaction of the Contractor's guarantees under GC 4.1.

Minimum performance guarantees met, but not performance guarantees

4.5 Subject to GC 4.3, 4.6 and 4.7, if, for reasons not attributable to the Owner, both of the rated output performance guarantee and the net heat rate performance guarantee are not met but both the minimum performance guarantees are met during the same performance test, the Contractor must, prior to the expiration of the extended testing period:

- (a) At its cost and expense make such changes, modifications and/or additions to the power station or any part as may be necessary so as to meet the rated output performance guarantee and the net heat rate performance guarantee respectively.
- (b) Notify the Owner upon completion of the necessary changes, modifications and/or additions.
- (c) Repeat the performance tests until the rated output performance guarantee and the net heat rate performance guarantee respectively have been met during the same performance test.

4.6 If, during the same performance test, the Contractor has met both the minimum performance guarantees, but not both the net heat rate performance guarantee and the rated output performance guarantee by the expiration of the extended testing period, the Contractor must pay the respective performance liquidated damages to the Owner.

4.7

- (a) Notwithstanding GC 4.5 and 4.6, the Contractor may at any time during the extended testing period elect to pay performance liquidated damages to the Owner in respect of the failure to meet either or both of the net heat rate performance guarantee and the rated output performance guarantee provided the minimum performance guarantees are met.
- (b) Notwithstanding GCs 4.5 and 4.6, and subject to GC 4.3, the Owner may, provided that the date for commercial operation has passed, require the Contractor to pay performance liquidated damages to the Owner in respect of the failure to meet either or both of the net heat rate performance guarantee and the rated output performance guarantee.

4.8 The payment of performance liquidated damages under GC 4.6 or GC 4.7 will be in complete satisfaction of the Contractor's guarantees under GC 4.1, provided that the power station meets both the minimum rated output performance guarantee and the minimum net heat rate performance guarantee as at the date of payment of such performance liquidated damages.

Guaranteed availability

4.9 The Contractor guarantees that the power station either in whole or in part will operate at the guaranteed availability for a period of 12 months from not later than two months after the date of commercial operation.

4.10 If during the actual availability period actual energy measured is less than the guaranteed availability, the Contractor will pay performance liquidated damages to the Owner as specified in Appendix Y.

4.11 The aggregate liability of the Contractor for performance liquidated damages under GC 4.10 will not exceed the amount calculated in accordance with Appendix 15.

General

- 4.12 Performance liquidated damages will be invoiced by the Owner and payment will be due within 21 days of issue of such invoice. At the expiration of 21 days the amount invoiced is a debt due and payable to the Owner on demand and may be deducted from any payments otherwise due from the Owner to the Contractor and the Owner may also have recourse to the security provided under this contract.
- 4.13 The parties agree that the performance liquidated damages in Appendix Y are a fair and reasonable pre-estimate of the damages likely to be sustained by the Owner as a result of the Contractor's failure to meet the performance guarantees.
- 4.14 The payment of performance liquidated damages under this GC 4 is in addition to any liability of the Contractor for delay liquidated damages under GC [].
- 4.15 The aggregate liability of the Contractor for delay liquidated damages and performance liquidated damages (provided the Contractor has met both minimum performance guarantees) will not exceed the amount calculated in accordance with section 3 of Appendix Y. The aggregate liability of the Contractor under this GC 4.15 will not apply if the Owner requires the Contractor to pay performance liquidated damages pursuant to GC 4.3.
- 4.16 If this GC 4 (or any part thereof) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming performance liquidated damages, the Owner is entitled to claim against the Contractor damages at law for the Contractor's failure to meet any or all of the performance guarantees. Such damages must not exceed:
- (a) \$[] for each megawatt (and pro rata for part of a megawatt) by which the actual output of the power station or part (whichever is applicable) is less than the rated output performance guarantee, unless the actual output of the power station is less than 95 percent of the rated output performance guarantee, in which case such damages will not exceed \$[] for each megawatt (and pro rata for part of a megawatt) by which the actual output of the power station or part (whichever is applicable) is less than the minimum rated output performance guarantee.
 - (b) \$[] for each kilojoule/kilowatt hour (and pro rata for part of a kilojoule/kilowatt hour) by which the actual net heat rate of the power station or part (whichever is applicable) exceeds the net heat rate performance guarantee, unless the actual net heat rate of the power station is more than 105 percent of the net heat rate performance guarantee, in which case such damages will not exceed \$[] for each kilojoule/kilowatt hour (and pro rata for part of a kilojoule/kilowatt hour) by which the actual net heat rate of the power station or part (whichever is applicable) is less than the minimum net heat rate performance guarantee.
 - (c) \$[] for each megawatt hour (and a proportionate part thereof for each part of a megawatt hour) that the availability period actual energy measured is less than the guaranteed availability.
- 4.17 The Contractor is not entitled to the benefit of the exclusion in GC [] [prohibition on claiming consequential loss] in any claim for damages at law by the Owner against the Contractor pursuant to GC 4.16 for the Contractor's failure to meet any or all of the performance guarantees.

Appendix 2 Example clause: part 2 – Extension of time regime

- [].1 The Contractor must immediately give notice to the Project Company of all incidents and/or events of whatsoever nature affecting or likely to affect the progress of the works.
- [].2 Within 15 days after an event has first arisen the Contractor must give a further notice to the Project Company which must include:
 - (a) The material circumstances of the event including the cause or causes
 - (b) The nature and extent of any delay
 - (c) The corrective action already undertaken or to be undertaken
 - (d) The effect on the critical path noted on the programme
 - (e) The period, if any, by which in its opinion the date for commercial operation should be extended
 - (f) A statement that it is a notice pursuant to this GC [].2
- [].3 Where an event has a continuing effect or where the Contractor is unable to determine whether the effect of an event will actually cause delay to the progress of the works so that it is not practicable for the Contractor to give notice in accordance with GC [].2, a statement to that effect with reasons together with interim written particulars (including details of the likely consequences of the event on progress of the works and an estimate of the likelihood or likely extent of the delay) must be submitted in place of the notice required under GC [].2. The Contractor must then submit to the Project Company, at intervals of 30 days, further interim written particulars until the actual delay caused (if any) is ascertainable, whereupon the Contractor must as soon as practicable but in any event within 30 days give a final notice to the Project Company including the particulars set out in GC [].2.
- [].4 The Project Company must, within 30 days of receipt of the notice in GC [].2 or the final notice in GC [].3 (as the case may be), issue a notice notifying the Contractor's representative of its determination as to the period, if any, by which the date for commercial operation is to be extended.
- [].5 Subject to the provisions of this GC [], the Contractor is entitled to an extension of time to the date for commercial operation as the Project Company assesses, where a delay to the progress of the works is caused by any of the following events, whether occurring before, on or after the date for commercial operation:
 - (a) Any act, omission, breach or default by the Project Company, the Project Company's representative and their agents, employees and Contractors
 - (b) A variation, except where that variation is caused by an act, omission or default of the Contractor or its SubContractors, agents or employees
 - (c) A suspension of the works pursuant to GC [], except where that suspension is caused by an act, omission or default of the Contractor or its subContractors, agents or employees
 - (d) An event of *force majeure*
 - (e) A change of law.
- [].6 Despite any other provisions of this GC [], the Project Company may at any time make a fair and reasonable extension of the date for commercial operation.

- [].7 The Contractor must constantly use its best endeavours to avoid delay in the progress of the works.
- [].8 If the Contractor fails to submit the notices required under GCs [].1, [].2 and [].3 within the times required then:
 - (a) The Contractor has no entitlement to an extension of time
 - (b) The Contractor must comply with the requirements to perform the works by the date for commercial operation
 - (c) Any principle of law or equity (including those which might otherwise entitle the Contractor to relief and the Prevention Principle) which might otherwise render the date for commercial operation immeasurable and liquidated damages unenforceable, will not apply
- [].9 It is a further condition precedent of the Contractor's entitlement to an extension of time that the critical path noted on the programme is affected in a manner which might reasonably be expected to result in a delay to the works reaching commercial operation by the date for commercial operation.
- [].10 If there are two or more concurrent causes of delay and at least one of those delays would not entitle the Contractor to an extension of time under this GC [] then, to the extent of that concurrency, the Contractor is not entitled to an extension of time.
- [].11 The Project Company may direct the Contractor's representative to accelerate the works for any reason including as an alternative to granting an extension of time to the date for commercial operation.
- [].12 The Contractor will be entitled to all extra costs necessarily incurred, by the Contractor in complying with an acceleration direction under GC [].11, except where the direction was issued as a consequence of the failure of the Contractor to fulfil its obligations under this contract. The Project Company must assess and decide as soon as reasonably practical, the extra costs necessarily incurred by the Contractor.

Appendix 3 Example clause: part 3 – Grid access regime

- [].1 The Contractor must coordinate the connection of the facility to the transmission line and provide, in a timely manner, suitable termination facilities in accordance with Appendix 1. The Contractor must liaise with the network service provider, government authorities and other parties to avoid delays in connecting the facility to the transmission line.
- [].2 On the date for first synchronisation the Project Company must ensure that there is in place a transmission network which is capable of receiving the generated output the facility is physically capable of producing at any given time.
- [].3 The Project Company's obligation to ensure that the transmission network is in place is subject to the Contractor being able (physically and legally) to connect the facility to the transmission line and import and/or export power to the transmission network.
- [].4 If the Contractor notifies the Project Company that first synchronisation is likely to take place before the date for first synchronisation, the Project Company must endeavour, but is under no obligation to ensure that the transmission network is in place, to enable first synchronisation to take place in accordance with the Contractor's revised estimate of first synchronisation.
- [].5 At the time of and following first synchronisation the Project Company will ensure that the Contractor is permitted to export to the transmission network power which the facility is physically capable of exporting, provided that:
 - (a) It is necessary for the Contractor to export that amount of power if the Contractor is to obtain commercial operation
 - (b) The Contractor has complied in all respects with its obligations under GC [].7
 - (c) In the reasonable opinion of the Project Company and/or the network service provider the export of power by the facility will not pose a threat to the safety of persons and/or property (including the transmission network).
- [].6 For the avoidance of doubt, the Project Company will not be in breach of any obligation under this contract by reason only of the Contractor being denied permission to export power to the transmission network in accordance with the grid code.
- [].7 The Contractor must carry out the testing of the works, in particular in relation to the connection of the facility to the transmission network so as to ensure that the Project Company and the Contractor as a Participant (as defined in the electricity code) comply with their obligations under the electricity code in respect of the testing of the works.
- [].8 The Contractor must carry out the testing of the works, in particular in relation to the connection of the facility to the transmission network, so as to ensure that:
 - (a) Any interference to the transmission network is minimised
 - (b) Damage to the transmission network is avoided.
- [].9 The Contractor must promptly report to the Project Company's representative any interference with and damage to the transmission network which connects with the facility.

- [].10 Without derogating from the Contractor's obligations under this contract, in carrying out any test which requires the Contractor to supply electricity to the transmission network, the Contractor must:
- (a) Issue a notice to the Project Company's representative at least 24 hours prior to the time at which it wishes to so supply, detailing the testing or commissioning and including the Contractor's best estimate of the total period and quantity (in MWh per half-hour) of that supply
 - (b) Promptly notify the Project Company's representative if there is any change in the information contained in such notice
 - (c) Do all things necessary to assist the Project Company (including but not limited to cooperating with the network service provider and complying with its obligations under GC 20.15), so that the Project Company can comply with its obligations under the national electricity code.

7 *EPC Contracts in the process plant sector*

Introduction

Engineering, Procurement and Construction (**EPC**) contracts are a common form of contract used to undertake construction works by the private sector on large-scale and complex process plant projects¹. Under an EPC Contract a Contractor is obliged to deliver a complete facility to a Developer who need only turn a key to start operating the facility, hence EPC Contracts are sometimes called turnkey construction contracts. In addition to delivering a complete facility, the Contractor must deliver that facility for a guaranteed price by a guaranteed date and it must perform to the specified level. Failure to comply with any requirements will usually result in the Contractor incurring monetary liabilities.

It is timely to examine EPC Contracts and their use on process plant projects given the bad publicity they have received, particularly in contracting circles. A number of Contractors have suffered heavy losses and, as a result, a number of Contractors now refuse to enter into EPC Contracts in certain jurisdictions. This problem has been exacerbated by a substantial tightening in the insurance market. Construction insurance has become more expensive owing both to significant losses suffered on many projects and the impact of September 11 on the insurance market. Further, some project proponents believe that the project delivery methods such as Engineering, Procurement and Construction Management (EPCM) give them greater flexibility and that they have the expertise and experience required to control costs in an EPCM Contract.

However, because of their flexibility, the value and the certainty Sponsors and Lenders derive from EPC Contracts, the authors believe EPC Contracts will continue to be a pre-eminent form of construction contract used on large-scale process plant projects in most jurisdictions².

This paper will only focus on the use of EPC Contracts in the process plant sector. However, the majority of the issues raised are applicable to EPC Contracts used in all sectors.

Prior to examining process plant EPC Contracts in detail, it will be useful to explore the basic features of a process plant project.

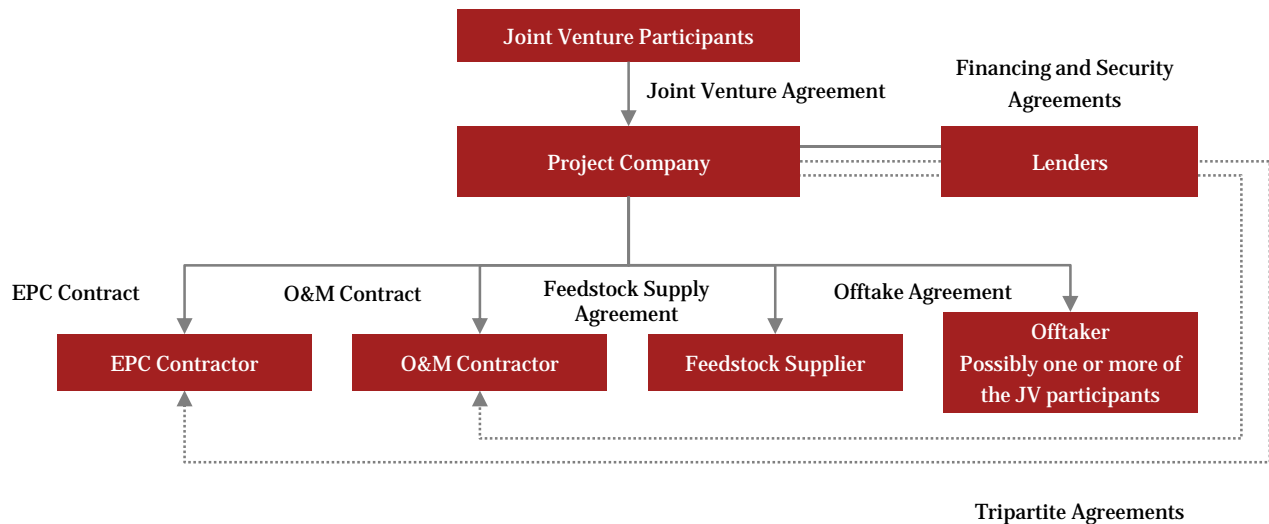
¹ A Liquefied Natural Gas (LNG) project would also usually involve a shipping deal and/or pipeline aspects.

² Even if the project is developed by a large conglomerate there are usually contracts between the various entities. For example, where the proponent will also be the supplier there will often be a supply agreement put in place so that the new project is properly defeasible and business property accountable.

Basic features of a process plant project

The contractual structure

The diagram below illustrates the basic contractual structure of a simple project financed process plant project using an EPC Contract³.



The detailed contractual structure will vary from project to project. However, most projects will have the basic structure illustrated above⁴. As can be seen from the diagram, the following agreements will usually be entered into:

- A Joint Venture (JV) agreement between the JV participants, which sets out the rights and obligations of the JV participants in relation to management, control and funding of the project. Usually the JV participants will establish a special purpose vehicle (referred to as the Project Company in the above diagram), which will be the entity that will construct and own the process plant facility. There is a significant advantage in establishing a special purpose vehicle as it means that one body is responsible for the delivery of projects, and relationships with government, customers, Contractors and suppliers.
- An agreement governing the operation and maintenance of the process plant facility. This is usually a long-term Operating and Maintenance Agreement (**O&M agreement**) with an Operator for the operation and maintenance of the facility. The term of the O&M agreement will vary from project to project. The Operator will usually be one of the JV participants whose main business is manufacturing the product to be produced at the facility.
- A supply agreement governing the supply of feedstock to the process plant. For an ammonia and urea plant or a methanol plant, the main feedstock material is natural gas and therefore the Project Company will usually enter into a gas supply agreement with a local gas supplier. On most projects this will require the construction of infrastructure for the supply of the feedstock to the facility. For example, a pipeline to supply natural gas to the facility. The Project Company will often engage a separate Contractor to design and construct this infrastructure.
- Offtake agreements govern the sale of the product of the project. For process plant projects these agreements are crucial to the development proceeding. Financiers will not lend the funds and boards will not approve the project if there are no customers locked in to take the product. The impact of the offtake

³ A LNG project would also usually involve a shipping deal and/or pipeline aspects.

⁴ Even if the project is developed by a large conglomerate there are usually contracts between the various entities. For example, where the proponent will also be the supplier there will often be a supply agreement put in place so that the new project is properly defeasible and business property accountable

agreement is on practical completion. If there are take or pay agreements it is vital that the project is ready to deliver product from inception date of the offtake agreement or it will face penalties. It may even have to buy product on the open market to meet its obligations. This can be a costly exercise if those markets are thinly traded or demand for these products is high.

- Financing and security agreements with the Lenders to finance the development of the project.

There are a number of contractual approaches that can be taken to construct a process plant facility. An EPC Contract is one approach. Another option is to have a supply contract, a design agreement and construction contract with or without a project management agreement. The project management can be, and often is, carried out by the proponent itself. Alternatively, an EPCM or project management contract can be used for the management. The choice of contracting approach will depend on a number of factors, including the time available, the Lender's requirements, the sophistication of the proponent and the identity of the Contractor(s)

Accordingly, the construction contract is only one of a suite of documents on a process plant project. Importantly, the promoter or the joint venture participants of the project operate and earn revenue under contracts other than the construction contract. Therefore, the construction contract must, where practical, be tailored so as to be consistent with the requirements of the other project documents. As a result, it is vital to properly manage the interfaces between the various types of agreements. These interface issues are discussed in more detail below.

The major advantage of the EPC Contract over the other possible approaches is that it provides for a single point of responsibility. This is discussed in more detail below.

Joint venture participants

- Interestingly, on large project-financed projects the Contractor is increasingly becoming one of the Sponsors, ie an equity participant in the Project Company. This is not the case in traditional process plant projects. Contractors will ordinarily sell down their interest after financial close because, generally speaking, Contractors will not wish to tie up their capital in operating projects. In addition, once construction is complete the rationale for having the Contractor included in the Ownership consortium often no longer exists. Similarly, once construction is complete a project will normally be reviewed as lower risk than a project in construction, therefore, all other things being equal, the Contractor should achieve a good return on its investments.
- Many Developers of process plant companies are large companies that sometimes choose to finance projects from their balance sheet. However, this is not always the case. Often they will seek finance to fund the project or there may be a number of small companies looking to develop assets that are regarded as stranded or too small for large companies to operate profitably. These smaller companies will need finance to carry out these developments. In these cases, the EPC Contractor is required to be a large, experienced participant in the industry that the Sponsors and Lenders are confident can successfully deliver the project and is large enough to cope with losses if it does not. Further, companies with a successful track record means that insurance for the project is easier to obtain. The larger Owners will still use an EPC Contract or design and construct contract for parts of large projects even if self-management, EPCM or project management are used for the greater project.

Bankability

A bankable contract is a contract with a risk allocation between the Contractor and the Project Company that satisfies the Lenders. Lenders focus on the ability (or more particularly the lack thereof) of the Contractor to claim additional costs and/or extensions of time as well as the security provided by the Contractor for its performance. The less comfortable the Lenders are with these provisions, the greater amount of equity support the Sponsors will have to provide. In addition, Lenders will have to be satisfied as to the technical risk. Obviously price is also a consideration, but that is usually considered separately to the bankability of the contract because the contract price (or more accurately the capital cost of the project facility) goes more directly to the economic bankability of the project as a whole.

Before examining the requirements for bankability, it is worth briefly considering the appropriate financing structures and lending institutions. Historically, the most common form of financing for process plant projects is project financing. Project financing is a generic term that refers to financing secured only by the assets of the

project itself. Therefore, the revenue generated by the project must be sufficient to support the financing. Project financing is also often referred to as either “non-recourse” financing or “limited recourse” financing.

The terms “non-recourse” and “limited recourse” are often used interchangeably, however, they mean different things. “Non-recourse” means there is no recourse to the project Sponsor at all and “limited recourse” means, as the name suggests, there is limited recourse to the Sponsor. The recourse is limited both in terms of when it can occur and how much the Sponsor are forced to contribute. In practice, true non-recourse financing is rare. In most projects the Sponsor will be obliged to contribute additional equity in certain defined situations.

Traditionally project financing was provided by commercial Lenders. However, as projects became more complex and financial markets more sophisticated, project finance also developed. In addition, as well as bank borrowings Sponsors are also using more sophisticated products like credit wrapped bonds, securitisation of future cash flows and political, technical and completion risk insurance to provide a portion of the necessary finance.

In assessing bankability, Lenders will look at a range of factors and assess a contract as a whole. Therefore, in isolation it is difficult to state whether one approach is or is not bankable. However, generally speaking, the Lenders will require the following:

- a fixed completion date
- a fixed completion price
- no or limited technology risk
- output guarantees
- liquidated damages for both delay and performance
- security from the Contractor and/or its parent
- large caps on liability (ideally, there would be no caps on liability, however, given the nature of EPC Contracting and the risks to the Contractors involved there are almost always caps on liability)
- restrictions on the ability of the Contractor to claim extensions of time and additional costs.

An EPC Contract delivers all of the requirements listed above in one integrated package. This is one of the major reasons why they are the predominant form of construction contract used on large-scale project-financed infrastructure projects and why they can be effective on process plant projects.

Basic features of an EPC Contract

The key clauses in any construction contract are those which impact on:

- time
- cost
- quality.

The same is true of EPC Contracts. However, EPC Contracts tend to deal with issues with greater sophistication than other types of construction contracts. This is because, as mentioned above, an EPC Contract is designed to satisfy the Lenders’ requirements for bankability.

EPC Contracts provide for:

- **A single point of responsibility:** The Contractor is responsible for all design, engineering, procurement, construction, commissioning and testing activities. Therefore, if any problems occur the Project Company need only look to one party – the Contractor – to both fix the problem and provide compensation. As a

result, if the Contractor is a consortium comprising several entities the EPC Contract must state that those entities are jointly and severally liable to the Project Company.

- **A fixed contract price:** Risk of cost overruns and the benefit of any cost savings are to the Contractor's account. The Contractor usually has a limited ability to claim additional money which is limited to circumstances where the Project Company has delayed the Contractor or has ordered variations to the works.
- **A fixed completion date:** EPC Contracts include a guaranteed completion date that is either a fixed date or a fixed period after the commencement of the EPC Contract. If this date is not met the Contractor is liable for delay liquidated damages (**DLDs**). DLDs are designed to compensate the Project Company for loss and damage suffered as a result of late completion of the facility. To be enforceable in common law jurisdictions,⁵ DLDs must be a genuine pre-estimate of the loss or damage that the Project Company will suffer if the facility is not completed by the target completion date. The genuine pre-estimate is determined by reference to the time the contract was entered into.

DLDs are usually expressed as a rate per day which represents the estimated extra costs incurred (such as extra insurance, supervision fees and financing charges) and losses suffered (revenue forgone) for each day of delay.

In addition, the EPC Contract must provide for the Contractor to be granted an extension of time when it is delayed by the acts or omissions of the Project Company. The extension of time mechanism and reasons why it must be included are discussed below.

- **Performance guarantees:** The Project Company's revenue will be earned by operating the facility. Therefore, it is vital that the facility performs as required in terms of output, efficiency and reliability. Therefore, EPC Contracts contain performance guarantees backed by performance liquidated damages (PLDs) payable by the Contractor if it fails to meet the performance guarantees. The performance guarantees usually comprise a guaranteed production capacity, quality and efficiency. PLDs must also be a genuine pre-estimate of the loss and damage that the Project Company will suffer over the life of the project if the facility does not achieve the specified performance guarantees. As with DLDs, the genuine pre-estimate is determined by reference to the time the contract was signed. PLDs are usually a net present value (NPV) (less expenses) calculation of the revenue forgone over the life of the project. For example, for an ammonia and urea plant if the production rate of urea is 50 tonnes less than the specification, the PLDs are designed to compensate the Project Company for the revenue forgone over the life of the project by being unable to sell that 50 tonnes of urea. It is possible to have a separate contract that sets out the performance requirements, testing regime and remedies. However, this can create problems where the EPC Contract and the performance guarantees do not match. In our view, the preferred option is to have the performance guarantees in the EPC Contract itself. PLDs and the performance guarantee regime and its interface with the DLDs and the delay regime are discussed in more detail below.
- **Caps on liability:** As mentioned above, most EPC Contractors will not, as a matter of company policy, enter into contracts with unlimited liability. Therefore, EPC Contracts for process plant projects cap the Contractor's liability at a percentage of the contract price. This varies from project to project, however, a cap of 100% of the contract price is common. In addition, there are normally subcaps on the Contractor's liquidated damages liability. For example, DLDs and PLDs might each be capped at 20% of the contract price, with an overall cap on both types of liquidated damages of 30% of the contract price. There will also likely be a prohibition on the claiming of consequential damages. Put simply, consequential damages are those damages that do not flow directly from a breach of contract, but which may have been in the reasonable contemplation of the parties at the time the contract was entered into. This used to mean heads of damage like loss of profit. However, loss of profit is now usually recognised as a direct loss on project-financed projects and, therefore, would be recoverable under a contract containing a standard exclusion of

⁵ For the purposes of this paper, we have assumed the EPC Contract will be governed by the law of a common law jurisdiction. Where there are differences between jurisdictions, we have adopted the English law approach. Therefore, if an EPC Contract is governed by a law other than English law you will need to seek advice from local counsel to ensure the contract is enforceable in the relevant jurisdiction. For example, in both the PRC and Malaysia liquidated damages amounts specified in a contract may be subsequently altered by a court. If a party can show that the liquidated damages amounts will either under- or in some cases over-compensate a party the court can adjust the damages payable so they more accurately reflect the actual damage suffered by a party.

consequential loss clause. Nonetheless, care should be taken to state explicitly that liquidated damages can include elements of consequential damages. Given the rate of liquidated damages is pre-agreed, most Contractors will not object to this exception.

In relation to both caps on liability and exclusion of liability, it is common for there to be some exceptions. The exceptions may apply to either or both the cap on liability and the prohibition on claiming consequential losses. The exceptions themselves are often project specific, however, some common examples include cases of fraud or wilful misconduct, situations where the minimum performance guarantees have not been met and the cap on delay liquidated damages has been reached, and breaches of the intellectual property warranties.

- **Security:** It is standard for the Contractor to provide performance security to protect the Project Company if the Contractor does not comply with its obligations under the EPC Contract. The security takes a number of forms, including:
 - A bank guarantee or bond for a percentage, normally in the range of 5–15% of the contract price. The actual percentage will depend on a number of factors including the other security available to the Project Company, the payment schedule (because the greater the percentage of the contract price unpaid by the Project Company at the time it is most likely to draw on security ie to satisfy DLD and PLD obligations the smaller the bank guarantee can be), the identity of the Contractor and the risk of it not properly performing its obligations, the price of the bank guarantee and the extent of the technology risk
 - Advance payment guarantee, if an advance payment is made
 - A parent company guarantee – this is a guarantee from the ultimate parent (or other suitable related entity) of the Contractor which provides that it will perform the Contractor's obligations if, for whatever reason, the Contractor does not perform.
- **Variations:** The Project Company has the right to order variations and agree to variations suggested by the Contractor. If the Project Company wants the right to omit works, either in their entirety or to be able to engage a different Contractor this must be stated specifically. In addition, a properly drafted variations clause should make provision for how the price of a variation is to be determined. In the event the parties do not reach agreement on the price of a variation, the Project Company or its representative should be able to determine the price. This determination is subject to the dispute resolution provisions. In addition, the variations clause should detail how the impact, if any, on the performance guarantees is to be treated. For some larger variations the Project Company may also wish to receive additional security. If so, this must also be dealt with in the variations clause.
- **Defects liability:** The Contractor is usually obliged to repair defects that occur in the 12 to 24 months following completion of the performance testing. Defects liability clauses can be tiered. That is, the clause can provide for one period for the entire facility and a second extended period, for more critical items.
- **Intellectual property:** The Contractor warrants that it has rights to all the intellectual property used in the execution of the works and indemnifies the Project Company if any third parties' intellectual property rights are infringed.
- **Force majeure:** The parties are excused from performing their obligations if a *force majeure* event occurs. This is discussed in more detail below.
- **Suspension:** The Project Company usually has a right to suspend the works.
- **Termination:** This sets out the contractual termination rights of both parties. The Contractor usually has very limited contractual termination rights. These rights are limited to the right to terminate for non-payment or for prolonged suspension or prolonged *force majeure* and will be further limited by the tripartite or direct agreement between the Project Company, the Lenders and the Contractor. The Project Company will have more extensive contractual termination rights. They will usually include the ability to terminate immediately for certain major breaches or if the Contractor becomes insolvent and the right to terminate after a cure period for other breaches. In addition, the Project Company may have a right to terminate for

convenience. It is likely the Project Company's ability to exercise its termination rights will also be limited by the terms of the financing agreements.

- **Performance specification:** Unlike a traditional construction contract, an EPC Contract usually contains a performance specification. The performance specification details the performance criteria that the Contractor must meet. However, it does not dictate how they must be met. This is left to the Contractor to determine. A delicate balance must be maintained. The specification must be detailed enough to ensure the Project Company knows what it is contracting to receive but not so detailed that if problems arise the Contractor can argue they are not its responsibility.

Whilst there are, as described above, numerous advantages to using an EPC Contract, there are some disadvantages. These include the fact that it can result in a higher contract price than alternative contractual structures. This higher price is a result of a number of factors, not least of which is the allocation of almost all the construction risk to the Contractor. This has a number of consequences, one of which is that the Contractor will have to factor into its price the cost of absorbing those risks. This will result in the Contractor building contingencies into the contract price for events that are unforeseeable and/or unlikely to occur. If those contingencies were not included, the contract price would be lower. However, the Project Company would bear more of the risk of those unlikely or unforeseeable events. Sponsors have to determine, in the context of their particular project, whether the increased price is worth paying.

As a result, Sponsor and their advisors must critically examine the risk allocation on every project. Risk allocation should not be an automatic process. Instead, the Project Company should allocate risk in a sophisticated way that delivers the most efficient result. For example, if a project is being undertaken in an area with unknown geology and without the time to undertake a proper geotechnical survey, the Project Company may be best served by bearing the site condition risk itself as it will mean the Contractor does not have to price a contingency it has no way of quantifying. This approach can lower the risk premium paid by the Project Company. Alternatively, the opposite may be true. The Project Company may wish to pay for the contingency in return for passing off the risk which quantifies and caps its exposure. This type of analysis must be undertaken on all major risks prior to going out to tender.

Another consequence of the risk allocation is the fact that there are relatively few engineering and construction companies that can and are willing to enter into EPC Contracts. As mentioned in the introduction, some bad publicity and a tightening insurance market have further reduced the pool of potential EPC Contractors. The scarcity of EPC Contractors can also result in relatively high contract prices.

Another major disadvantage of an EPC Contract becomes evident when problems occur during construction. In return for receiving a guaranteed price and a guaranteed completion date, the Project Company cedes most of the day-to-day control over the construction. Therefore, project companies have limited ability to intervene when problems occur during construction. The more a Project Company interferes, the greater the likelihood of the Contractor claiming additional time and costs. In addition, interference by the Project Company will make it substantially easier for Contractors to defeat claims for liquidated damages and defective works.

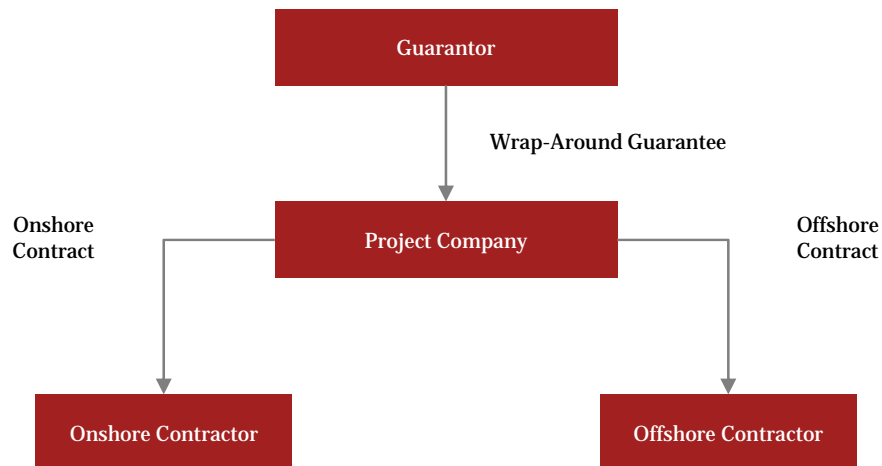
Obviously, ensuring the project is completed satisfactorily is usually more important than protecting the integrity of the contractual structure. However, if a Project Company interferes with the execution of the works they will, in most circumstances, have the worst of both worlds. They will have a contract that exposes them to liability for time and costs incurred as a result of their interference without any corresponding ability to hold the Contractor liable for delays in completion or defective performance. The same problems occur even where the EPC Contract is drafted to give the Project Company the ability to intervene. In many circumstances, regardless of the actual drafting, if the Project Company becomes involved in determining how the Contractor executes the works then the Contractor will be able to argue that it is not liable for either delayed or defective performance.

As a result, it is vitally important that great care is taken in selecting the Contractor and in ensuring the Contractor has sufficient knowledge and expertise to execute the works. Given the significant monetary value of EPC Contracts, and the potential adverse consequences if problems occur during construction, the lowest price should not be the only factor used when selecting Contractors.

Split EPC Contracts

One common variation, particularly in Asia, on the basic EPC structure illustrated above is a split EPC Contract. Under a split EPC Contract, the EPC Contract is, as the name implies, split into two or more separate contracts.

The basic split structure (illustrated below) involves splitting the EPC Contract into an onshore construction contract and an offshore supply contract.⁶

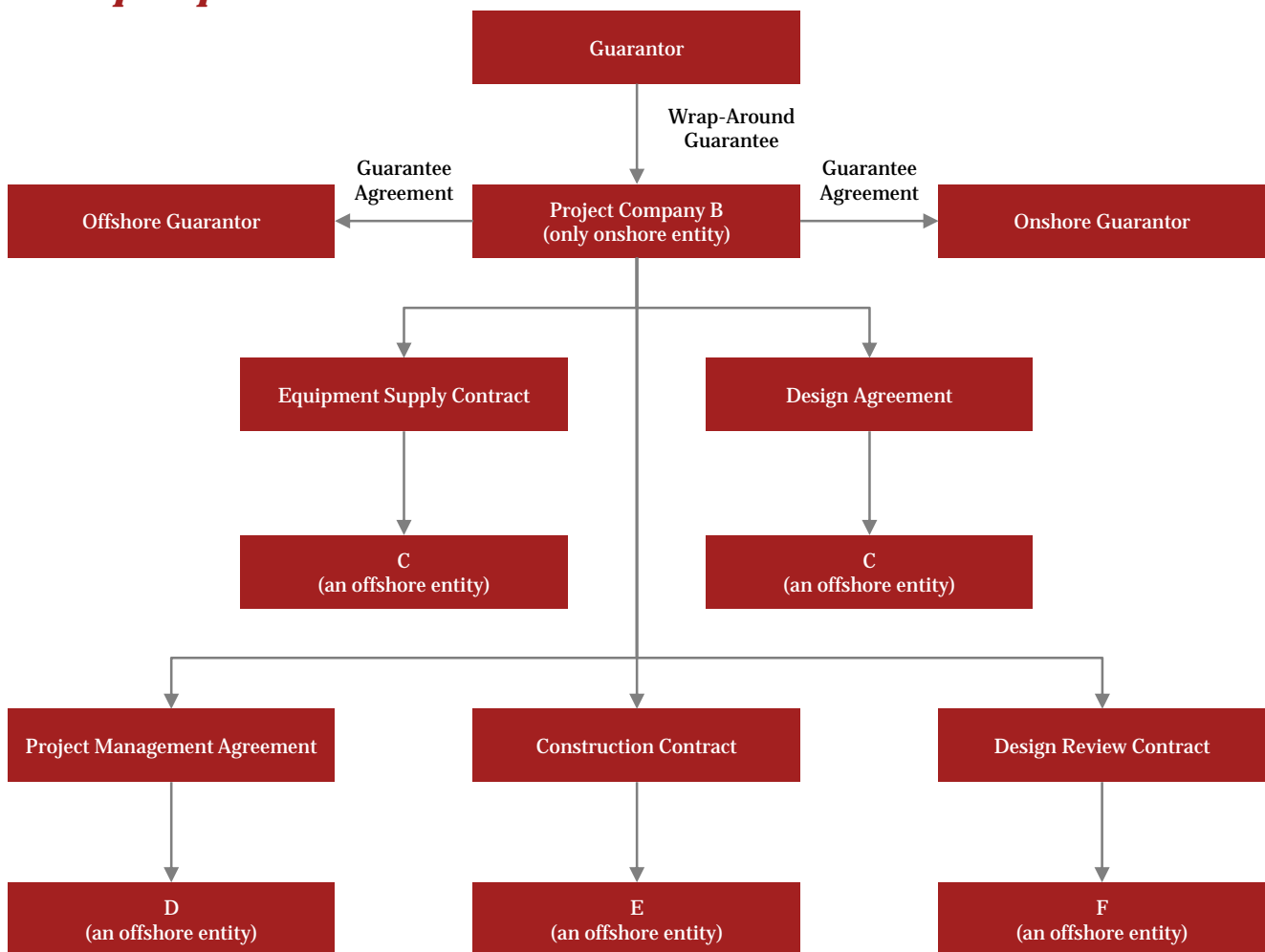


There are two main reasons for using a split contract. The first is because it can result in a lower contract price as it allows the Contractor to make savings in relation to onshore taxes; in particular on indirect and corporate taxes in the onshore jurisdiction. The second is because it may reduce the cost of complying with local licensing regulations by having more of the works, particularly the design works, undertaken offshore.⁷ In addition, in some countries that impose restrictions on who can carry out certain activities like engineering and design services, splitting the EPC Contract can also be advantageous because it can make it easier to repatriate profits. Below is a diagram illustrating a more complex split EPC structure we have used previously that dealt with both tax and licensing issues.

⁶ We have prepared a paper that deals with the variations and complications in split EPC Contracts. You should consult that paper if you want more information on this topic.

⁷ Modularisation is now a common form of construction and is an example where a split EPC Contract may be particularly appropriate.

Example split EPC Structure



Example simple split EPC Structure

Whilst a split EPC Contract can result in costs savings, there are risks to the Project Company in using such a structure. This mainly arises because of the derogation from the principle of single point of responsibility.

Unlike a standard EPC Contract, the Project Company cannot look only to a single Contractor to satisfy all the contractual obligations (in particular, design, construction and performance). Under a split structure, there are at least two entities with those obligations. Therefore, a third agreement, a wrap-around guarantee,⁸ is used to deliver a single point of responsibility despite the split.

Under a wrap-around guarantee, an entity, usually either the offshore supplier or the parent company of the contracting entities, guarantees the obligations of both Contractors. This delivers a single point of responsibility to the Project Company and the Lenders. The contracting entities will then enter into a separate agreement to determine how, as between themselves, liability is to be apportioned. However, that agreement is not relevant for the purposes of this paper.

In addition, the wrap-around guarantee will, if properly drafted, prevent the various Contractors from relying on the defaults of the other parties to avoid performing their contractual obligations – a tactic known as a horizontal defence. The wrap-around guarantee should also prevent a Contractor from relying on the Project Company’s default where the Project Company’s default was a result, either directly or indirectly, of the non-

⁸ This is also called a coordination agreement, an administration agreement or an umbrella deed.

performance, under-Guarantor performance or delay in performance of any of the other Contractors under their respective contracts.

In addition to horizontal defences, the wrap-around guarantee should deal with the following matters:

- **Guarantees and indemnities:** The Guarantor must guarantee the performance of the totality of the works and the ability of the separate parts to work seamlessly.
- **Liquidated damages:** This is linked to the issue of horizontal defences discussed above. The wrap-around guarantee must ensure that liquidated damages are paid regardless of which Contractor is late and which Contractor fails to perform. Similarly, the aggregate cap of liability in the wrap-around guarantee must override any caps on liability in the split contracts themselves.
- **Provision of a performance bond by the Guarantor or its parent:** It is usually prudent to have the Guarantor provide security for their obligations under the wrap-around guarantee. This may be in addition to or in replacement of the security provided under the EPC Contracts themselves. It will depend on the particular requirements of each project.
- **Liability (and limitation of liability) of the Guarantor:** The Guarantor's liability should be equal to the aggregate liability of the contracting entities under the split EPC Contracts.
- **Duration of the wrap-around guarantee:** The wrap-around guarantee should remain in force for as long as possible to offer the Project Company additional protection in the event latent defects occur. In any event, it should remain in force until the expiry of the defects liability period or the resolution of any dispute arising out of or in connection with the construction of the facility, whichever is the later.
- **Dispute resolution:** The procedures should be identical to those in the project documents and allow the Project Company to consolidate claims.
- **Termination:** Termination of an EPC Contract should automatically terminate the other EPC Contract(s) and the wrap-around guarantee (except in respect of accrued liability).
- **Tax indemnity:** Ideally the Contractor(s) should indemnify the Project Company for any taxes or penalties payable as a result of the split.

In addition, the wrap-around guarantee should contain provisions dealing with the practical consequences of splitting the contract and how the contracts and the project should be administered. For example, there should also be clauses dealing with more mundane issues like notices. Notices issued under one contract should be deemed to be notices under the other contracts.

Whenever an EPC Contract is split, the primary driver both of the general structure of the split and the particular drafting approach must be achieving a tax-effective structure. Therefore, tax advice from experts in the relevant jurisdiction must be obtained and those experts must review the split contracts and the wrap-around guarantee.

Key process plant-specific clauses in process plant EPC Contracts

General interface issues

As noted above, an EPC Contract is one of a suite of agreements necessary to develop a process plant project. Therefore, it is vital that the EPC Contract properly interfaces with those other agreements. In particular, care should be taken to ensure the following issues interface properly:

- commencement and completion dates
- liquidated damages amounts and trigger points
- caps on liability
- indemnities
- entitlements to extensions of time
- insurance
- *force majeure*
- intellectual property.

Obviously, not all these issues will be relevant for all agreements. In addition to these general interface issues that apply to most types of projects, there are also process plant project issues that must be considered. These issues are many and varied and depend largely on the nature of the project. For example, on a methanol project the facility must be ready and able to accept feedstock, process it to meet rigorous occupational health, safety and environmental guidelines and export methanol to meet supplier and customer demands and contractual obligations. They are discussed in more detail below.

Some major process plant-specific interface issues are:

- access for the Contractor to the feedstock to allow timely completion of construction, commissioning and testing
- consistency of commissioning and testing regimes
- feedstock, product and by-product (such as greenhouse emissions) specification requirements
- interface issues between the relevant government agencies and System Operator and the Contractor. In particular, whilst the Project Company must maintain a long-term/comfortable relationship with either the government or the system Operator the Contractor does not.

Feedstock and product storage

Usually, EPC Contracts will not provide for the handover of the facility to the Project Company until all commissioning and reliability trialling has been successfully completed.⁹

This raises the important issue of the supply of feedstock and other consumables (such as water) and receipt of product during testing and commissioning and the need for the EPC Contract to clearly define the obligations of the Project Company in providing feedstock and sufficient storage or product demand to fully and properly commission and test the facility.

⁹ Some Owners will, however, carry out the commissioning themselves.

Lenders need to be able to avoid the situation where the Project Company's obligation to ensure feedstock and storage (or demand) is uncertain. This will result in protracted disputes with the Contractor concerning the Contractor's ability to commission and test the facility at design conditions and to obtain extensions of time in situations where delay has been caused as a result of the failure or otherwise of the Project Company to provide sufficient (or sufficient quality) feedstock or storage.

With respect to the obligation to ensure the availability of sufficient feedstock, the Project Company is the most appropriate party to bear this risk *vis-à-vis* the Contractor, since the Project Company usually either builds the infrastructure itself or has it provided through the relevant supply agreement. Issues that must be considered include:

- Where is the feedstock from, an existing facility or a new facility?
- If it is a new facility, what is the timing for completion of that facility – will it fit in with the timing under the EPC Contract? What are the risks – and what can be done if it is not finished?
- Will new infrastructure be required to transport the feedstock material to the site such as the construction of a new pipeline? Will this be completed in time?
- What happens if insufficient feedstock is available or not available at all? Contractors will usually want the test to be deemed complete in these circumstances.
- What happens if the feedstock does not meet the specification? The EPC Contract should provide an adjustment mechanism to cope with this.

From the Project Company's perspective, the EPC Contract should set out the quantity of feedstock material and the date at which it must be provided. If possible, it should specify a maximum quantity that will be supplied. This will enable the Project Company to arrange the supply of this material by entering into a supply agreement with a third party.

With respect to the Contractor's ability to export product or store product, the EPC Contract must adequately deal with this risk and satisfactorily answer the following questions to ensure the smooth testing, commissioning and achieving commercial operation:

- What is the extent of the product export obligation? It will usually be an obligation to provide storage or demand for the product for a fixed period of time.
- What is the timing for the commencement of this obligation? Does the obligation cease at the relevant target date of completion? If not, does its nature change after the date has passed?
- What is the obligation of the Project Company to provide demand or storage in cases where the Contractor's commissioning/plant is unreliable – is it merely a reasonableness obligation?
- Which party is responsible for loss or damage to the product that is being stored?
- What happens if the Project Company fails to provide sufficient storage or demand? Contractors will usually seek to have the test deemed complete.

Many EPC Contracts are silent on these matters or raise far more questions than they actually answer. Given that the Project Company's failure will stem from restrictions imposed on it under its supply or offtake agreements, the best answer is to back-to-back the Project Company's obligations under the EPC Contract (usually to provide an extension of time and/or costs) with its supply and offtake agreements. This approach will not eliminate the risk associated with commissioning and testing issues, but will make it more manageable.

Our experience in a variety of projects has taught us that the issue of availability and quality of feedstock and availability of storage or demand is a matter that must be resolved at the contract formation stage.

Interfacing of commissioning and testing regimes

It is also important to ensure the commissioning and testing regimes in the EPC Contract mirror the requirements of any supply and offtake agreements. Mismatches only result in delays, lost revenue and liability for damages under the EPC Contract, supply or offtake agreements, all of which have the potential to cause disputes. This is even more important where the EPC Contract is part of a larger development, say a methanol plant on the back of a new gas processing plant. For example, the gas process plant might need the methanol plant to take its product as much as the methanol plant needs its product. If the interface is not carefully thought through and agreed in the contracts then this interface becomes a ripe area for disputes.

Testing/trialling requirements under any related contracts must provide the necessary Project Company satisfaction under the EPC Contract and the offtake and supply contracts. Relevant testing issues which must be considered include:

- Will any related facilities be required for the tests/trialling?
- Is there consistency between obtaining handover from the Contractor under the EPC Contract and commercial operation? It is imperative to ensure that there is a sufficient window for the EPC Contract facility and any related facilities to be tested. Contractors will usually want an agreement that where the testings/trials cannot be undertaken, through no fault of its own, in a reasonable time frame the test/trials are deemed to be completed. It must not be forgotten that various certifications will be required at the Lender level. The last thing the Lenders will want is the process to be held up by their own requirements for certification. To avoid delays and disruption it is important that the Lenders' engineer is acquainted with the details of the project and, in particular, any potential difficulties with the testing regime. Therefore, any potential problems can be identified early and resolved without impacting on the commercial operation of the facility.
- Is the basis of the testing to be undertaken mirrored under both the EPC Contract and related facility? Using the methanol example above, is the gas processing plant required to produce the same quality gas that the methanol plant is to be tested/trialled, and ultimately operated on?¹⁰
- On what basis are various environmental tests to be undertaken?
- What measurement methodology is being used? Are the correction factors to be applied under the relevant documents uniform? Are references to international standards or guidelines to a particular edition or version?
- Are all tests necessary for the Contractor to complete under the EPC Contract able to be performed as a matter of practice?

Significantly, if the relevant specifications are linked to guidelines such as the international environmental guidelines, consideration must be given to changes which may occur in these guidelines. The EPC Contract reflects a snapshot of the standards existing at a time when that contract was signed. It may be a number of years post that date in which the actual construction of the project is undertaken thus allowing for possible mismatches should the legislative/guidelines have changed as regards environmental concerns. It is important that there is certainty as to which standard applies. Is it the standard at the time of entering the EPC Contract or is it the standard which applies at the time of testing?

Consideration must therefore be given to the appropriate mechanism to deal with potential mismatches between the ongoing obligation of complying with laws, and the Contractor's obligation to build to a specification agreed at a previous time. Consideration must be given to requiring satisfaction of guidelines "as amended from time to time"¹¹. The breadth of any change of law provision will be at the forefront of any review.

¹⁰ This sounds basic but it has been a relatively common error. The same issue arises if the testing, using this example, was contingent on another related facility being able to accept some or all of the product.

¹¹ It is often the case that if amendments to the design are required as a result the Contractor will be entitled to extensions of time and/or variations.

The above issues raise the importance of the testing schedules to the EPC Contract. The size and importance of the various projects to be undertaken must mean that the days where schedules are attached at the last minute without being subject to review are gone – they are part and parcel of the EPC Contract.

Discrepancies between the relevant testing and commissioning requirements will only serve to delay and distract all parties from the successful completion of testing and reliability trials.

These are all areas where lawyers can add value to the successful completion of projects by being alert to and dealing with such issues at the contract formation stage.

Feedstock specification issues

The nature of the feedstock to be supplied to the Contractor under the EPC Contract is also another important issue. Where there is a supply agreement¹² it is vitally important that adequate review is done at the EPC Contract level to ensure that the feedstock being provided under the supply agreement meets the requirements of the EPC Contract. Similar consideration will need to be given to any Project Company where it will be supplying the feedstock itself. This is a common area of dispute where the facility fails to meet the specification in test/trials.

Differing feedstock specification requirements can only result in delay, cost claims and extension of time claims at the EPC Contract level. Feedstock specification issues will be hidden away in the schedules. Again, watch out for those schedules.

In addition, where certain tests require specific types or quality of feedstock, the review should check that there are arrangements in place for that type of quality of feedstock to be provided. If the specification calls for a wide range of feedstock and provision is made for it to be tested as such it will be meaningless if the test cannot be undertaken. For example, the production plan might show an increase in a certain contaminant over the life of the project so a test on the lower quality feedstock may be appropriate, but only if it is possible to do so.

Interface issues between a supplier or offtaker and the EPC Contractor

At a fundamental level, it is imperative that the appropriate party corresponds with the relevant supplier or offtaker/system Operator during construction on issues such as the provision of offtake facilities/feedstock requirements/testing requirements and timing.

The Project Company must ensure the EPC Contract states clearly that it is the appropriate party to correspond with the supplier or offtaker and the System Operator. Any uncertainty in the EPC Contract may unfortunately see the EPC Contractor dealing with the supplier or offtaker and/or the system Operator thus possibly risking the relationship of the Project Company with its customer. Significantly, it is the Project Company which must develop and nurture an ongoing and long-term relationship with the offtaker. On the other hand, it is the Contractor's prime objective to complete the project on time or earlier at a cost which provides it with significant profit. The clash of these conflicting objectives in many cases does not allow for such a smooth process. Again, the resolution of these issues at the EPC Contract formation stage is imperative.

¹² As opposed to the situations of the Operator of the new plant also supplying the feedstock, which presents its own problems.

Interface issues between the operating and maintenance agreement and the EPC Contract

During the transition from the construction to operating phase of the project, a number of interface issues arise which need to be addressed by both the EPC Contract and the operating and maintenance agreement.

The first is commissioning. In many EPC Contracts, the Project Company is required to provide personnel to assist the Contractor with commissioning. The personnel provided by the Project Company will more than often be personnel of the Operator.¹³

To enable the Operator to have sufficient time to mobilise its personnel, it needs to have adequate notice of the likely date of the commencement of commissioning. This is particularly important where the Operator is not a local or domestic organisation and will be mobilising personnel from different parts of the world. An EPC Contract, therefore, must require the Contractor to give advance notice to the Project Company as to the likely date of commissioning.

The second interface issue that needs to be addressed is the completion and handover of the facility. Again, the Operator will need to have sufficient notice of the likely date of completion as the commencement date under the operating and maintenance agreement (commencement of operation) will immediately follow this date. As with commissioning, the Operator will need to mobilise personnel that are not already on site assisting with commissioning.

On some projects, the Contractor (or the Project Company itself depending on the identity of the Sponsor) may require the Project Company to carry out the commissioning and performance testing. In those circumstances, handover of the facility will usually take place on mechanical completion.

While this arrangement may provide the Project Company with greater control of commissioning and performance testing, it creates bankability issues. For example, if the performance guarantees are not achieved or the project is not completed by the guaranteed completion date, the Contractor could argue that the acts or omissions of the Project Company prevented it from achieving the performance guarantees or completion by the guaranteed completed date. Even when such allegations are without merit they can be very difficult and expensive to disprove. For those reasons, it is preferable if the EPC Contract provides that the Contractor is responsible for commissioning and carrying out the performance tests and not the Project Company.¹⁴

Key performance clauses in process plant EPC Contracts

Rationale for imposing liquidated damages

Almost every construction contract will impose liquidated damages for delay and impose standards in relation to the quality of construction. Most, however, do not impose PLDs. EPC Contracts impose PLDs because the achievement of the performance guarantees has a significant impact on the ultimate success of a project. Similarly, it is important that the facility commences operation on time because of the impact on the success of the project and because of the liability the Project Company will have under other agreements. This is why DLDs are imposed. DLDs and PLDs are both sticks used to motivate the Contractor to fulfil its contractual obligations.

The law of liquidated damages

As discussed above, liquidated damages must be a genuine pre-estimate of the Project Company's loss. If liquidated damages are more than a genuine pre-estimate, they will be a penalty and unenforceable. There is no legal sanction for setting a liquidated damages rate below that of a genuine pre-estimate, however, there are the obvious financial consequences.

¹³ See section 7.4.2 for a more detailed discussion on this issue.

¹⁴ Ibid.

In addition to being unenforceable as a penalty, liquidated damages can also be void for uncertainty or unenforceable because they breach the Prevention Principle. Void for uncertainty means, as the term suggests, that it is not possible to determine how the liquidated provisions work. In those circumstances, a court will void the liquidated damages provisions. The Prevention Principle was developed by the courts to prevent Employers, ie project companies, from delaying Contractors and then claiming DLDs. It is discussed in more detail below in the context of extensions of time.

Prior to discussing the correct drafting of liquidated damages clauses to ensure they are not void or unenforceable it is worth considering the consequences of an invalid liquidated damages regime. If the EPC Contract contains an exclusive remedies clause the result is simple – the Contractor will have escaped liability unless the contract contains an explicit right to claim damages at law if the liquidated damages regime fails. This is discussed in more detail below.

If, however, the EPC Contract does not contain an exclusive remedies clause, the non-challenging party should be able to claim at law for damages they have suffered as a result of the challenging party's non – or defective-performance. What then is the impact of the caps in the now invalidated liquidated damages clauses?

Unfortunately, the position is unclear in common law jurisdictions, and a definitive answer cannot be provided based upon the current state of authority. It appears the answer varies depending upon whether the clause is invalidated due to its character as a penalty, or because of uncertainty or unenforceability. Our view of the current position is set out below. We note that whilst the legal position is not settled the position presented below does appear logical.

- **Clause invalidated as a penalty:** When liquidated damages are unenforceable at law because they are a penalty (ie they do not represent a genuine pre-estimate of loss), the cap on liquidated damages will not act as a cap on damages claims at general law. Equity will also read down a penalty and allow appropriate compensation. This may not be an issue if the provision is less than the loss suffered. We also note that it is rare for a court to find liquidated damages are penalties in contracts between two sophisticated, well-advised parties.
- **Clause invalidated due to acts of prevention by the Principal:** When a liquidated damages clause is invalidated due to an act of prevention by the Principal for which the Contractor is not entitled to an extension of time, the liquidated damages or its cap will not act as a cap on damages claims at general law.
- **Clause void for uncertainty:** A liquidated damages clause which is unworkable or too uncertain to ascertain what the parties intended is severed from the EPC Contract in its entirety, and will not act as a cap on the damages recoverable by the Principal from the Contractor. Upon severance, the clause is, for the purposes of contractual interpretation, ignored.

However, it should be noted that the threshold test for rendering a clause void for uncertainty is high, and courts are reluctant to hold that the terms of a contract, in particular a commercial contract where performance is well advanced, are uncertain.

Drafting of liquidated damages clauses

Given the role liquidated damages play in ensuring EPC Contracts are bankable, and the consequences detailed above of the regime not being effective, it is vital to ensure they are properly drafted to ensure Contractors cannot avoid their liquidated damages liability on a legal technicality.

Therefore, it is important, from a legal perspective, to ensure DLDs and PLDs are dealt with separately. If a combined liquidated damages amount is levied for late completion of the works, it risks being struck out as a penalty because it will over-compensate the Project Company. However, a combined liquidated damages amount levied for under-performance may under-compensate the Project Company.

Our experience shows that there is a greater likelihood of delayed completion than there is of permanent under-performance. One of the reasons why projects are not completed on time is Contractors are often faced with remedying performance problems. This means, from a legal perspective, if there is a combination of DLDs and PLDs, the liquidated damages rate should include more of the characteristics of DLDs to protect against the risk of the liquidated damages being found to be a penalty.

If a combined liquidated damages amount includes a NPV or performance element, the Contractor will be able to argue that the liquidated damages are not a genuine pre-estimate of loss when liquidated damages are levied for late completion only. However, if the combined liquidated damages calculation takes on more of the characteristics of DLDs the Project Company will not be properly compensated if there is permanent under-performance.

Where there is significant under-performance such as a failure to meet the minimum performance guarantees, an EPC Contract will generally provide for remedies other than the payment of PLDs. For example, the range of remedies usually included in an EPC Contract in relation to the minimum performance guarantees not being met are:

- the Contractor is required to replace the facility or any part of the facility and repeating the performance tests until the minimum performance guarantees are met
- termination of the contract with the Project Company completing the facility or engaging a third party to do so
- rejection of the facility or part of the facility in which case the Contractor must repay all sums paid by the Project Company and the cost of dismantling and clearing the facility or part of the facility
- issuing a certificate of completion despite the Contractor not meeting the minimum performance guarantees with a corresponding reduction in the contract price.¹⁵

It is also important to differentiate between the different types of PLDs to protect the Project Company against arguments by the Contractor that the PLDs constitute a penalty. For example, if a single PLD's rate is only focused on output and not efficiency, problems and uncertainties will arise if the output guarantee is met but one or more of the efficiency guarantees are not. In these circumstances, the Contractor will argue that the PLDs constitute a penalty because the loss the Project Company suffers if the efficiency guarantees are not met are usually smaller than if the output guarantees are not met.

Drafting of the performance guarantee regime

Now that it is clear that DLDs and PLDs must be dealt with separately it is worth considering, in more detail, how the performance guarantee regime should operate. A properly drafted performance testing and guarantee regime is important because the success or failure of the project depends, all other things being equal, on the performance of the process plant facility.

The major elements of the performance regime are:

- testing
- guarantees
- liquidated damages.

Liquidated damages were discussed above. Testing and guarantees are discussed below.

Testing

Performance tests may cover a range of areas. Three of the most common are:

- **Functional tests:** These test the functionality of certain parts of the facility. For example, pumps, valves, pressure vessels etc. They are usually discrete tests which do not test the facility as a whole. Liquidated damages do not normally attach to these tests. Instead, they are absolute obligations that must be complied

¹⁵ For a more detailed discussion of this issue please consult our paper on "Performance Guarantees and Remedies in EPC Contracts".

with. If not, the facility will not reach the next stage of completion (for example, mechanical completion or provisional acceptance).

- **Emissions tests:** These test compliance against environmental requirements. Again, these are normally absolute obligations because the consequences of failure can be as severe as being forced to shut down the facility. These tests should ensure the most stringent obligations imposed on the Project Company, whether by government regulations or by Lenders, are met. Emissions tests occur at various times, including during and after performance tests. Liquidated damages are sometimes levied if the Contractor fails the emissions tests. However, given emissions tests are usually related to environmental approvals, it is likely that the facility will not be able to operate if the emissions tests are failed. Therefore, passing the emissions tests is usually an absolute obligation not linked to liquidated damages.
- **Performance tests:** These test the ability of the facility to meet the performance criteria specified in the contract. There are often minimum and guaranteed levels of performance specified and, as discussed above, providing the minimum levels are met the consequence of failure is normally the payment of PLDs. Satisfaction of the minimum performance guarantees¹⁶ is normally an absolute obligation. The minimum performance guarantees should be set at a level of performance at which it is economic to accept the facility. Lender's input will be vital in determining what this level is. However, it must be remembered that Lenders have different interests to the Sponsor. Lenders will, generally speaking, be prepared to accept a facility that provides sufficient income to service the debt. However, in addition to covering the debt service obligations, Sponsor will also want to receive a return on their equity investment. If that will not be provided via the sale of product because the Contractor has not met the performance guarantees, the Sponsor will have to rely on the PLDs to earn their return. In some projects, the performance tests occur after handover of the facility to the Project Company. This means the Contractor no longer has any liability for DLDs during performance testing.

In our view, it is preferable, especially in project-financed projects, for handover to occur after completion of performance testing. This means the Contractor continues to be liable for DLDs until either the facility operates at the guaranteed level or the Contractor pays PLDs where the facility does not operate at the guaranteed level.¹⁷ Obviously, DLDs will be capped (usually at 20% of the contract price); therefore, the EPC Contract should give the Project Company the right to call for the payment of the PLDs and accept the facility. If the Project Company does not have this right the problem mentioned above will arise, namely, the Project Company will not have received its facility and will not be receiving any DLDs as compensation.

It is common for the Contractor to be given an opportunity to modify the facility if it does not meet the performance guarantees on the first attempt. This is because the PLD amounts are normally very large and most Contractors would prefer to spend the time and the money necessary to remedy performance instead of paying PLDs. Not giving Contractors this opportunity will likely lead to an increased contract price both because Contractors will over-engineer the facility and will build a contingency for paying PLDs into the contract price. The second reason is because in most circumstances the Project Company will prefer to receive a facility that operates at 100% capacity and efficiency. The right to modify and retest is another reason why DLDs should be payable up to the time the performance guarantees are satisfied.

If the Contractor is to be given an opportunity to modify and retest, the EPC Contract must deal with who bears the costs of the additional feedstock and consumables required to undertake the retesting. The cost of the feedstock in particular can be significant and should, in normal circumstances, be to the Contractor's account because the retesting only occurs if the performance guarantees are not met at the first attempt.

¹⁶ This can be in the form of steady state testing.

¹⁷ If the contract contains a term that handover will not occur until the performance guarantees are met, there will be a regime by which this may be waived.

Technical issues

Ideally, the technical testing procedures should be set out in the EPC Contract. However, for a number of reasons, including the fact that it is often not possible to fully scope the testing programme until the detailed design is complete, the testing procedures are usually left to be agreed during construction by the Contractor, the Project Company's representative or engineer and, if relevant, the Lenders' engineer. However, a properly drafted EPC Contract should include the guidelines for testing.

The complete testing procedures must, as a minimum, set out details of:

- **Testing methodology:** Reference is often made to standard methodologies, for example, the American Society of Mechanical Engineers methodology.
- **Testing equipment:** Who is to provide it, where it is to be located, how sensitive must it be.
- **Tolerances:** What is the margin of error.
- **Ambient conditions:** What atmospheric conditions are assumed to be the base case (testing results will need to be adjusted to take into account any variance from these ambient conditions).
- **Steady state testing:** Using ordinary parameters to avoid running the plant at unsustainable short-term rates.

Provision of consumables and feedstock

The responsibility for the provision of consumables and feedstock required to carry out the performance tests must be clearly set out in the EPC Contract. In general, the Project Company will be responsible for the provision of both consumables and feedstock.

As the proper interpretation of the Project Company's obligation to supply consumables is often a matter of dispute between the Project Company and Contractor, it is important for the EPC Contract to precisely identify the quality and quantity of consumables to be provided as well as the time for provision of those consumables (which should be linked to the progress of the works rather than a specific date). The responsibility for the cost of providing consumables and feedstock must also be clearly identified. This is discussed in more detail in the section on feedstock specification issues.

An example of the performance testing and guarantee regime we have used on a number of projects is included in Appendix 1 of this paper.

These example clauses are only extracts from a complete contract and ideally should be read as part of that entire contract and, in particular, with the clauses that deal with DLDs, PLDs, liability, the scope of the Contractor's obligations, including any fitness for purpose warranties and termination. Nonetheless, they do provide an example of the way a performance testing and liquidated damages regime can operate.

The process is best illustrated diagrammatically. Refer to the flowcharts below to see how the various parts of the performance testing regime should interface.

Key general clauses in EPC Contracts

Delay and extensions of time

The Prevention Principle

As noted previously, one of the advantages of an EPC Contract is that it provides the Project Company with a fixed completion date. If the Contractor fails to complete the works by the required date it is liable for DLDs. However, in some circumstances the Contractor is entitled to an extension of the date for completion. Failure to grant that extension can void the liquidated damages regime and set time at large. This means the Contractor is only obliged to complete the works within a reasonable time.

This is the situation under common law governed contracts due to the Prevention Principle. The Prevention Principle was developed by the courts to prevent Employers, ie project companies, from delaying Contractors and then claiming DLDs.

The legal basis of the Prevention Principle is unclear and it is uncertain whether you can contract out of the Prevention Principle. Logically, given most commentators believe the Prevention Principle is an equitable principle, explicit words in a contract should be able to override the principle. However, the courts have tended to apply the Prevention Principle even in circumstances where it would not, on the face of it, appear to apply. Therefore, there is a certain amount of risk involved in trying to contract out of the Prevention Principle. The more prudent and common approach is to accept the existence of the Prevention Principle and provide for it in the EPC Contract.

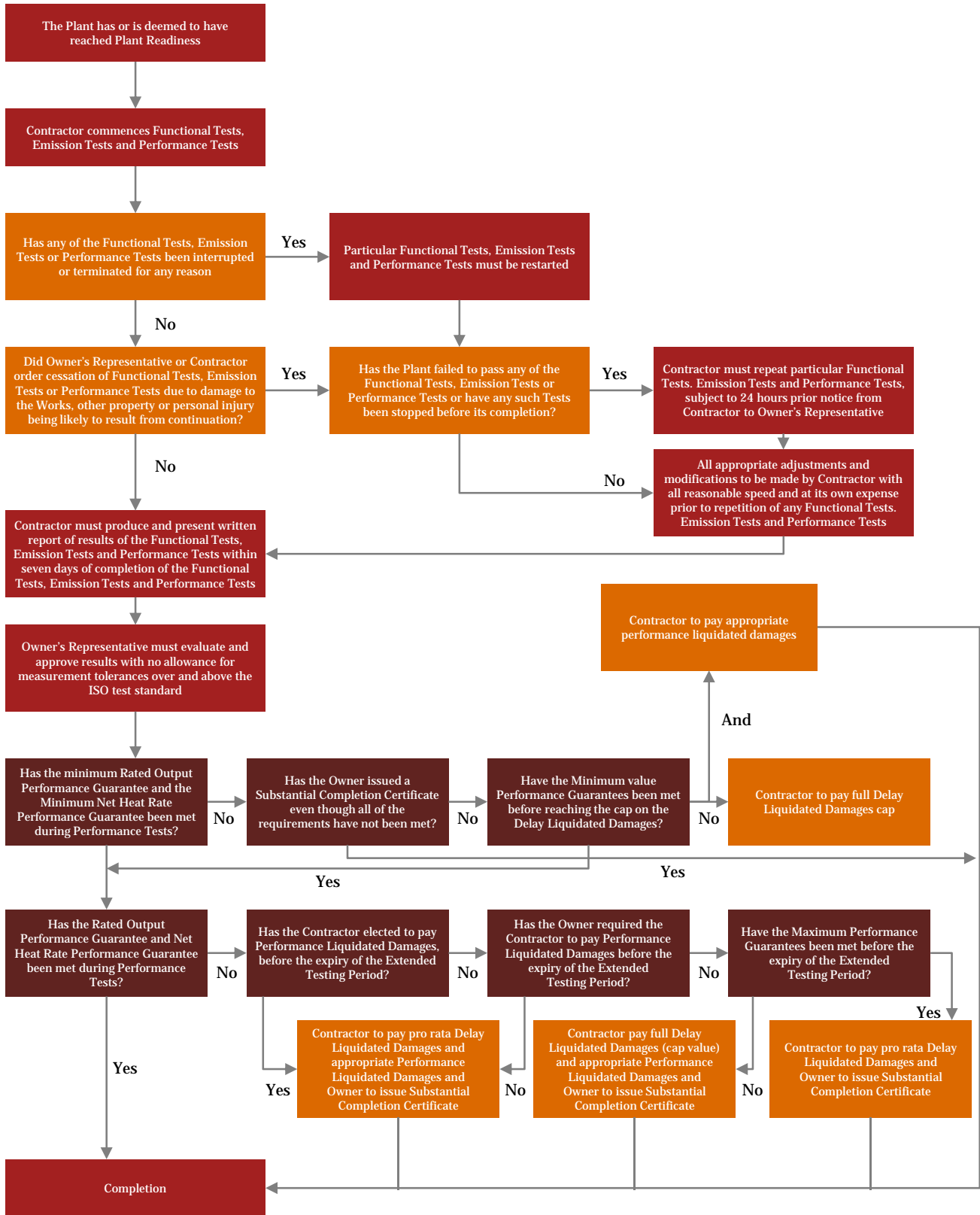
The Contractor's entitlement to an Extension of Time (EOT) is not absolute. It is possible to limit the Contractor's rights and impose pre-conditions on the ability of the Contractor to claim an extension of time. A relatively standard EOT clause would entitle the Contractor to an EOT for:

- an act, omission, breach or default of the Project Company
- suspension of the works by the Project Company (except where the suspension is due to an act or omission of the Contractor)
- a variation (except where the variation is due to an act or omission of the Contractor)
- *force majeure*.

Which cause a delay on the critical path 2 and about which the Contractor has given notice within the period specified in the contract. It is permissible (and advisable) from the Project Company's perspective to make both the necessity for the delay to impact the critical path and the obligation to give notice of a claim for an extension of time conditions precedent to the Contractor's entitlement to receive an EOT. In addition, it is usually good practice to include a general right for the Project Company to grant an EOT at any time. However, this type of provision must be carefully drafted because some judges have held (especially when the Project Company's representative is an independent third party) the inclusion of this clause imposes a mandatory obligation on the Project Company to grant an extension of time whenever it is fair and reasonable to do so, regardless of the strict contractual requirements. Accordingly, from the Project Company's perspective, it must be made clear that the Project Company has complete and absolute discretion to grant an EOT, and that it is not required to exercise its discretion for the benefit of the Contractor.

Similarly, following some recent common law decisions, the Contractor should warrant that it will comply with the notice provisions that are conditions precedent to its right to be granted an EOT.

We recommend using the clause in part 2 of Appendix 1



Concurrent delay

You will note that in the suggested EOT clause, one of the subclauses refers to concurrent delays. This is relatively unusual because most EPC Contracts are silent on this issue. For the reasons explained below we do not agree with that approach.

A concurrent delay occurs when two or more causes of delay overlap. It is important to note that it is the overlapping of the causes of the delays not the overlapping of the delays themselves. In our experience, this distinction is often not made. This leads to confusion and sometimes disputes. More problematic is when the contract is silent on the issue of concurrent delay and the parties assume the silence operates to their benefit. As a result of conflicting case law it is difficult to determine who, in a particular fact scenario, is correct. This can also lead to protracted disputes and outcomes contrary to the intention of the parties.

There are a number of different causes of delay which may overlap with delay caused by the Contractor. The most obvious causes are the acts or omissions of a Project Company.

A Project Company may have obligations to provide certain materials or infrastructure to enable the Contractor to complete the works. The timing for the provision of that material or infrastructure (and the consequences for failing to provide it) can be affected by a concurrent delay.

For example, the Project Company may be obliged, as between the Project Company and the Contractor, to provide a pipeline to connect to the facility by the time the Contractor is ready to commission the facility. Given the construction of the pipeline can be expensive, the Project Company is likely to want to incur that expense as close as possible to the date commissioning is due to commence. For this reason, if the Contractor is in delay the Project Company is likely to further delay incurring the expense of building the pipeline. In the absence of a concurrent delay clause, this action by the Project Company, in response to the Contractor's delay, could entitle the Contractor to an extension of time.

Concurrent delay is dealt with differently in the various international standard forms of contract. Accordingly, it is not possible to argue that one approach is definitely right and one is definitely wrong. In fact, the "right" approach will depend on which side of the table you are sitting.

In general, there are three main approaches for dealing with the issue of concurrent delay. These are:

- **Option one:** The Contractor has no entitlement to an extension of time if a concurrent delay occurs.
- **Option two:** The Contractor has an entitlement to an extension of time if a concurrent delay occurs.
- **Option three:** The causes of delay are apportioned between the parties and the Contractor receives an extension of time equal to the apportionment. For example, if the causes of a 10-day delay are apportioned 60:40 Project Company:Contractor, the Contractor would receive a six-day extension of time.

Each of these approaches is discussed in more detail below.

Option one: Contractor not entitled to an EOT for concurrent delays

A common, Project Company friendly, concurrent delay clause for this option one is:

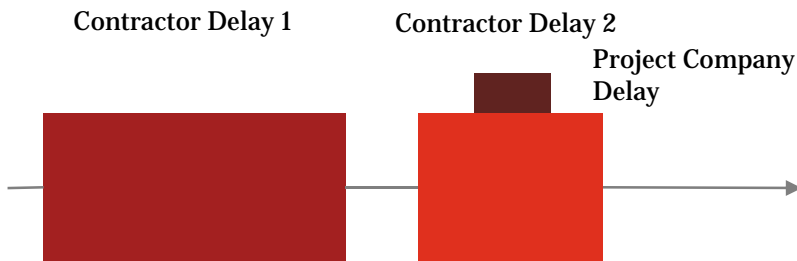
If more than one event causes concurrent delays and the cause of at least one of those events, but not all of them, is a cause of delay which would not entitle the Contractor to an extension of time under [EOT clause], then to the extent of the concurrency, the Contractor will not be entitled to an extension of time.

Nothing in the clause prevents the Contractor from claiming an EOT under the general EOT clause. What the clause does do is to remove the Contractor's entitlement to an EOT when there are two or more causes of delay and at least one of those causes would not entitle the Contractor to an EOT under the general EOT clause.

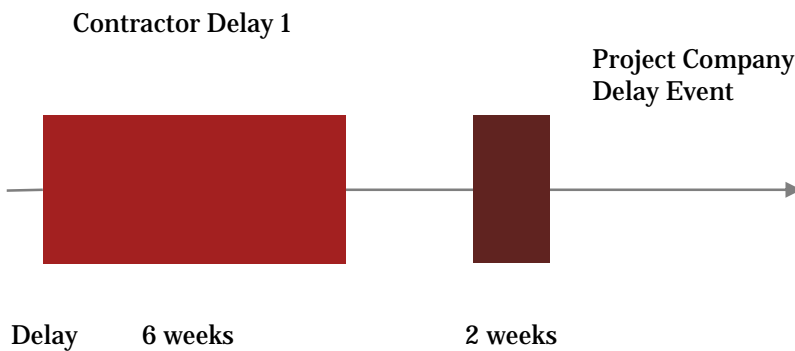
For example, if the Contractor's personnel were on strike and during that strike the Project Company failed to approve drawings, in accordance with the contractual procedures, the Contractor would not be entitled to an EOT for the delay caused by the Project Company's failure to approve the drawings.

The operation of this clause is best illustrated diagrammatically.

Example one: Contractor not entitled to an EOT for concurrent delays

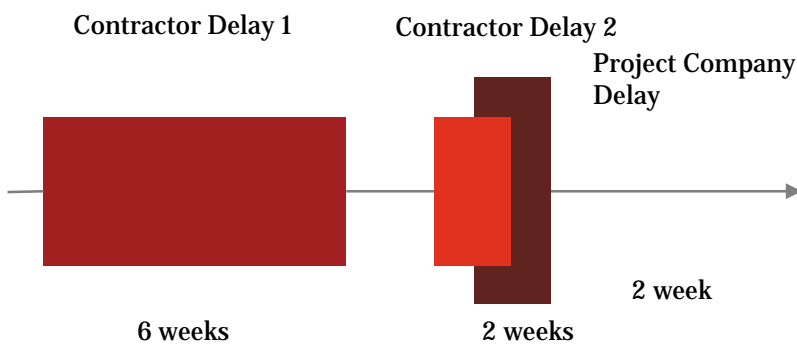


In this example, the Contractor would not be entitled to any EOT because the Contractor Delay 2 overlaps entirely the Project Company Delay. Therefore, using the example clause above, the Contractor is not entitled to an EOT to the extent of the concurrency. As a result, at the end of the Contractor Delay 2 the Contractor would be in eight weeks' delay (assuming the Contractor has not, at its own cost and expense, accelerated the works).



Example 2: Contractor entitled to an EOT for Project Company-caused delay

In this example, there is no overlap between the Contractor and Project Company Delay Event, the Contractor would be entitled to a two-week EOT for the Project Company delay. Therefore, at the end of the Project Company Delay the Contractor will remain in six weeks' delay, assuming no acceleration.



Example 3: Contractor entitled to an EOT for a portion of the Project Company-caused delay

In this example, the Contractor would be entitled to a one-week EOT because the delays overlap for one week. Therefore, the Contractor is entitled to an EOT for the period when they do not overlap ie when the extent of the concurrency is zero. As a result, after receiving the one-week EOT, the Contractor would be in seven weeks' delay, assuming no acceleration.

From a Project Company's perspective, we believe, this option is both logical and fair. For example, if, in example 2, the Project Company Delay was a delay in the approval of drawings and the Contractor Delay was the entire workforce being on strike, what logic is there in the Contractor receiving an EOT? The delay in approving drawings does not actually delay the works because the Contractor could not have used the drawings given its workforce was on strike. In this example, the Contractor would suffer no detriment from not receiving an EOT. However, if the Contractor did receive an EOT it would effectively receive a windfall gain.

The greater number of obligations the Project Company has the more reluctant the Contractor will likely be to accept option one. Therefore, it may not be appropriate for all projects.

Option two: Contractor entitled to an EOT for concurrent delays

Option two is the opposite of option one and is the position in many of the Contractor-friendly standard forms of contract. These contracts also commonly include EOT provisions to the effect that the Contractor is entitled to an EOT for any cause beyond its reasonable control which, in effect, means there is no need for a concurrent delay clause.

The suitability of this option will obviously depend on which side of the table you are sitting. This option is less common than option one but is nonetheless sometimes adopted. It is especially common when the Contractor has a superior bargaining position.

Option three: Responsibility for concurrent delays is apportioned between the parties

Option three is a middle ground position that has been adopted in some of the standard form contracts. For example, the Australian Standards construction contract AS4000 adopts the apportionment approach. The AS4000 clause states:

34.4 Assessment

When both non-qualifying and qualifying causes of delay overlap, the Superintendent shall apportion the resulting delay to WUC according to the respective causes' contribution.

In assessing each EOT the Superintendent shall disregard questions of whether:

- a) WUC can nevertheless reach practical completion without an EOT, or
- b) the Contractor can accelerate, but shall have regard to what prevention and mitigation of the delay has not been effected by the Contractor.

We appreciate the intention behind the clause and the desire for both parties to share responsibility for the delays they cause. However, we have some concerns about this clause and the practicality of the apportionment approach in general. It is easiest to demonstrate our concerns with an extreme example. For example, what if the qualifying cause of delay was the Project Company's inability to provide access to the site and the non-qualifying cause of delay was the Contractor's inability to commence the works because it had been black-banned by the unions. How should the causes be apportioned? In this example, the two causes are both 100% responsible for the delay.

In our view, an example like the above where both parties are at fault has two possible outcomes. Either:

- the delay is split down the middle and the Contractor receives 50% of the delay as an EOT; or
- the delay is apportioned 100% to the Project Company and therefore the Contractor receives 100% of the time claimed.

The delay is unlikely to be apportioned 100% to the Contractor because a judge or arbitrator will likely feel that that is unfair, especially if there is a potential for significant liquidated damages liability. We appreciate the above is not particularly rigorous legal reasoning, however, the clause does not lend itself to rigorous analysis.

In addition, option three is only likely to be suitable if the party undertaking the apportionment is independent from both the Project Company and the Contractor.

Exclusive remedies and fail safe clauses

It is common for Contractors to request the inclusion of an exclusive remedies clause in an EPC Contract. However, from the perspective of a Project Company, the danger of an exclusive remedies clause is that it prevents the Project Company from recovering any type of damages not specifically provided for in the EPC Contract.

An EPC Contract is conclusive evidence of the agreement between the parties to that contract. If a party clearly and unambiguously agrees that their only remedies are those within the EPC Contract, they will be bound by those terms. However, the courts have been reluctant to come to this conclusion without clear evidence of an intention of the parties to the EPC Contract to contract out of their legal rights. This means if the common law right to sue for breach of EPC Contract is to be contractually removed, it must be done by very clear words.

Contractor's perspective

The main reason for a Contractor insisting on a Project Company being subject to an exclusive remedies clause is to have certainty about its potential liabilities. The preferred position for a Contractor will be to confine its liabilities to what is specified in the EPC Contract. For example, an agreed rate of liquidated damages for delay and, where relevant, underperformance of the facility. A Contractor will also generally require the amount of liquidated damages to be subject to a cap and for the EPC Contract to include an overall cap on its liability.

Project company's perspective

The preferred position for a Project Company is for it not to be subject to an exclusive remedies clause. An exclusive remedies clause limits the Project Company's right to recover for any failure of the Contractor to fulfil its contractual obligations to those remedies specified in the EPC Contract. For this reason, an exclusive remedies clause is an illogical clause to include in an EPC Contract from the perspective of a Project Company because it means that the Project Company has to draft a remedy or exception for each obligation – this represents an absurd drafting position. For example, take the situation where the EPC Contract does not have any provision for the recovery of damages other than liquidated damages. In this case, if the Contractor has either paid the maximum amount of liquidated damages or delivered the facility in a manner that does not require the payment of liquidated damages (ie it is delivered on time and performs to specification) but subsequent to that delivery the Project Company is found to have a claim, say for defective design which manifests itself after completion, the Project Company will have no entitlement to recover any form of damages as any remedy for latent defects has been excluded.

The problem is exacerbated because most claims made by a Project Company will in some way relate to performance of the facility and PLDs were expressed to be the exclusive remedy for any failure of the facility to perform in the required manner. For example, any determination as to whether the facility is fit for purpose will necessarily depend on the level and standard of the performance of the facility. In addition to claims relating to fitness for purpose, a Project Company may also wish to make claims for, amongst other things, breach of contract, breach of warranty or negligence. The most significant risk for a Project Company in an EPC Contract is where there is an exclusive remedies clause and the only remedies for delay and underperformance are liquidated damages. If, for whatever reason, the liquidated damages regimes are held to be invalid, the Project Company would have no recourse against the Contractor as it would be prevented from recovering general damages at law, and the Contractor would escape liability for late delivery and underperformance of the facility.

Fail safe clauses

In contracts containing an exclusive remedies clause, the Project Company must ensure all necessary exceptions are expressly included in the EPC Contract. In addition, drafting must be included to allow the Project Company to recover general damages at law for delay and underperformance if the liquidated damages regimes in the EPC Contract are held to be invalid. To protect the position of a Project Company (if liquidated damages are found for any reason to be unenforceable and there is an exclusive remedies clause), we recommend the following clauses be included in the EPC Contract:

[]1 If clause [**delay liquidated damages**] is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Project Company from claiming delay liquidated damages, the Project Company is entitled to claim against the Contractor damages at law for the Contractor's failure to complete the works by the date for practical completion.

[]2 If []1 applies, the damages claimed by the Project Company must not exceed the amount specified in item [] of Appendix [] for any one day of delay and in aggregate must not exceed the percentage of the EPC Contract price specified in item [] of Appendix [].

These clauses (which would also apply to PLDs) mean that if liquidated damages are held to be unenforceable for any reason, the Project Company will not be prevented from recovering general damages at law. However, the amount of damages recoverable at law may be limited to the amount of liquidated damages that would have been recoverable by the Project Company under the EPC Contract if the liquidated damages regime had not been held to be invalid (see discussion above). For this reason, the suggested drafting should be commercially acceptable to a Contractor as its liability for delay and underperformance will be the same as originally contemplated by the parties at the time of entering into the EPC Contract.

In addition, if the EPC Contract excludes the parties' rights to claim their consequential or indirect losses, these clauses should be an exception to that exclusion. The rationale being that the rates of liquidated damages are likely to include an element of consequential or indirect losses.

Force Majeure

What is force majeure?

Force majeure clauses are almost always included in EPC Contracts. However, they are rarely given much thought unless and until one or more parties seek to rely on them. Generally, the assumption appears to be that "the risk will not affect us" or "the *force majeure* clause is a legal necessity and does not impact on our risk allocation under the contract". Both of these assumptions are inherently dangerous, and, particularly in the second case, incorrect. Therefore, especially in the current global environment, it is appropriate to examine their application.

Force majeure is a civil law concept that has no real meaning under the common law. However, *force majeure* clauses are used in contracts because the only similar common law concept – the doctrine of frustration – is of limited application. For that doctrine to apply, the performance of a contract must be radically different from what was intended by the parties. In addition, even if the doctrine does apply, the consequences are unlikely to be those contemplated by the parties. An example of how difficult it is to show frustration is that many of the leading cases relate to the abdication of King Edward VIII before his coronation and the impact that had on contracts entered into in anticipation of the coronation ceremony.

Given *force majeure* clauses are creatures of contract, their interpretation will be governed by the normal rules of contractual construction. *Force majeure* provisions will be construed strictly and in the event of any ambiguity the *contra proferentem* rule will apply. *Contra proferentem* literally means "against the party putting forward". In this context, it means that the clause will be interpreted against the interests of the party that drafted it and is seeking to rely on it. The parties may contract out of this rule.

The rule of *ejusdem generis*, which literally means "of the same class", may also be relevant. In other words, when general wording follows a specific list of events, the general wording will be interpreted in light of the specific list of events. In this context it means that when a broad catch-all phrase, such as "anything beyond the reasonable control of the parties", follows a list of more specific *force majeure* events the catch-all phrase will be limited to events analogous to the listed events. Importantly, parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions.

The underlying test in relation to most *force majeure* provisions is whether a particular event was within the contemplation of the parties when they made the contract. The event must also have been outside the control of the contracting party. There are generally three essential elements to *force majeure*:

- it can occur with or without human intervention.
- it cannot have reasonably been foreseen by the parties.

- it was completely beyond the parties' control and they could not have prevented its consequences.

Given the relative uncertainty surrounding the meaning of *force majeure*, we favour explicitly defining what the parties mean. This takes the matter out of the hands of the courts and gives control back to the parties. Therefore, it is appropriate to consider how *force majeure* risk should be allocated.

Drafting force majeure clauses

The appropriate allocation of risk in project agreements is fundamental to negotiations between the Project Company and its Contractors. Risks generally fall into the following categories:

- risks within the control of the Project Company.
- risks within the control of the Contractor.
- risks outside the control of both parties.

The negotiation of the allocation of many of the risks beyond the control of the parties, for example, latent site conditions and change of law, is usually very detailed so that it is clear which risks are borne by the Contractor. The same approach should be adopted in relation to the risks arising from events of *force majeure*.

There are two aspects to the operation of *force majeure* clauses:

- the definition of *force majeure* events.
- the operative clause that sets out the effect on the parties' rights and obligations if a *force majeure* event occurs.¹⁸

The events which trigger the operative clause must be clearly defined. As noted above, given the common law meaning of the term *force majeure* is not certain and is open to interpretation of the courts, it is in the interests of both parties to ensure that the term *force majeure* is clearly defined.

The preferred approach for a Project Company is to define *force majeure* events as being any of the events in an exhaustive list set out in the contract. In this manner, both parties are aware of which events are *force majeure* events and which are not. Clearly, defining *force majeure* events makes the administration of the contract and, in particular, the mechanism within the contract for dealing with *force majeure* events simpler and more effective.

An example exhaustive definition is:

An Event of Force Majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent provided that event or circumstance is limited to the following:

- a) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), acts of terrorism, civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any governmental or competent authority*
- b) Ionising radiation or contamination, radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component*
- c) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds*

¹⁸ A common failing of *force majeure* in some negotiations is to focus on the definitional issues rather than the consequences. Both issues are important.

- d) *Earthquakes, flood, fire or other physical natural disaster, but excluding weather conditions regardless of severity*
- e) *Strikes at national level or industrial disputes at a national level, or strike or industrial disputes by labour not employed by the affected party, its sub contractors or its suppliers and which affect an essential portion of the Works but excluding any industrial dispute which is specific to the performance of the Works or this Contract.*

An operative clause will act as a shield for the party affected by the event of *force majeure* so that a party can rely on that clause as a defence to a claim that it has failed to fulfil its obligations under the contract.

An operative clause should also specifically deal with the rights and obligations of the parties if a *force majeure* event occurs and affects the project. This means the parties must consider each of the events it intends to include in the definition of *force majeure* events and then deal with what the parties will do if one of those events occurs.

An example of an operative clause is:

- [].1 *Neither party is responsible for any failure to perform its obligations under this Contract, if it is prevented or delayed in performing those obligations by an Event of Force Majeure*
- [].2 *Where there is an Event of Force Majeure, the party prevented from or delayed in performing its obligations under this Contract must immediately notify the other party giving full particulars of the Event of Force Majeure and the reasons for the Event of Force Majeure preventing that party from, or delaying that party in performing its obligations under this Contract and that party must use its reasonable efforts to mitigate the effect of the Event of Force Majeure upon its or their performance of the Contract and to fulfil its or their obligations under the Contract*
- [].3 *Upon completion of the Event of Force Majeure the party affected must as soon as reasonably practicable recommence the performance of its obligations under this Contract. Where the party affected is the Contractor, the Contractor must provide a revised programme rescheduling the Works to minimise the effects of the prevention or delay caused by the Event of Force Majeure*
- [].4 *An Event of Force Majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event*
- [].5 *The Contractor has no entitlement and the Project Company has no liability for:*
 - a) *Any costs, losses, expenses, damages or the payment of any part of the Contract Price during an Event of Force Majeure.*
 - b) *Any delay costs in any way incurred by the Contractor due to an Event of Force Majeure.*

In addition to the above clause, it is critical to deal appropriately with other issues that will arise if a *force majeure* event occurs. For example, as noted above, it is common practice for a Contractor to be entitled to an extension of time if a *force majeure* event impacts on its ability to perform the works. Contractors also often request costs if a *force majeure* event occurs. In our view, this should be resisted. *Force majeure* is a neutral risk in that it cannot be controlled by either party. Therefore, the parties should bear their own costs and neither party should be penalised.

Another key clause that relates to *force majeure* type events is the Contractor's responsibility for care of the works and the obligation to reinstate any damage to the works prior to completion. A common example clause is:

- [].1 *The Contractor is responsible for the care of the Site and the Works from when the Project Company makes the Site available to the Contractor until 5.00pm on the Date of Commercial Operation.*
- [].2 *The Contractor must promptly make good loss from, or damage to, any part of the Site and the Works while it is responsible for their care.*

[] .3 If the loss or damage is caused by an Event of Force Majeure, the Project Company may direct the Contractor to reinstate the Works or change the Works. The cost of the reinstatement work or any change to the Works arising from a direction by the Project Company under this clause will be dealt with as a Variation except to the extent that the loss or damage has been caused or exacerbated by the failure of the Contractor to fulfil its obligations under this Contract.

[] .4 Except as contemplated in clause [] .3, the cost of all reinstatement Works will be borne by the Contractor.

This clause is useful because it enables the Project Company to, at its option, have the damaged section of the project rebuilt as a variation to the existing EPC Contract. This will usually be cheaper than recontracting for construction of the damaged sections of the works.

Operation and Maintenance

Operating and maintenance manuals

The Contractor is usually required to prepare a detailed Operating and Maintenance Manual (O&M manual). The EPC Contract should require the Contractor to prepare a draft of the O&M manual within a reasonable time to enable the Project Company, the Operator and possibly the Lenders to provide comments, which can be incorporated into a final draft at least six months before the start of commissioning.

The draft should include all information which may be required for start-up, all modes of operation during normal and emergency conditions and maintenance of all systems of the facility.

Operating and maintenance personnel

It is common for the Contractor to be obliged to train the operations and maintenance staff supplied by the Project Company. The cost of this training will be built into the contract price. It is important to ensure the training is sufficient to enable such staff to be able to efficiently, prudently, safely and professionally operate the facility upon commercial operation. Therefore, the framework for the training should be described in the Appendix dealing with the scope of work (in as much detail as possible). This should include the standards of training and the timing for training.

The Project Company's personnel trained by the Contractor will also usually assist in the commissioning and testing of the facility. They will do this under the direction and supervision of the Contractor. Therefore, absent specific drafting to the contrary, if problems arise during commissioning and/or testing the Contractor can argue they are entitled to an extension of time etc. We recommend inserting the following clause:

[] .1 The Project Company must provide a sufficient number of competent and qualified operating and maintenance personnel to assist the Contractor to properly carry out Commissioning and the Commercial Operation Performance Tests.

[] .2 Prior to the Date of Commercial Operation, any act or omission of any personnel provided by the Project Company pursuant to GC [] .1 is, provided those personnel are acting in accordance with the Contractor's instructions, directions, procedures or manuals, deemed to be an act or omission of the Contractor and the Contractor is not relieved of its obligations under this Contract or have any claim against the Project Company by reason of any act or omission.

Spare parts

The Contractor is usually required to provide, as part of its scope of works, a full complement of spare parts (usually specified in the appendices (the scope of work or the specification)) to be available as at the commencement of commercial operation.

Further, the Contractor should be required to replace any spare parts used in rectifying defects during the defects liability period, at its sole cost. There should also be a time limit imposed on when these spare parts must be back in the store. It is normally unreasonable to require the spare parts to have been replaced by the expiry of the defects liability period because that may, for some long lead time items, lead to an extension of the defects liability period.

The Project Company also may wish to have the option to purchase spares parts from the Contractor on favourable terms and conditions (including price) after the expiry of the defects liability period. In that case it would be prudent to include a term which deals with the situation where the Contractor is unable to continue to manufacture or procure the necessary spare parts. This provision should cover the following points:

- written notification from the Contractor to the Project Company of the relevant facts, with sufficient time to enable the Project Company to order a final batch of spare parts from the Contractor.
- the Contractor should deliver to, or procure for, the Project Company (at no charge to the Project Company), all drawings, patterns and other technical information relating to the spare parts.
- the Contractor must sell to the Project Company (at the Project Company's request) at cost price (less a reasonable allowance for depreciation) all tools, equipment and moulds used in manufacturing the spare parts, to the extent they are available to the Contractor provided it has used its reasonable endeavours to procure them.

The Contractor should warrant that the spare parts are fit for their intended purpose, and that they are of merchantable quality. At worst, this warranty should expire on the later of:

- the manufacturer's warranty period on the applicable spare part; or
- the expiry of the defects liability period.

Dispute resolution

Dispute resolution provisions for EPC Contracts could fill another entire paper. There are numerous approaches that can be adopted depending on the nature and location of the project and the particular preferences of the parties involved.

However, there are some general principles which should be adopted. They include:

- having a staged dispute resolution process that provides for internal discussions and meetings aimed at resolving the dispute prior to commencing action (either litigation or arbitration)
- obliging the Contractor to continue to execute the works pending resolution of the dispute
- not permitting commencement of litigation or arbitration, as the case may be, until after commercial operation of the facility. This provision must make provision for the parties to seek urgent interlocutory relief ie injunctions and to commence proceedings prior to the expiry of any limitations period. If the provision does not include these exceptions it risks being unenforceable
- providing for consolidation of any dispute with other disputes which arise out of or in relation to the construction of the facility. The power to consolidate should be at the Project Company's discretion

We have prepared a paper which details the preferred approach to be taken in respect of dispute resolution regimes in various Asian jurisdictions including the PRC, Philippines, Thailand, Vietnam and Taiwan. You should consult this paper if you want more information on this topic.

Appendix 1 Example clauses

Part 1 – Performance testing and guarantee regime

Tests and Inspections

- [].1 The Contractor must, at its own expense, carry out at the place of manufacture and/or on the site all tests and/or inspections of the equipment and any part of the works as specified in this contract or as required by any applicable laws, and as necessary to ensure the facility operates safely and reliably under the conditions specified in the schedule of scope of work and the schedule of tests. [Appendix 1 should specify all the categories of tests other than the tests (eg test at manufacturers plant, test on site, functional test etc.)]
- [].2 The Contractor must also comply with any other requirements of the Owner in relation to testing and inspection.
- [].3 The Owner and the Lenders' representative are entitled to attend any test and/or inspection by its appointed duly authorised and designated inspector.
- [].4 Whenever the Contractor is ready to carry out any test and/or inspection, the Contractor must give a reasonable advance notice to the Owner of the test and/or inspection and of the place and time. The Contractor must obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Owner's inspector and the Lenders' representative to attend the test and/or inspection.
- [].5 The Contractor must provide the Owner's representative with a certified report of the results of any test and/or inspection within five days of the completion of that test or inspection.
- [].6 If the Owner or the Lenders' representative fails to attend the test and/or inspection, or if it is agreed between the parties that the Owner or the Lenders' representative will not attend, then the Contractor may proceed with the test and/or inspection in the absence of the Owner's inspector and provide the Owner and the Lenders' representative with a certified report of the results.
- [].7 The Owner may require the Contractor to carry out any test and/or inspection not described in this contract. The Contractor's extra costs necessarily incurred, which do not include head office or corporate overheads, profit or loss of profit, in the carrying out of the test and/or inspection will be added to the contract price only if the test shows that the relevant works conform with the requirements of the contract, but otherwise all costs will be borne by the Contractor.
- [].8 If any equipment or any part of the works fails to pass any test and/or inspection, the Contractor must either rectify to the Owner's satisfaction or replace such equipment or part of the works and must repeat the test and/or inspection upon giving a notice under GC [].4.
- [].9 The Contractor must afford the Owner and the Lenders' representative access at any time to any place where the equipment is being manufactured or the works are being performed in order to inspect the progress and the manner of manufacture or construction, provided that the Owner gives the Contractor reasonable prior notice. The Owner, Owner's representative and the Lenders' representative will have the right to examine and have access to documents relating to the manufacture and assembly of the equipment including the quality control and inspection documentation.
- [].10 The Contractor agrees that neither the execution of a test and/or inspection of equipment or any part of the works, nor the attendance by either or both the Owner and the Lenders' representative nor the issue of any test report pursuant to GC [].5 releases the Contractor from any other responsibilities under this contract.

- [].11 No part of the works are to be covered up on the site without carrying out any test and/or inspection required under this contract and the Contractor must give reasonable notice to the Owner whenever any part of the works are ready or about to be ready for test and/or inspection.
- [].12 The Contractor must uncover any part of the works or make openings in or through the same as the Owner may from time to time require at the site and must reinstate and make good that part.
- [].13 If any part of the works have been covered up at the site after compliance with the requirement of GC [].12 and are found to be performed in accordance with the contract, the Contractor's extra costs, which do not include head office or corporate overheads, profit or loss of profit, necessarily incurred in uncovering, making openings in or through, reinstating and making good the same will be added to the contract price.

Performance tests, procedures and guidelines

- [].14 The performance tests must be conducted by the Contractor after commissioning to ascertain whether the facility can achieve completion and to ascertain whether the facility can meet the performance guarantees.
- [].15 All performance tests must be conducted in a professional, timely, safe and environmentally responsible manner and in accordance with the schedule of scope of work and the schedule of tests, all other terms and conditions of this contract, applicable standards, laws, government approvals and must be accomplished at no additional cost or expense to the Owner.
- [].16 The facility must not be operated during any performance test in excess of:
 - a The limits allowed by any manufacturer to maintain its warranty
 - b The limits imposed by the law and government approvals applicable standards
 - c The limits stated in the schedule of tests
- [].17 The Contractor agrees that the Owner and the Lenders' representative will monitor the conduct of the performance testing to ensure compliance with the terms and conditions of this contract.
- [].18 The Contractor agrees that an inspection pursuant to GC [].17 by the Owner and/or the Lenders' representative does not release the Contractor from any other responsibilities under this contract, including meeting the performance guarantees.
- [].19 If a performance test is interrupted or terminated, for any reason, such performance test, must be re-started from the beginning, unless otherwise approved by the Owner or the Lenders' representative.
- [].20 The Owner or the Contractor is entitled to order the cessation of any performance test if:
 - a Damage to the works, the facility or other property or personal injury
 - b Breach of the conditions specified in the relevant environmental laws or government approvals, is likely to result from continuation
- [].21 If the Contractor fails to pass a performance test (or any repetition in the event of prior failure) or if a performance test is stopped before its completion, such performance test must, subject to 24 hours' prior notice having been given by the Contractor to the Owner and the Lenders' representative, be repeated as soon as practicable. All appropriate adjustments and modifications are to be made by the Contractor with all reasonable speed and at its own expense before the repetition of any performance test.
- [].22 The results of the performance tests must be presented in a written report, produced by the Contractor and delivered to the Owner and the Lenders' representative within five days of the completion of the tests. Those results will be evaluated by the Owner and the Lenders' representative. In evaluation of the results, no additional allowance will be made for measurement tolerances over and above those specified in the applicable ISO standard or other relevant test standard.

- [].23 Despite any other provision of this contract, the Owner is entitled to all products and revenues generated or earned during precommissioning, commissioning and the performance tests.

Mechanical completion, precommissioning and commissioning

[].1 Mechanical completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of mechanical completion the Contractor must give a notice to the Owner's representative.
- (b) The Owner's representative must, promptly, and no later than five days after receipt of the Contractor's notice under GC [].1(a), either issue a certificate of mechanical completion stating that the facility has reached mechanical completion or notify the Contractor of any defects and/or deficiencies.
- (c) If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in GCs [].1(a) and (b) must be repeated until the Owner issues a certificate of mechanical completion.

[].2 Precommissioning

After the Owner's representative has issued a certificate of mechanical completion to the Contractor under GC [].1(b), the Contractor must commence precommissioning of the facility in accordance with the Owner's requirements and procedures in relation to precommissioning as set out in the schedule of scope of work.

[].3 Commissioning

- (a) After the successful completion of precommissioning under GC [].2 the Contractor must give the Owner a notice that the facility is ready for commissioning.
- (b) The Contractor must, as soon as reasonably practicable after receipt of a notice under GC [].3(a), issue a notice to the Contractor specifying the date for commencement of commissioning.
- (c) On the date specified in the notice issued under GC [].3(b), the Contractor must commence commissioning of the facility in accordance with the Owner's requirements and procedures in relation to commissioning as set out in the schedule of scope of work.

Performance tests, completion and final completion

[].1 Performance tests

- (a) After the successful completion of commissioning, the Contractor must give a notice to the Owner's representative that the facility, or that part, is ready for the performance tests and the emissions test.
- (b) The Owner's representative must, as soon as reasonably practicable, after receipt of a notice under GC [].1(a), issue a notice to the Contractor specifying the date for commencement of those performance tests if that date is not already identified in the programme and the schedule of tests.

[].2 Completion

- (a) As soon as the facility has passed the performance tests and the emissions test and, in the opinion of the Contractor, the facility has reached the stage of completion, the Contractor must give a notice to the Owner's representative.
- (b) The Owner's representative must, promptly, and no later than five days after receipt of the Contractor's notice under GC [].2(a), either issue a certificate of completion stating that the facility has reached completion or notify the Contractor of any defects and/or deficiencies.

- (c) If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in GCs [] .2(a) and (b) must be repeated until the Owner issues a certificate of completion.
- (d) Despite any other provision of this contract, no partial or entire use or occupancy of the site, the works or the facility by the Owner, whether during the performance tests, or otherwise, in any way constitutes an acknowledgment by the Owner that completion has occurred, nor does it operate to release the Contractor from any of its warranties, obligations or liabilities under this contract.
- (e) Upon the issue of the certificate of completion, the Contractor must hand over care, custody and control of the facility to the Owner.
- (f) Notwithstanding that all the requirements for the issuing of a certificate of completion have not been met, the Owner may at any time, in its absolute discretion, issue a certificate of completion. The issue of a certificate of completion in accordance with this GC [] .2(f) will not operate as an admission that all the requirements of completion have been met and does not prejudice any of the Owner's rights, including the right to require the Contractor to satisfy all these requirements.

[] .3 Final completion

- (a) As soon as the facility, in the opinion of the Contractor, reaches the stage of final completion the Contractor must give a notice to the Owner.
- (b) The Owner's representative must, promptly, and no later than five days after receipt of the Contractor's notice under GC [] .3(a), either issue a certificate of final completion stating that the facility has reached final completion or notify the Contractor of any defects and/or deficiencies.
- (c) If the Owner's representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in GCs [] .3(a) and (b) must be repeated until the Owner issues a certificate of final completion.
- (d) Despite any other provision of this contract, no partial or entire use or occupancy of the site, the works or the facility by the Owner, whether during the performance tests or otherwise, in any way constitutes an acknowledgment by the Owner that final completion has occurred, nor does it operate to release the Contractor from any of its warranties, obligations or liabilities under this contract including the satisfactory performance of its obligations during the defects liability period, the carrying out of the performance tests and meeting the performance guarantees and the emissions guarantee.

Performance guarantee

[] .1 Performance guarantees

- (a) The Contractor guarantees that the facility and all parts will meet the performance guarantees and emissions guarantee as specified in the schedule of performance guarantees and the schedule of tests.
- (b) The Contractor agrees that the emissions guarantee is an absolute guarantee the meeting of which is a condition precedent to achieving completion.

[] .2 Minimum performance guarantees not met

- (a) If, for reasons not attributable to the Owner, the minimum performance guarantees are not met, the Contractor must at its cost and expense make changes, modifications and/or additions to the facility or any part as may be necessary to meet at least the minimum performance guarantees. The Contractor must notify the Owner upon completion of the necessary changes, modifications and/or additions and must, subject to the Owner's rights under GCs [] .2, [] .14 and [] [Termination], repeat the overall performance test until the minimum performance guarantees have been met. Nothing in this GC [] .2 derogates from the Contractor's obligation to meet the performance guarantees.

- (b) Despite this GC [] or any other provision of this contract, if for reasons not attributable to the Owner, the Contractor does not meet the minimum performance guarantees after two repetitions of the overall performance test the Owner may:
- (i) Reject the facility or any part of the facility and the provisions of GC [].3 will apply.
 - (ii) Require the Contractor to: (A) replace the facility or any part of the facility with all due dispatch and in compliance with the requirements of the contract; and (B) repeat the performance tests and the overall performance test.
 - (iii) Terminate the contract and, at the Contractor's risk, complete or procure completion of the works in accordance with the contract; or
 - (iv) Require the Owner's representative to issue a certificate of completion notwithstanding that the minimum performance guarantees have not been met. The contract price will then be reduced by such amount as determined by the Owner's representative.

[].3 Consequences of termination or rejection

- (a) If the Owner rejects the facility or any part of the facility under GC [].2(b)(i), the Owner will be entitled to recover:
- (i) All sums paid by the Owner in respect of such part(s) of the facility.
 - (ii) The cost of dismantling those part(s) of the facility.
 - (iii) The cost of clearing the site as appropriate and returning the facility or part thereof to the Contractor.
- (b) If the Owner terminates the contract pursuant to GC [].2(b)(iii), then in addition to any delay liquidated damages which may be due for delay under GC [].2, it will be entitled to recover from the Contractor any loss (including but not limited to any construction and financing costs whether or not determined to be direct loss) it suffers in completing the relevant works to the extent that such loss exceeds the amount that would have been paid by the Owner to the Contractor under the contract had the relevant works been completed by the Contractor in accordance with the contract as well as any amounts payable under the financing agreements, as a result of the Contractor failing to meet the minimum performance guarantees.

[].4 Satisfaction of performance guarantees

Provided the minimum performance guarantees have been met, the payment of performance liquidated damages under GCs, [].6, [].7 and/or []9 (as the case may be) will be in satisfaction of the relevant performance guarantee.

[].5 Minimum performance guarantees met, but not performance guarantees

Subject to GCs [].4, [].6 and [].7, if, for reasons not attributable to the Owner, the performance guarantees are not met, but the minimum performance guarantees are met during the same overall performance test, the Contractor must, prior to the expiration of the extended remediation period:

- (a) At its cost and expense make changes, modifications and/or additions to the facility or any part as may be necessary to meet the performance guarantees.
- (b) Notify the Owner upon completion of the necessary changes, modifications and/or additions.
- (c) Repeat the overall performance test until the performance guarantees have been met during the same overall performance test.

[].6 Performance liquidated damages

If the Contractor does not, for reasons not attributable to the Owner, during the same overall performance test, meet the performance guarantees by the expiration of the extended remediation period, but the minimum performance guarantees are met, the Contractor must pay performance liquidated damages calculated in accordance with schedule of performance liquidated damages.

[].7 Extended remediation period

- (a) Despite GCs [].5 and [].6, the Contractor may at any time during the extended remediation period elect to pay performance liquidated damages in respect of the failure to meet any or all of the performance guarantees (for reasons not attributable to the Owner) provided the minimum performance guarantees and the emissions guarantees have been met.
- (b) Despite GCs [].5 and [].6, the Owner may at any time, one month after the date for completion, require the Contractor to pay performance liquidated damages in respect of the failure to meet any or all of the performance guarantees (for reasons not attributable to the Owner) provided the minimum performance guarantees have been met.

[].8 Aggregate liability

The aggregate liability of the Contractor for performance liquidated damages under GC [].9 will not exceed the amount calculated in accordance schedule of performance liquidated damages.

[].9 General

Performance liquidated damages must be invoiced by the Owner and payment must be made within 15 days of the date of the invoice. At the expiration of 15 days, the amount involved will be a debt due and payable to the Owner on demand and the Owner may also have recourse to the security provided under this contract.

[].10 Fair and reasonable pre-estimate

The parties agree that the performance liquidated damages in the schedule of performance liquidated damages are a fair and reasonable pre-estimate of the damages likely to be sustained by the Owner if the Contractor meets the minimum performance guarantees but fails to meet the performance guarantees.

[].11 Completion

Provided the minimum performance guarantees have been met and subject to [].1(b), the payment of performance liquidated damages in relation to the performance guarantees under this [].11 is in complete satisfaction of the Contractor's guarantees under GC [].1. Upon the payment of the performance liquidated damages by the Contractor, the Owner must, subject to all other conditions to achieving completion having been satisfied, issue the certificate of completion for the facility or any part in respect of which the performance liquidated damages have been paid.

[].12 Performance liquidated damages additional to delay liquidated damages

The payment of performance liquidated damages and the Contractor's other obligations and liabilities under this GC [] are in addition to any liability of the Contractor for delay liquidated damages under GC [].

[].13 Rights at law

If this GC [] (or any part) is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Owner from claiming performance liquidated damages, the Owner is entitled to claim against the Contractor for damages at law for the Contractor's failure to meet the performance guarantees. Those damages must not exceed the amounts specified in the schedule of performance liquidated damages.

[].14 No benefit

The Contractor is not entitled to the benefit of the exclusion in GC [] **[Prohibition on claiming consequential loss]** in any claim for damages at law by the Owner against the Contractor pursuant to GC [].13 for the Contractor's failure to meet any or all of the performance guarantees.

Part 2 – Extension of time regime

- [].1 The Contractor must immediately give notice to the Project Company of all incidents and/or events of whatsoever nature affecting or likely to affect the progress of the works.
- [].2 Within 15 days after an event has first arisen the Contractor must give a further notice to the Project Company which must include:
- (a) the material circumstances of the event including the cause or causes.
 - (b) the nature and extent of any delay.
 - (c) the corrective action already undertaken or to be undertaken.
 - (d) the effect on the critical path noted on the programme.
 - (e) the period, if any, by which in its opinion the date for commercial operation should be extended.
 - (f) a statement that it is a notice pursuant to this GC [].2.
- [].3 Where an event has a continuing effect or where the Contractor is unable to determine whether the effect of an event will actually cause delay to the progress of the works so that it is not practicable for the Contractor to give notice in accordance with GC [].2, a statement to that effect with reasons together with interim written particulars (including details of the likely consequences of the event on progress of the works and an estimate of the likelihood or likely extent of the delay) must be submitted in place of the notice required under GC [].2. The Contractor must then submit to the Project Company, at intervals of 30 days, further interim written particulars until the actual delay caused (if any) is ascertainable, whereupon the Contractor must as soon as practicable but in any event within 30 days give a final notice to the Project Company including the particulars set out in GC [].2.
- [].4 The Project Company must, within 30 days of receipt of the notice in GC [].2 or the final notice in GC [].3 (as the case may be), issue a notice notifying the Contractor's representative of its determination as to the period, if any, by which the date for completion is to be extended.
- [].5 Subject to the provisions of this GC [], the Contractor is entitled to an extension of time to the date for completion as the Project Company assesses, where a delay to the progress of the works is caused by any of the following events, whether occurring before, on or after the date for completion:
- (a) Any act, omission, breach or default by the Project Company, the Project Company's representative and their agents, employees and Contractors.
 - (b) A variation, except where that variation is caused by an act, omission or default of the Contractor or its sub contractors, agents or employees.
 - (c) A suspension of the works pursuant to GC [], except where that suspension is caused by an act, omission or default of the Contractor or its sub contractors, agents or employees.
 - (d) An event of *force majeure*.
 - (e) A change of law.
- [].6 Despite any other provisions of this GC [], the Project Company may at any time and in its absolute discretion make a fair and reasonable extension of the date for completion.

- [].7 The Contractor must constantly use its best endeavours to avoid delay in the progress of the works.
- [].8 If the Contractor fails to submit the notices required under GCs [].1, [].2 and [].3 within the times required then:
- (a) The Contractor has no entitlement to an extension of time.
 - (b) The Contractor must comply with the requirements to perform the works by the date for completion.
 - (c) Any principle of law or equity (including those which might otherwise entitle the Contractor to relief and the Prevention Principle) which might otherwise render the date for completion immeasurable and liquidated damages unenforceable, will not apply.
- [].9 It is a further condition precedent of the Contractor's entitlement to an extension of time that the critical path noted on the programme is affected in a manner which might reasonably be expected to result in a delay to the works reaching completion by the date for completion.
- [].10 If there are two or more concurrent causes of delay and at least one of those delays would not entitle the Contractor to an extension of time under this GC [] then, to the extent of that concurrency, the Contractor is not entitled to an extension of time.
- [].11 The Project Company may direct the Contractor's representative to accelerate the works for any reason including as an alternative to granting an extension of time to the date for completion.
- [].12 The Contractor will be entitled to all extra costs necessarily incurred, by the Contractor in complying with an acceleration direction under GC [].11, except where the direction was issued as a consequence of the failure of the Contractor to fulfil its obligations under this contract. The Project Company must assess and decide as soon as reasonably practical, the extra costs necessarily incurred by the Contractor.

8 EPCM Contracts: Project delivery through engineering, procurement and construction management contracts

Introduction

There has been a significant shift in contracting strategy within the construction market in recent years, particularly regarding traditional risk allocation. In many countries enjoying favourable economic conditions, it is no longer unusual to see Contractors refusing to bid for the usual fixed price and time contracts. This change is partly driven by Contractors becoming more sophisticated in their risk analysis, but also largely due to:

- the current surge in demand in the global construction and engineering sectors
- the significant size, complexity and profile of so-called “mega projects”
- the shortage of Contractors with the experience and resources needed to deliver such mega projects
- the shortage of experienced labour and quality materials and resultant fluctuations in associated costs.

Increasingly, Owners and Contractors are looking for alternatives to the traditional fixed price and time project delivery methods. While the traditional delivery methods remain (such as design and build; Engineering, Procurement and Construction (EPC); and construct only), the risk allocation and payment arrangements vary significantly.

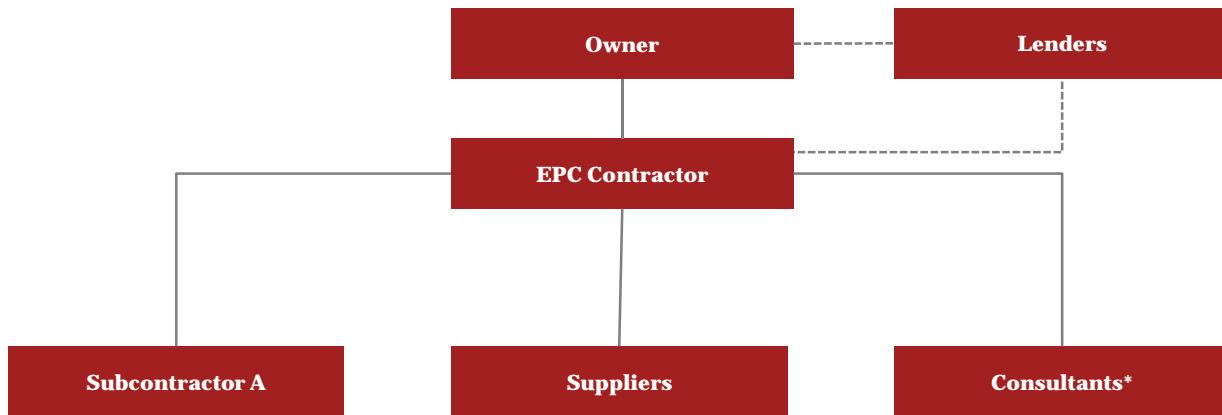
This paper provides a brief review on the traditional fixed time and cost arrangements and, in the Engineering, Procurement and Construction Management (EPCM) context:

- provides an overview of the main features
- examines each phase of the EPCM delivery method
- discusses other issues, including bankability and Key Performance Indicator (KPI) arrangements.

Delivery by traditional fixed time and cost arrangements

Over the past 10-15 years, project delivery methods have generally incorporated some form of fixed time and cost arrangement – whether by construct only, design and build or EPC. These delivery methods were, and remain, popular with Owners and Financiers as the fixed time and cost arrangement provides certainty and, for EPC Contracts, a single source of responsibility. Delay liquidated damages may be levied against the Contractor so as to incentivise them to complete the works on time and the circumstances where the Contractor can claim relief for increases in the cost are carefully limited. Naturally, Contractors seek to price a risk premium into their remuneration to deal with such risk allocation.

Where projects are delivered on a limited or non-recourse financing basis, the need for time and price certainty is magnified. While the recent forces of demand and supply in the construction industry have also impacted the risk allocation on the “turnkey” EPC Contracts used for such projects, and bank credit committees have relaxed requirements slightly (credit crunch aside), the change in risk allocation has been far more limited.



* including designers, engineers and construction managers – where limited or non-recourse financing is in place

Overview of EPCM arrangements

The concept of delivering projects by way of an EPCM Contract is not new. It has wavered in popularity for a number of decades and has, for some time, been used extensively throughout the oil, gas, petrochemical and resources industries. In the current market, sophisticated Owners are often not prepared to pay large risk premiums and profits to Contractors under traditional fixed time and cost contracts. Add to this, the current “boom” in the number of projects to be delivered across the globe, increased pressure to fast-track delivery, limitations on Owners’ resources, rising prices of materials and labour, and we are witnessing a redefining of the way projects are being delivered. EPCM Contracting is just one of a number of alternative models becoming more wide spread.

Delivering an EPCM project means different things to many participants. The form and structure of an EPCM Contract will vary depending on a variety of factors such as the:

- particular industry and project
- sophistication and expertise of the project parties
- owner’s requirements as to level of involvement
- owner’s internal project delivery resources/and skill set
- history and level of trust between the Owner and the Contractor
- level of integration between the project parties’ respective teams
- level of risk on the project (ie technical and commercial/financial).

In its simplest form, an EPCM Contract is a consultancy agreement for the provision of professional or technical services. At one end of the spectrum, an EPCM could be considered to be a pure consultancy-type arrangement and, at the other end, an integrated EPCM Contract could look more akin to an integrated alliance style contract.

The EPCM Contractor is typically responsible for:

- basic and detailed design and engineering
- establishing, implementing and managing tendering processes for procurement of all equipment and materials and awarding and managing works package contracts
- overall project management and administration of work package contracts, including during warranty periods.

Traditionally, the Owner entered into the construction and procurement agreements for the project. However, depending on the project structure, the Owner and the industry, the EPCM Contractor may enter into contracts directly with Contractors and suppliers, as agent for the Owner, (with the EPCM Contractor assuming no or limited liability under such contracts). Where this is the case, there are generally clear procedures and limitations on the EPCM Contractor's ability to execute such contracts.

EPCM Contractors usually do not take full responsibility for:

- delivery of the project by certain key milestone dates
- care and custody of the works (with certain exceptions for arranging security and management of safety etc.)
- the project being delivered in accordance with the project budget.

The EPCM Contractor is usually heavily incentivised to bring the project to commercial operation on time and under budget, but is not required to indemnify the Owner for failing to do so.

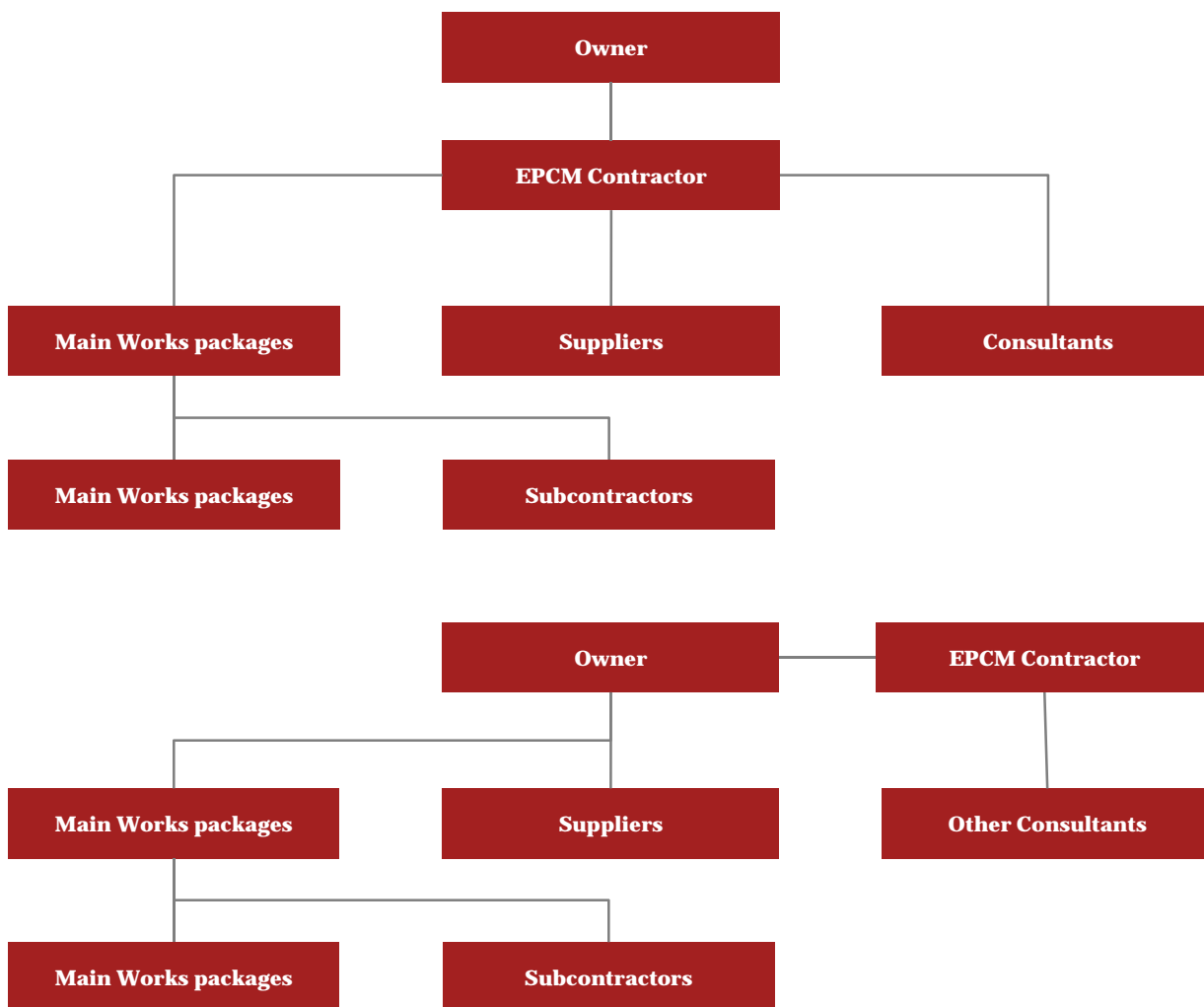
Depending on the scope of services to be provided by the EPCM Contractor, potential liabilities may relate to wilful default, fraudulent behaviour and, after some form of negligence or recklessness, in respect of matters such as:

- performance of the design and engineering
- preparation of the project budget and project schedule
- management of procurement, including a failure to implement an objective and competitive tender process
- management, administration and supervision of the work packages
- coordination of the design and construction works between works package Contractors.

Ordinarily, the maximum liability of the EPCM Contractor is much lower than is usually the case under fixed time and cost arrangements. It is often limited to the re-performance of defective services and capped out at between 5-20% of the total EPCM remuneration (or, more recently, to the value of the profit and sometimes the overhead component as well). There are generally a number of carve-outs from such a limitation, including for losses resulting from fraud or wilful misconduct. Obviously, these arrangements depend on a number of factors and vary widely from project to project.

Model 1: EPCM Contractor has direct contractual relationship with works package Contractors and suppliers.

Model 2: EPCM Contractor procures the entry by the Owner into a direct contractual relationship for the main works package.



Appendix 1 to this paper contains a table summary of some key issues for the appointment of an EPCM Contractor to be considered by Owners when preparing the EPCM Contract.

Typical phases of an EPCM Arrangement

Design and engineering

It is not unusual to have the engineering arrangements split into a number of components. The EPCM Contractor's engagement may start as early as the feasibility stage of the project. That is, it may be engaged to analyse high level technical aspects and prepare a report on the likely timing and cost, proposed procurement arrangements for long-lead items, local project considerations and other aspects of the proposed project (usually on a straight cost-plus basis).

Following the feasibility study, the Contractor may be appointed to undertake the Front-End Engineering and Design (FEED) for the project. Broadly, the FEED phase covers the basic engineering and design for the project and also the development of preliminary project schedules, budgets and work packages. This process allows the Owner to go to the market with sufficient scope definition to ensure that it receives bids which are competitive and realistic – ideally on a lump sum basis although this may only be for the procurement of long-lead critical path items (eg key equipment or foundation work/site and access preparation). As with the feasibility stage, this component usually proceeds on a cost-plus basis.

Following the FEED stage, the EPCM Contractor will work the basic engineering and design into the complete detailed engineering package. In many cases, the EPCM Contractor will ultimately be responsible for ensuring that the engineering and design will meet the relevant performance parameters for the project. To this end, it must coordinate these works with the other parties involved to ensure that the engineering and design complies with the overall project specification and other specific requirements.

The EPCM Contract may also be structured in such a way so as to permit the Owner, in its absolute discretion, to instruct the EPCM Contractor to proceed to the next stage. For example, at the conclusion of the feasibility stage, the Owner can elect to dismiss the EPCM Contractor and engage another Contractor to undertake the FEED services regardless of whether the Contractor has properly performed the services. Also, the contract may be structured in such a way so as to have the EPCM Contractor roll into a lump sum EPC after conclusion of the FEED services and therefore taking the turnkey risk on the entire project. This process can provide the Owner with greater flexibility but will obviously depend on the needs and other constraints of each particular project.

Procurement

In addition to undertaking the design and engineering for the project, the EPCM Contractor is usually required to procure, on behalf of the Owner, all of the materials, equipment and construction works necessary for the proper completion of the project. To this end, the EPCM Contractor is required to establish a system or follow procedures for implementing such procurement arrangements. This may be a significant task if the project is broken down into many components and involves the EPCM Contractor preparing a suite of standard form procurement and construction contracts for the project (most EPCM Contractors will have these already), establishing a tender process suitable for the project and works to be approved by the Owner, responding to tender clarification issues, negotiating the commercial terms of all construction works packages and supply contracts and finalising each of the agreements for execution by the Owner or approved by the Owner for execution by the EPCM Contractor.

Construction management

Once the works have started, the EPCM Contractor assumes the role of the Owner's "engineer" or "Employer's representative" under the various work package and supply contracts. It manages and supervises each of these contracts. A key role for the EPCM Contractor is coordinating each of the works packages to ensure that all of the works interface as required and that delays and variation claims are minimised where possible. Usually the EPCM Contract will set out the limits on the EPCM Contractor's authority. These limitations generally relate to instructing or agreeing variations, settling of claims, waiving any breach or default and certification of final payments.

Depending on the scope of the EPCM services which, in some cases, evolves as the project proceeds, the EPCM Contractor is usually required to play an active role in monitoring and reporting during the testing and commissioning phase of the works packages. Further, they are generally required to oversee the notification and rectification arrangements during the defects liability period and also to deal with any other warranty issues. In certain cases, the EPCM Contractor is required to take an active role in the management of claims or disputes from work package Contractors. Alternatively, this role may be limited to the provision of advice regarding any disputes that arise during the course of the projects.

Other issues

Bankability and completion guarantees

As mentioned earlier, where the project is financed through limited or non-recourse project financing, Lenders will demand a great deal of outcome certainty in terms of time and cost because their security is heavily reliant on sufficient and timely revenue from the operation phase. The borrower is usually the entity newly established to own the project and this usually precludes the use of EPCM Contracting even though the outcome may be cheaper and faster.

The only circumstances (with some exceptions where there is government support or very strong client-Lender relationships or influence) where EPCM Contracting will be bankable where the Sponsor(s) provide the Lenders with a completion guarantee. That is, it offers the Lenders some form of parent company guarantee until commercial operation or a commitment to cover cost overruns and debt service obligations during a period of delay. Such a guarantee is usually for the total amount of the debt and falls away upon commercial operation.

Depending on the Lenders, the project and the Owner/Contractor's track record for delivering similar projects, the completion guarantee may be more limited and step down prior to commercial operation or as various stages of the project are completed. Conversely, they sometimes linger beyond commercial operation to cover market pricing risk depending on the type of project and output.

Incentivising the EPCM Contractor

KPI and incentive arrangements are very much project-specific. As such, it is difficult to meaningfully suggest project-specific KPI arrangements without first understanding the key commercial considerations driving any particular project. These are usually a combination of time, cost, quality, safety, environment and community. To a certain extent, the corporate philosophy of the Contractor is also important.

Appendix 2 to this paper contains a table summary of various KPIs and related incentive arrangements that may be relevant to the appointment of an EPCM Contractor. Whilst this table is not an exhaustive list, it includes key issues which an Owner should consider in order to encourage the behaviour it requires the EPCM Contractor to display so as to achieve the Owner's objective for its project.

Given the cost-reimbursable nature of most EPCM Contracts, an alignment of interests is obviously extremely desirable from the Owner's perspective to encourage productive behaviour and positive outcomes. However market forces and an environment of rising costs and scarce technical resources have been driving some Contractors' lack of enthusiasm to place too much at risk.

At the early stages of a project, lack of project-definition also complicates the setting of meaningful and precise targets against which performance can be measured and appropriate behaviour encouraged. Setting the framework and principles at an early stage, while there is a competitive environment and balanced bargaining position, is generally the best way for the Owner to lock in KPI arrangements.

As noted earlier, there has been a significant shift in the construction market over the last few years particularly regarding traditional risk allocation. This has also impacted the form of EPCM Contracts being used. Interestingly, some Contractors are preferring to move away from, or limit the extent and impact of, KPIs. This is largely because they believe these arrangements can:

- create uncertainty (and therefore increased risk and are more difficult to achieve in a rising cost market)
- cause additional friction between the parties which does not foster a sense of cooperation or trust or help develop a long-term multi-project relationship
- waste time and resources on trying to monitor, document and agree on whether KPIs have been met (which detracts from the main objective of successfully completing the project).

Some Owners prefer an integrated approach toward administering and managing the project akin to assuming part of, and sharing, the EPCM responsibilities. Given the magnitude, complexity and duration of the "mega projects", some Contractors may be unwilling to commit a material percentage of their remuneration to an incentive regime structured on a "whole of project" basis as opposed to one that corresponds with discrete phases of work.

Many projects are almost completely "schedule" driven. Consequently, and despite both parties' best efforts, an incentive arrangement that predominantly focuses on time may inevitably create inefficiencies which results in increased cost, double handling and/or re-work which also puts pressure on costs. Any KPI arrangement adopted for a particular project must encourage the kind of behaviour the Owner wants the Contractor to display so as to achieve the project's objectives. Above all, any KPI arrangement should focus on maximising productivity and delivering timely and innovative results while striking a balance between time and budget without sacrificing quality or safety or creating inefficiencies. Obviously this is easier said than done.

Cost definition

Where the cost-plus model is used, there needs to be a detailed assessment of what costs are in and which are not. Some EPCM models also separate the direct costs from project and head office overheads and either treat them differently or agree a lump sum or fixed percentage for some or all of the overhead or profit component. Doing so can also tie into the incentivisation regime. If fixed, then the Contractor's margin diminishes the longer the delivery period and/or the greater the reimbursable component becomes.

Alliancing comparisons

The integrated team approach of EPCM Contracting is verging on an alliancing style contract without taking the final step of openly creating a "no blame" environment. The reality is however, that it becomes increasingly

difficult to apportion blame and pursue a Contractor for breach of contract in an integrated team approach where representatives of the Owner and the Contractor work together and make decisions jointly. Conversely, many EPCM Contracts are more similar in style to consultancy contracts and cannot be compared to alliancing.

Conclusion

Current projections indicate that the international construction boom is likely to continue into the foreseeable future. Consequently, more Owners and Contractors will seek to redefine traditional project delivery methods, particularly in response to a variety of economic and market-driven changes. In such an environment, it is likely that rigid fixed time and cost arrangements will become less common and we will see more of cost-plus, alliancing and EPCM arrangements.

As the complexity of so called “mega projects” increases and labour, materials and professional resources become more difficult or expensive to source, Owners will need to choose between paying an increasing EPC profit/risk premium or placing greater reliance on the expertise and skill of reputable and experienced Contractors to manage the delivery of their projects.

If the latter is the preferred option, a carefully planned EPCM Contract, with appropriate incentivisation arrangements, will go some way to ensuring that the Owner’s commercial and other project objectives are achieved.

Appendix 1

Issue	Comment
Form	<p>In its simplest form, an EPCM Contract is a consultancy agreement for the provision of professional and/or technical services. At one end of the spectrum, an EPCM Contract could be considered to be a pure consultancy-type arrangement and, at the other end, it could look more akin to an integrated alliance style contract where the parties' interests are aligned through the KPI incentive regime."</p> <p>There are many important factors arising out of a project and the current market which will influence the form of the EPCM Contract. They include:</p> <ul style="list-style-type: none">• the surge in demand in the engineering/project management sector across Australia and internationally• the size, complexity and profile of the project• whether the project is to be delivered on a fast-track schedule• the requirements and approach to allocation of risk of the project Sponsor(s)/Owner's parent company(s)• the requirements of the Lenders where the project is to be financed on a limited or non-recourse basis• the requirements of other stakeholders including governments• the extent of engineering and design already undertaken by the Owner under separate contracts (if any).
Scope of services	<p>The EPCM Contractor's scope of services typically includes:</p> <ul style="list-style-type: none">• engineering and design• procurement• construction management and administration• the provision of systems and computer software. <p>Design and Engineering</p> <p>It is not unusual to have the engineering arrangements split into a number of components. The EPCM Contractor's engagement may start as early as the feasibility stage of the project. That is, it may be engaged to analyse high level technical aspects and prepare a report on the likely timing and cost, proposed procurement arrangements for long-lead items, local project considerations and other aspects of the proposed project (usually on a straight cost-plus basis).</p> <p>Following the feasibility study, the Contractor may be appointed to undertake the Front-End Engineering and Design (FEED) for the project. Broadly, the FEED phase covers the basic engineering and design for the project and also the development of preliminary project schedules, budgets and work packages. This process allows the Owner to go to the market with sufficient scope definition to ensure that it receives bids which are competitive and realistic – ideally on a lump sum basis, although this may only be for the procurement of long-lead critical path items (eg key equipment or foundation work/site and access preparation). As with the feasibility stage, this component usually proceeds on a cost-plus basis.</p> <p>Following the FEED stage, the EPCM Contractor will work the basic engineering and design into the complete detailed engineering package. In many cases, the EPCM Contractor will ultimately be responsible for ensuring that the engineering and design will meet the relevant performance parameters for the project. To this end, it must coordinate these works with the other parties involved to ensure that the engineering and design complies with the overall project specification and other specific requirements of the Owner.</p> <p>As discussed below, the EPCM Contract may also be structured in such a way so as to permit the Owner, in its absolute discretion, to instruct the EPCM Contractor to proceed to the next stage.</p>

Issue	Comment
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Procurement

In addition to undertaking the design and engineering for the project, the EPCM Contractor is usually required to procure, on behalf of the Owner, all of the materials, equipment and construction works Contractors necessary for the proper completion of the project. To this end, the EPCM Contractor is required to establish a system or follow procedures for implementing such procurement arrangements. This may be a significant task if the project is broken down into many components and involves the EPCM Contractor preparing a suite of standard form procurement and construction contracts for the project (in conjunction with the Owner’s legal advisors), establishing a tender process suitable for the project and works to be approved by the Owner, responding to tender clarification issues, negotiating the commercial terms of all construction work packages and supply contracts and finalising each of the agreements for execution by the Owner or approved by the Owner for execution by the EPCM Contractor.

Construction Management

Once the works have started, the EPCM Contractor assumes the role of the Owner’s “engineer” or “Owner’s Representative” under the various work package and supply contracts. It manages and supervises each of these contracts within pre-agreed limits of authority. A key role for the EPCM Contractor is coordinating each of the work packages to ensure that all of the works interface as required and that delays and variation claims are minimised where possible. Usually the EPCM Contract will set out the limits on the EPCM Contractor’s authority. These limitations generally relate to instructing or agreeing variations, settling of claims, waiving any breach or default and certification of final payments.

Depending on the scope of the EPCM services which, in some cases, evolves as the project proceeds, the EPCM Contractor is usually required to play an active role in monitoring and reporting during the testing and commissioning phase of the work packages. Further, they are generally required to oversee the notification and rectification arrangements during the defects liability period and deal with any other warranty issues. In certain cases, the EPCM Contractor is required to take an active role with the Owner’s legal advisors in the management of claims or disputes with work package Contractors. Alternatively, this role may be limited to the provision of advice regarding any disputes that arise during the course of the project.

EPCM Contractors usually do not take responsibility for:

- delivery of the project by certain key milestone dates
- care and custody of the works (with certain exceptions for arranging security and management of safety etc.)
- the project being delivered in accordance with the project budget.

These obligations would be included in the construction contracts and supply agreements.

Remuneration

EPCM Contractors are typically remunerated on an cost-reimbursable basis, including the following components:

- **Fixed Fee:** Pre-agreed fixed fee or % of the value for each phase of the project to cover margin and overheads
- **Actual Personnel Costs:** Reimbursement for directly and reasonably incurred personnel costs at pre-agreed rates (fixed for the duration of the EPCM Contract where possible), with typical carve-outs for duplication of work undertaken due to defects in the services or otherwise for the EPCM Contractor’s default
- **Reimbursable Expenses:** Reimbursement for a discrete list of reimbursable expenses, subject to the Owner’s approval prior to the expense being incurred (ie pre-approved work related travel)

The EPCM Contractor may also be entitled to bonuses (or subject to a reduction in payment) under agreed KPI incentive regime.

Issue	Comment
Bankability	<p>Where the project is to be financed through limited or non-recourse project financing, Lenders will demand a great deal of outcome certainty in terms of time and cost because their security is heavily reliant on sufficient and timely revenue from the operation phase.</p> <p>In these circumstances, to provide cost certainty for the EPCM Contract, the Owner should consider capping individual incentive arrangements (or the aggregate of all) at a certain % of the fee or the estimated target costs. The Owner should also consider incorporating a guaranteed maximum or “ceiling price” cap on the EPCM Contractor’s remuneration (ie if the target man-hour budget is exceeded, the payments otherwise due to the EPCM Contractor could be deemed not reimbursable). This could apply to price caps for each phase of the project. Obviously this approach would require a certain level of project definition to enable the development of realistic target man-hour budgets during negotiations with the successful Contractor. However, the extent to which the Owner can impose a cap on the EPCM Contractor’s remuneration will depend on market conditions at the time of going to tender. In the current market we are seeing this approach rejected by many Contractors because there are opportunities to procure work on a pure cost reimbursable basis, particularly on projects that are not subject to Lender requirements/restrictions.</p> <p>Also, where the borrower is an entity newly established to deliver, own and operate the project, this usually restricts the use of EPCM Contracting even though the outcome may be cheaper and faster (with some exceptions where there is government support or very strong client-Lender relationships or influence). Where EPCM Contracting is used, it is not uncommon for Lenders to require the Sponsor(s) to provide them with a completion guarantee. That is, the Sponsor(s) offers the Lenders some form of parent company guarantee until practical completion/commercial operation or a commitment to cover cost overruns and debt service obligations during a period of delay. Such a guarantee is usually for the total amount of the debt and falls away upon practical completion/commercial operation. Depending on the Lenders, the project and the Owner/Contractor’s track record for delivering similar projects, the completion guarantee may be more limited and step down prior to practical/commercial operation or as various stages of the project are completed. Conversely, they sometimes linger beyond commercial operation to cover market pricing risk depending on the type of project and output.</p>
Novation of existing design	<p>Where a major proportion of the engineering and design for the project has already been undertaken under separate design/consultancy packages let by the Owner (ie FEED during the project feasibility phase), the Owner must avoid potential gaps in liability by creating a single point of responsibility for the performance of the design of the project through the novation of the existing design to the EPCM Contractor. The Owner must allow sufficient time in the project schedule for the EPCM Contractor verify and accept responsibility for the existing design.</p>
Optional Phases	<p>In most instances the EPCM Contract should be structured in such a way so as to permit the Owner, in its absolute discretion, to instruct the EPCM Contractor to proceed to the next stage.</p> <p>For example, at the conclusion of the feasibility stage, the Owner can elect to dismiss the EPCM Contractor and engage another Contractor to undertake the FEED services regardless of whether the Contractor has properly performed the services. Similarly, where the project is to be financed through limited or non-recourse project financing, the Owner must be entitled to terminate the EPCM Contractor in its absolute discretion if the Lenders do not give finance approval or the Owners cannot raise the required capital.</p> <p>Terms establishing the process, consequences (including payment on termination outlined above) and risk in the services undertaken during a particular phase will need to be clearly articulated in the EPCM Contract.</p> <p>Also, for certain types of projects (ie the construction of a facility such as a power station or a process plant) the EPCM Contract may be structured in such a way so as to have the EPCM Contractor roll into a lump sum EPC after conclusion of the FEED services, therefore taking the turnkey risk on the entire project. This process can provide the Owner with a single point of responsibility for design and construction and greater flexibility but will</p>

Issue	Comment
	<p>obviously depend on the needs and other constraints of each particular project, including market considerations. For example, rolling an EPCM into a single EPC is unlikely to be suitable on major projects such as integrated mine, port and rail projects where the size, complexity and varying nature of the project components cannot be delivered in its entirety by one EPC Contractor or without significant risk premiums that increase costs to a level that impact on the overall viability of the project.</p>
Insurance	<p>Obviously the whole of project insurance strategy is a critical issue for all projects. It will also impact on the EPCM Contract and extent of insurances to be procured and maintained by the EPCM Contractor. For example, a project wide PI policy may be required to supplement the PI insurance provided by the EPCM Contractor, to avoid gaps in design liability in circumstances where the limit of indemnity provided under the EPCM Contractor's PI insurance is not sufficient to cover the potential loss.</p>
Liability Caps	<p>In the current market, any sophisticated Contractor will require an overall cap on liability and exclusion of liability for consequential loss.</p> <p>The overall limitation could be managed in a number of ways – for example, the EPCM Contractor's exposure could be limited to:</p> <ul style="list-style-type: none"> • 100% of any incentive payment or the component of the price representing the Contractor's profit and/or overhead (or part thereof) • a percentage of the contract price – ideally, this would be the higher of the “total estimated contract price” or the actual amount of payments made to the EPCM Contractor (to overcome the issue where the EPCM Contract is terminated for breach in the early stages of the project and payments made to the Contractor are insignificant in comparison to the loss suffered by the Owner). <p>Ordinarily, the maximum liability of the EPCM Contractor is much lower than is usually the case under fixed time and cost arrangements. In the current market, and for similar services, overall caps are reported to be typically in the range of 5% – 20% of the total EPCM remuneration (or, more recently, to the value of the profit and sometimes the overhead component as well). This is in addition to proceeds available from project insurance policies. Obviously it is desirable for the Owner to set the cap at the “high water mark” to satisfy requirements of the SponsorSponsors and Lenders in seeking to minimise gaps in liability and then by transferring liability to Contractors, suppliers and the insurers.</p> <p>These overall caps and exclusion of consequential loss usually do not apply to certain exempt liabilities such as the cost of re-performing defective works, infringement of IP/confidentiality obligations, third party claims, fraud, gross negligence (this is often controversial), wilful misconduct, unlawful acts and liabilities which the EPCM Contractor cannot lawfully contract out of (generally contracts are silent on this – the main one being section 52 of the Trade Practices Act). Having said that, there may be some significant push back by EPCM Contractors on these carve-outs and even limiting consequences of breach largely to re-performance of defective work (more so in an integrated team environment and after considerable debate over what is, or is not, “defective” work).</p>
Variations	<p>Owners need to develop mechanisms for determining what amounts to a variation (ie a major change to the services not contemplated by the parties) and the corresponding cost consequences (ie adjustment to fixed fee and overhead component or payment of direct costs only). This area becomes more important in relation to the achievement of KPIs and whether the target costs and time frames are to be adjusted. Pre-award workshops are often conducted with Contractors to define the limited nature of events giving rise to a variation.</p>
Termination Payments	<p>In the current market, where the EPCM Contract is terminated for the Owner's convenience or default during one of the optional phases, the EPCM Contractor is likely to expect to be paid a portion of loss of profit for the balance of that phase and for its reasonable demobilisation expenses which have not been recovered through payment up to the date of termination.</p> <p>Where this is the case, to the extent possible, it is desirable to have pre-agreed fixed amounts. Where this is not possible, the method of calculation should be clearly defined,</p>

Issue	Comment
	<p>including what's in and what's out, particularly in respect any demobilisation entitlement (on other projects we have seen the Owner paying significant sums for staff wages and relocation as part of demobilisation payments).</p> <p>Where the EPCM Contract is terminated for the EPCM Contractor's default any payment should be limited to the services performed up to the date of termination and subject to the Owner's right to set off.</p>
Contractor's Security	<p>At the risk of stating the obvious, given the duration of the EPCM services, the likely low caps on liability and the cost of maintaining the performance security (which will ultimately be borne by the Owner), consideration should be given to the value of the security required, rather than simply allocating an arbitrary X% of the estimated contract price.</p>
Project and Services Budgets	<p>The concept of whole of project and/or EPCM services budgets could be incorporated into the EPCM Contract terms to deal with limitations on the cost of certain services or implementation contracts etc. As outlined above, any incentive or KPI arrangement incorporated could be limited where the Owner incurs cost overruns above budgeted amounts of greater than X%.</p>
Contractor's Key Personnel	<p>The traditional provisions regarding personnel (ie the EPMC Contractor cannot remove Key Personnel without the Owner's prior approval) may be too inflexible. Given the market squeeze on suitably qualified personnel and resourcing, consideration could be given to alternate arrangements regarding Key Personnel – such as payment of a liquidated amount where senior personnel leave or are taken off the project within a certain period (ie within 2 years – we have seen amounts up to USD\$300k for the project director). Possible exceptions to such payment could include illness, incapacitation, and resignation or if the personnel are temporarily absent on annual, sick, long service or compassionate leave etc. If liquidated damages are not suitable, Key Personnel turnover could also be a consideration in any KPI incentive payments (as outlined in Table 1).</p>
Project Control Group	<p>Generally the Owner will establish a form of "Project Directorate" or management team (Project Control Group) comprising personnel from the Owner, Sponsor(s) and the EPCM Contractor. Terms must be included dealing with the composition, role and powers of the Project Control Group (and various other administrative matters, such as meeting protocols and reporting). These arrangements could also deal with the Owner's "reserve powers", the flexibility to add other equity participants to the Project Control Group and procedures for determining KPI performance as discussed above.</p>
Health and Safety	<p>The Owner must consider that it will have primary responsibility for implementing the workplace, health and safety obligations for the project. We often see the EPCM Contractor (to the extent permitted by law) assuming primary responsibility for implementing the workplace, health and safety obligations for the services and the overall project (including any and all implementation Contractors and the Owner's personnel at the site).</p>
Disputes	<p>Given the likely duration of the EPCM Contract, the fact that small disputes are likely to occur and a good working relationship must be maintained at the senior project level, it may be beneficial (in terms of certainty and time) for the EPCM Contract to establish a dispute resolution procedure in advance of any arbitration or litigation. For example, negotiation between the parties' representatives; escalation to negotiation by senior representatives not heavily involved in the project (or the Project Control Group); referral to expert determination (or other form of resolution); and then to arbitration or the courts.</p> <p>From an enforceability perspective, arbitration is preferred if contracting with foreign parties (ie to be able to rely on the New York Convention).</p>
Reserve Powers	<p>Terms should be added to clarify the "reserve powers" held by the Owner to manage and direct the project, including approval of systems and procedures governing the project, urgent protection of people and property, issuing bid documents, awarding implementation contracts, approving variations and extensions of time or any event likely to have a major impact on the operation or viability of the project etc.</p>

Issue	Comment
Lender requirements	Where the project is to be financed through limited or non-recourse project financing, terms must be added to the EPCM Contract regarding the usual Lender requirements (such as step-in rights, cooperation (including providing access to Financiers' engineer), execution of a tripartite deed, the Owner's right to assign its interest in the EPCM Contract etc).

Appendix 2

Incentive Arrangement	Comment
General	<p>Given the cost reimbursable nature of EPCM Contracts, without KPI incentive mechanisms, it is difficult, if not impossible, to instil the same sense of urgency and efficiency in the EPCM Contractor and its personnel over a long period as compared to a fixed price model. Therefore, the KPIs will be critical in incentivising the EPCM Contractor to perform in a safe, productive, efficient and timely manner in order to ensure the Owner's key commercial objectives for the project are realised – usually time, cost, quality, safety, environment and community or some combination of these.</p> <p>It is critical to the success of the KPI incentive regime that, when formulating the targets and methods of measuring performance, there is sufficient clarity of project scope and the Owner's requirements. Whenever possible, the Owner must allow sufficient time and resources to agree and clearly articulate quantifiable KPI targets and corresponding methods of measuring performance in the EPCM Contract. Obviously, formulating incentive arrangements is problematic where they need to be agreed through the execution phase. This approach is not recommended as the parties often fail to reach agreement, in which case the incentive regime has little or no value.</p> <p>The KPI incentive regime should focus on maximising productivity and timely delivery whilst striking a balance between time and budget, and without sacrificing quality or safety. We have seen very detailed and sophisticated KPI incentive regimes, particularly in an alliancing or relationship contracting context and where project deliverables are to be measured over long time frames.</p> <p>Conversely, some EPCM Contractors prefer to move away from (or limit the extent and impact of) KPI incentive regimes, largely because they believe these arrangements can create uncertainty (and therefore some risks in a rising cost market) and additional friction between the parties, which does not foster a sense of co-operation or trust. Where this is the case, we see Owners often opting for an integrated approach toward administering and managing the project (akin to assuming part of, and sharing, the EPCM responsibilities). In the current market we are also seeing that some EPCM Contractors are unwilling to put a material percentage of their remuneration at risk based on a KPI incentive regime.</p> <p>However, if the KPI incentive regime is structured with proper recognition of the current market conditions and the issues below are addressed then successful outcomes are achievable.</p>
KPI – Cost	<p>The cost incentive arrangements can be structured on a “whole of project basis” or a “phase by phase” basis with an underlying “whole of project” component (which directs the EPCM Contractor to also focus on the integration of the phases into the over-arching project). For the “whole of project” component there needs to be a meaningful target reimbursable cost – something that might not be available with any degree of accuracy at the time the Owner elects to go to the market.</p> <p>The Owner should consider whether it has sufficient detail to develop realistic target man-hour budgets. If the target man-hour budget is exceeded, certain components of the payments otherwise due to the EPCM Contractor could be deemed not reimbursable (unlikely to be acceptable in this market), or there could be some reduction in the incentive payment (likely to be more acceptable).</p> <p>Another alternative is to set a fixed profit and off-site overhead component as part of the EPCM Contractor's remuneration. If the project takes longer than anticipated or more man-hours are required, the profit and overhead component does not change. It diminishes as a percentage of the overall project value (unless there is a very significant/fundamental change in scope).</p>

Incentive Arrangement	Comment
<p>KPI – Schedule</p>	<p>The traditional schedule disincentive arrangements of liquidated damages for delays are not generally applicable in the EPCM context. This is because the EPCM Contractor does not have complete control over the delivery of the works and achieving project milestones.</p> <p>On projects where time is of critical importance, the “carrot” rather than the “stick” approach seems more commonly used. This can be done by agreeing fixed bonuses up front (typically where the additional revenue/cost savings to the Owner resulting from early completion can be assessed at the outset), or by including schedule KPIs as part of an overall weighted performance measurement calculation used to determine bonuses or abatements. As noted above, schedule incentive can also be dealt with indirectly, by setting a fixed profit and off-site overhead component (ie if the project takes longer than anticipated, the profit and overhead component diminishes as a percentage of the overall project value).</p> <p>Many projects are almost completely “schedule driven.” Despite both parties “best efforts, any arrangement that predominantly focuses on time may inevitably create inefficiencies (resulting in increased cost, double handling and/or re-work which ultimately puts pressure on costs and impacts on quality and safety). Therefore, it is important to try, if possible, to ensure that the KPI incentive regime is not solely “schedule” driven to eliminate those inefficiencies. Obviously, too great an emphasis on schedule incentive arrangements can jeopardise or undermine other objectives of the project – ie cost, safety, quality, environmental performance, community relations and minimising operational expenditure.</p>
<p>KPI – Performance</p>	<p>There are many other ways in which to incentivise Contractors regarding performance. It is not unusual to see performance incentive arrangements where performance by the EPCM Contractor which:</p> <ul style="list-style-type: none"> • exceeds pre-agreed fixed targets will lead to better than normal returns for the EPCM Contractor • falls short of the pre-agreed fixed targets will lead to poorer than normal returns for the EPCM Contractor. <p>It is important to set targets that can be effectively measured to collect demonstrable performance information. This is easier said than done and requires specific project management expertise. If this is not possible, or it is difficult, there is a real prospect of dispute and the incentive arrangement will be of little value. Regular meetings of a “Project Control Group” (made up of members from both the Owner and the EPCM Contractor) where performance issues are raised and areas for improvement are identified are important (as are outcomes and objectives reached during any pre-contract workshops to set targets).</p> <p>It is also common to see KPI incentive mechanisms whereby the Contractor’s overall bonus (or reduction in fee) is determined using weighted performance measurement across several pre-agreed targets (ie time, cost, safety, environment and community). The weightings and formula are agreed and recorded in the EPCM Contract from the outset. The weightings reflect the importance placed on each target in achieving the Owner’s commercial and other objectives for the project (it is common to see safety with the greatest weighting).</p> <p>Often it is the role of a Project Control Group to analyse performance against targets and determine the inputs to the formulae used to determine the adjustment to the Contractor’s fee (if any). To avoid disputes over performance it is important that the measurement of performance is based on quantifiable targets and not open to subjective interpretation. However, in circumstances where the Project Control Group is unable to reach agreement on performance, the determination is typically made by the Owner’s representative or an independent expert (the latter generally considered the fairer option, while recognising that appointment of the expert will be an additional cost to the parties).</p> <p>Under a weighted performance mechanism, the Contractor may be entitled to a bonus, despite failing to achieve one of the KPI targets. Alternatively, the EPCM Contractor’s bonus or the fee payable may be reduced where the EPCM Contractor achieves some but not all of the targets.</p>

Incentive Arrangement	Comment
<p>KPI – Safety</p>	<p>Generally, KPI arrangements for safety are largely based on the corporate policy of the Owner or the project SponsorSponsors (ie zero deaths and/or lost time injuries (LTIs)), many of which are absolute.</p> <p>Other factors that may be relevant include:</p> <ul style="list-style-type: none"> • compliance with safety management plans, procedures and policies (and diligence in reporting and/or ensuring other parties comply with these) • number of accidents, near misses or project-related injuries • Contractor’s management and administration of accidents, near misses and project-related injuries (ie reporting, preparation of hazard assessments etc). <p>It is likely that many of the safety incentive arrangements for the EPCM Contract will also take into account the performance of the other Contractors appointed by the Owner on the project. This is typically the case where the Owner wants the EPCM Contractor to drive safety KPIs and culture across the whole project.</p> <p>Also, it is not uncommon to see the achievement of certain safety KPIs as a mandatory requirement to the EPCM Contractor receiving any incentive bonus. In these circumstances, where the Contractor fails to achieve these KPIs, they often forfeit the entire project incentive arrangement (not just for safety) that would have otherwise been available to them. For example where there is a major personal injury suffered by a person involved with the project, which results in permanent disability or death.</p> <p>However, the mandatory requirement to the incentive bonus may not be appropriate in the context of a single or several LTIs, particularly where the EPCM services are to be performed over 1 to 3 years. This is because it is likely that the EPCM Contractor (or one of the Owner’s other Contractors) will suffer an LTI at some stage during this period, which would render the whole incentive regime void.</p> <p>Obviously, the Owner should also consider the corporate policy of the Sponsor(s)/Owner’s parent company(s) in setting safety KPIs for the EPCM Contract.</p>
<p>KPI – Quality</p>	<p>Quality incentive arrangements are not always afforded a great deal of attention in many KPI arrangements (generally at the expense of time and cost issues).</p> <p>It is important to ensure that the end product is of the specified quality to minimise impact on the long term operational expenditure and profitability of the project. Generally, it will be the EPCM Contractor’s responsibility to identify and instruct the Owner’s other Contractors when certain performance or quality guarantees are not being met under the various work packages.</p> <p>Factors that may be integral in any assessment of the EPCM Contractor’s quality performance include:</p> <ul style="list-style-type: none"> • instances of defective services, equipment, systems or re-work by the EPCM Contractor • failure to meet the Owner’s performance and other design requirements on, and after, commissioning • failure to identify defective work, equipment or plant of other Contractors and suppliers • functionality, throughput, availability and reliability of the supply chain; compliance with quality management plans, including conduct of audits and inspections (and diligence in ensuring other parties comply with these) • failure to meet reporting obligations • failure to properly administer contracts on behalf of the Owner • poor communications or responsiveness • failure to comply with relevant project approvals, regulations and standards. <p>Back to back obligations would also be included in the implementation phase construction contracts and supply agreements.</p>

Incentive Arrangement	Comment
KPI – Environmental and Community Impacts	<p>A project’s impact on the environment and community are often of key concern to the Owner and other stakeholders.</p> <p>Certain KPIs can encourage the EPCM Contractor to ensure it, and the Owner’s other Contractors, diligently comply with their environmental obligations and meet the project’s environmental objectives.</p> <p>Factors we have seen that may influence any environmental and community incentives include:</p> <ul style="list-style-type: none"> • quality and timing of responses to environmental and other complaints from the community and stakeholders • where relevant, management of community (including Indigenous) consultation and education • number of incidents of environmental harm and the timing and quality of the corresponding response to such incidents • compliance with environmental management plans (and diligence in ensuring other parties comply with same) • compliance with the conditions and reporting requirements under any statutory approval • establishment of effective administrative procedures to deal with notifications under any implementation phase construction contract or supply agreement.
KPI – Key Personnel	<p>Given the current pressure in the market on retaining skilled and appropriately experienced personnel, securing and retaining quality personnel for any project will be critical.</p> <p>Retention of sufficient numbers and key personnel has been an issue that commonly arises (especially where the project spans many years) and often results in negative cost and time outcomes due to a lack of resources and continuity of key people.</p> <p>Approaches to key personnel KPIs that may be considered include a reduction in the EPCM Contractor’s fee:</p> <ul style="list-style-type: none"> • for high turnover rate of personnel (outside of pre-agreed parameters) • for replacement of personnel during a “project introduction phase” (based on discounted rates) • for the number of personnel removed as a result of incompetence, negligence etc. <p>The Owner may also consider some form of direct bonus for the retention of individual key personnel over certain timeframes or the life of the project or the reimbursement of recruitment costs.</p> <p>Some EPCM Contracts also include payment of liquidated damages by the EPCM Contractor where senior personnel leave or are taken off the project within a certain period.</p>
Assessment	<p>There are many ways that KPIs can be assessed including:</p> <ul style="list-style-type: none"> • through the use of a formula or other mutually agreed procedure whereby the Contractor’s performance is evaluated against set criteria. This is often a detailed schedule to the EPCM Contract that sets out where the risk and reward lies • through a procedure to be agreed by the parties after the EPCM Contract is signed (although as outlined above we do not recommend that you adopt this approach) • use of a committee to agree the measurement of KPIs with a dead lock or dispute resolution mechanism. <p>As discussed above, it is important that the assessment of performance is based on quantifiable targets and not open to subjective interpretation.</p>

Incentive Arrangement	Comment
Structure	<p>The Owner should consider how KPIs are going to be structured, such as:</p> <ul style="list-style-type: none"> • a percentage of the EPCM Contractor's profit • a percentage of other amounts payable under the EPCM Contract (for example, profit and overhead but not direct costs) • a bonus pool or discrete cash amount set up only for the calculation of KPIs and independent of the payment provisions under the EPCM Contract.
Timing	<p>There are a number of alternatives regarding the timing of any incentive payment:</p> <ul style="list-style-type: none"> • a one off "bullet" payment at the end of the project • payments to be made at the end of each discrete phase with an additional "whole of project" payment or fee reduction made at the end of the project • payments offered on a calendar or financial year basis (to coincide with the Owner's reporting or other project obligations) • certain incentive payments could be contingent upon the happening of a set event (ie timely delivery of key materials, return of performance security etc) • a combination of the above.
Other Considerations	<p>The Owner may also want to consider the following:</p> <ul style="list-style-type: none"> • whether each incentive arrangement (or the aggregate or all) will be capped (for example, at a certain % of the fee or the target costs), particularly where the project is financed through limited or non-recourse project financing because Lenders will demand a great deal of outcome certainty in terms of time. This can be for both individual and overall KPIs • how often the incentive arrangements will be assessed and the relevant processes that must be followed • how often the incentive arrangements will be paid or deducted. This is particularly important as some KPIs can only be assessed after completion of the project • whether the incentive arrangements can be challenged and, if so, how this is done. For example, the parties could agree to establish a Senior Management Group made up of senior executives of the Owner and the EPCM Contractor to review and attempt to agree upon any disputed decisions in relation to incentive payments prior to litigation or arbitration. Alternatively the EPCM Contract could provide for independent determinations of such disputes • whether there is a mechanism to vary any of the incentive arrangements to account for the changing emphasis and priorities of the project and drive preferred Contractor behaviour. Such a mechanism could also be used to address incentive arrangements that are not working as anticipated or those that have become less relevant. It could also address the timing of payment, amount of payment, method of calculation, criteria, addition of other incentive arrangements etc.

9 *Splitting an EPC Contract*

The hidden dangers of split EPC Contracts

One innovation that is becoming more prevalent in infrastructure project financing in Asia involves an extension of the traditional project documentation structure whereby the works under an Engineering Construction and Procurement (EPC) Contract are divided or “split” into two or more separate contracts. The split structure offers reduced taxation obligations on the Contractor by allowing the Contractor to avoid local taxes on equipment and materials purchased from “offshore”. The savings result in a reduced project capital cost, which in turn may be passed onto the Project Company and its Lenders.

The concept of splitting EPC Contracts

Under the classic split, the EPC Contract is divided into two separate contracts, commonly referred to as the “onshore contract” and the “offshore contract”. The responsibilities of the offshore Contractor will usually be restricted to:

- the supply of design and engineering services
- the supply of plant, equipment and materials (equipment) sourced from outside the host country.

The responsibilities of the onshore Contractor will usually be restricted to:

- the installation of equipment sourced from outside the host country and procured under the offshore contract, once the equipment has reached its onshore destination
- the construction, testing, commissioning and other onsite activities (including some onshore design and engineering services) associated with the works
- the supply of equipment sourced from within the host country.

It will also be necessary to consider the splitting of obligations to provide training and supply spare parts.

To complete the split structure, an agreement is required to coordinate and wrap the obligations of the onshore and offshore Contractors to the Project Company. This way, any gaps that arise as a result of the split structure are appropriately covered and the Project Company’s recourse, in the event of a failure in the performance of either the onshore Contractor or the offshore Contractor, will only be to a single entity – The Guarantor (as would have been the case in the traditional EPC Contract form). In some structures the offshore Contractor will also be the Guarantor.

Why split EPC Contracts?

In a word: tax. The split structure is designed to avoid or reduce the profit element of any equipment supplied from outside the host country, or any design work performed outside the host country, becoming subject to local taxes. The classes of taxes, both direct and indirect, that an EPC Contractor and a Project Company may be exposed in the host country include value added taxes; withholding taxes; technology transfer taxes; import and stamp duties; local construction and property license fees and duties; and onshore income or profits tax.

Other commercial considerations may drive the split structure, such as avoidance of local “red tape” requirements and costs associated with obtaining permits, approvals and submitting designs to local government authorities in the host country.

Caveat on splitting EPC Contracts

Splitting EPC Contracts will not be appropriate for every project. Appropriate local taxation advice and legal advice should always be sought before deciding whether to split the EPC Contract into two or more contracts to take advantage of taxation savings and other commercial benefits. Different legal and tax jurisdictions will have their own specific requirements which will impact on the structure. For example, in some jurisdictions a mere

reference in the onshore contract to the offshore contract (or vice-versa) may defeat the tax advantages that the split structure is intended to achieve.

The legal issues associated with splitting EPC Contracts

Specifications: Where two separate specifications are prepared, the Project Company should thoroughly review the specifications to ensure that there are no inconsistencies and that when combined, they cover the entire works. Any “gaps” produced as a result in splitting the specification should be covered in the umbrella agreement. If one specification is adopted to cover the whole of the works, then it should be made clear that the offshore Contractor’s scope of work includes all activities associated with the supply of design and engineering services and the supply of equipment sourced from outside the host country. The onshore Contractor’s scope of work will include all remaining activities necessary for the proper completion of the works.

Timing and performance issues: Where the split structure results in split liquidated damages and extension of time regimes, the Project Company will need to scrutinise the regimes in each contract to ensure they are consistent and interact logically and correctly.

Quality issues: The Project Company should ensure that the overall design obligations are assumed by one Contractor, usually the onshore Contractor which has established a presence in the host country. The Guarantor under the umbrella agreement should then provide a guarantee for the Contractors’ design obligations.

Coordination issues: The onshore contract should provide that the onshore Contractor is responsible for all equipment sourced from offshore from the moment the offshore Contractor ceases to be responsible for that same equipment and in the same way that the offshore Contractor is responsible under the offshore contract for the equipment.

Residual legal issues: The Project Company should also address the following issues with a split structure:

- caps on liability and liquidated damages
- termination and suspension
- variations/change orders
- confidentiality issues
- governing law
- *Force majeure/force majeure.*

The umbrella agreement

In terms of providing the necessary legal protection to the Project Company, the most important document is the umbrella agreement (also known as a “wrap around guarantee agreement”, “coordination and administration agreement”, “supplemental agreement” or “guarantee agreement”). The umbrella agreement will, if properly drafted, provide the Project Company with a single point of responsibility and more importantly, prevent the various Contractors from relying on each other’s defaults to avoid performing their contractual obligations – a tactic known as a “horizontal defence”. The umbrella agreement should also prevent a Contractor from relying on the Project Company’s default where the Project Company’s only default was a result, either directly or indirectly, of the non-performance, inadequate performance or delay in performance of any of the other Contractors under their respective contract. In addition to horizontal defences, the umbrella agreement should deal with the following matters:

- guarantees and indemnities
- liquidated damages
- the performance bond by the Guarantor’s parent
- liability (and limitation of liability) of the Guarantor

- duration of the umbrella agreement
- dispute resolution – it should be identical to the project documents and allow the Project Company to consolidate claims.

Conclusion

The splitting of works between two or more contracts is usually driven by tax and other commercial considerations. Provided appropriate taxation and legal advice is sought and received, and it should be in every case, and provided all associated legal issues are adequately addressed in the split contracts and co-ordinated and “wrapped” in the umbrella agreement, the taxation and other commercial benefits offered under the split structure should flow through to the Project Company and its Lenders.

10 Preparing the Employer's Requirements for a Construction Project

Introduction

The Employer's requirements are project-specific components of the construction contract that document the:

- fitness for purpose criteria for the project
- Contractor's scope of work and design and how it is to fulfil those obligations
- technical criteria to be satisfied
- other project-specific obligations

Preparing and putting into words the Employer's requirements for a construction project is one of the most difficult tasks the Employer will undertake and is critical to the success of the project. It requires market research, a thorough analysis of the many commercial and legal influences and risks on the project, and expert technical and project management skills. Importantly, it also requires the Employer to have a clear understanding of the project purpose, goals and objectives from the outset of the contract procurement process.

Unfortunately, Employers often select a contract delivery method for a project and commence preparing the contract documents without identifying their goals and objectives at an early stage so that those responsible for developing the contract documents do not have a clear understanding of what the Employer wants from the final product. It is also not uncommon for lawyers acting for an Employer to prepare the general conditions in isolation from the Employer's technical consultants responsible for the Employer's requirements and other technical documents.

This leads to inconsistencies between the various components of the construction contract and uncertainty as to the extent of the Contractor's obligations. It also increases the risk of important aspects of the Contractor's obligations not being comprehensively described in either the general conditions or the Employer's requirements and leads to a misalignment of the parties' expectations, which is a common cause of disputes and costly variations.

To avoid these risks, the process should be centrally managed by suitably qualified personnel with combined expertise in contract procurement, contract administration, project delivery and legal drafting.

Key stages in preparing the Employer's requirements

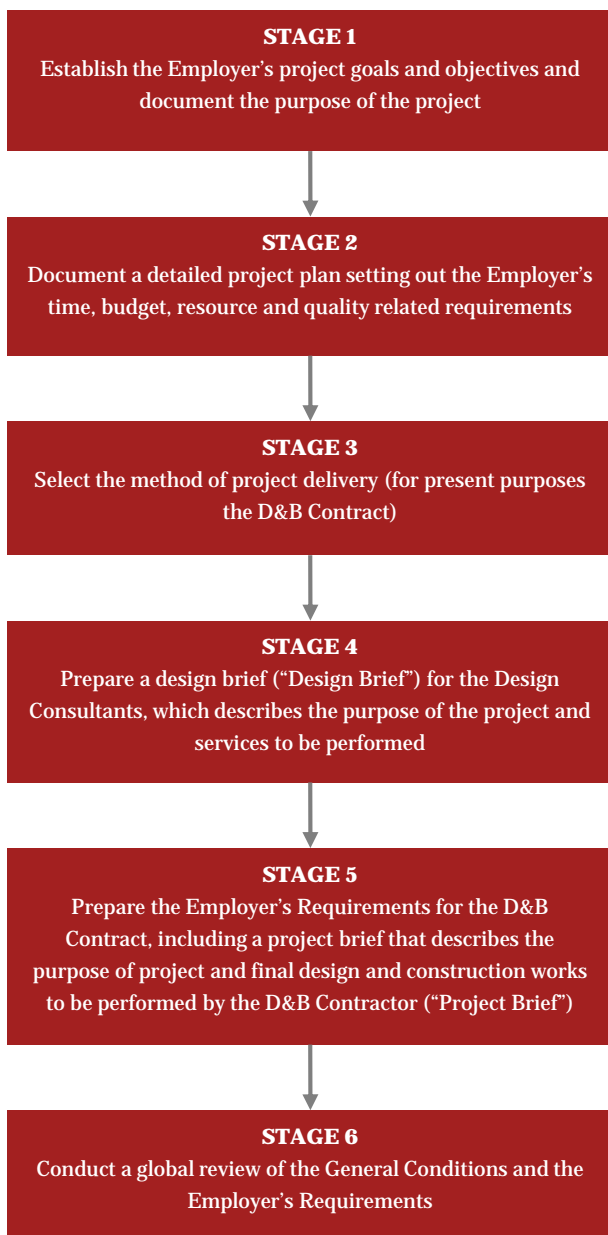
There is no universally accepted process for preparing the Employer's requirements. The process will vary depending on the Employer's resources, commercial drivers and the nature of the project. However, irrespective of these variations, the guiding principles for an Employer when preparing the Employer's requirements and other contract documents must be to:

- allocate sufficient time and resources to conduct market research, gather information and identify its overall requirements for the project
- document the project goals, objectives and purpose at the outset, so that those responsible for developing the contract documents have a clear understanding of what the Employer wants from the final product and what it expects the Contractor to deliver

- document the Employer's requirements in a manner so that it articulates precisely and consistently what must be designed and/or constructed by the Contractor and who will be responsible for design and other prior works (if any) undertaken by the Employer
- undertake a global review of the contract documents, utilising the combined knowledge of the Employer's project management team, expert technical consultants and lawyers to ensure consistent and clear drafting throughout the contract and certainty in relation to the project goals, objectives and purpose.

In practice, the Employer's requirements will evolve in stages and will vary for different types of projects. To outline the key stages, we have chosen the design and build contract (**D&B Contract**) project delivery method. This is a useful basis for discussion because the Employer has to prepare Employer's requirements for design consultants responsible for the concept and preliminary design (**Design Consultants**) and ultimately for a design and build Contractor (**D&B Contractor**).

The key stages in developing the Employer's requirements for a D&B Contract are:



Each stage of this process will be described in further detail below.

Stage 1 – Establishing the project goals, objectives and purpose of the project

Prior to choosing the contract delivery method and attempting to articulate the Employer's requirements, the Employer must establish its goals and the purpose of the project. This forces the Employer to consider and prioritise its goals and objectives at an early stage and will ultimately form the basis of the Employer's requirements to be included in the D&B Contract.

This will include consideration of the impact the project will have on its resources and existing operations and the commercial, technical, quality and timing requirements. It does not matter if the requirements cannot be finalised at this point because these requirements will be updated as the design and planning progress.

The factors that the Employer must consider at this early stage include:

- the overall timing of the project, including understanding the Employer's current business market, where the market will be when the Employer intends to sell the product generated by the project and at what point in the boom/bust cycle the construction industry is at the time of the project
- the specific timing requirements, including the critical stages and milestones for the project and when are they required to be completed
- budgetary restrictions and the Employer's economic and commercial drivers
- availability of both internal and external resources required to complete the project
- the external requirements of customers and other relevant parties and authorities

Determining the target market and the requirements of customers and other external parties, in addition to the Employer's internal requirements, is critical during this stage. For example, in the property development sector, the external requirements of the residential and commercial sales contracts, tenancy agreements, relevant government authorities, Financiers (if any) and arrangements with utilities and services providers will all form the basis from which the Employer's requirements must be developed.

Analysing these external agreements and requirements is critical to the D&B Contract procurement process because they contain concessions which have been made by the Employer and which oblige the Employer to ensure that the project is designed and constructed in order to fulfil certain requirements. This will directly affect the D&B Contract and the Employer's requirements. Examples include:

- timing of construction
- approvals for commencement of the works
- labour, safety, environmental and development guidelines
- access restrictions
- design approval process
- construction methodology
- the standard and quality of materials and finishes
- performance requirements and outputs (if any)
- the pricing and approval of variations and extensions of time and financier step-in rights
- interface requirements with utilities and service providers

- the requirements for completion and certification.

It is therefore essential that the Employer determines what its obligations are in order to meet these external requirements from the outset. It can then communicate them to those responsible for developing the contract documents and, in turn, build those specific obligations into the Employer's requirements and ultimately pass on those obligations to the Design Consultants and the D&B Contractor as required.

Stage 2 – Document a project plan

Once the Employer has established its internal and external requirements, it then needs to prepare a detailed plan for the delivery of the project that articulates those requirements. The plan should include:

- a clear statement of the purpose of the project
- the goals and objectives, including time, cost and quality and requirements of external parties etc.
- a resources plan that identifies internal resources and where external resources are required to produce the contract documentation and deliver the project
- budgets
- an overall development programme and milestones
- any other specific requirements of the Employer

Generally, it is not until the completion of this stage that the Employer will be in a position to consider the appropriate method of project delivery.

Stage 3 – Selecting the method of project delivery

There are numerous project delivery options for the Employer to choose from including:

- design by the Employer and construction by a Contractor
- preliminary design by the Employer and final design and construction by a Contractor
- total design and construction by a Contractor
- design by Employer, construction by trade Contractors and management of project delivery by a construction manager
- design commenced by Employer – Design completion and construction by Contractor

The selection of the most appropriate method (there is usually no right or wrong way to deliver the project) requires careful thought and consideration of many of the factors identified in stages 1 and 2.

This paper will not attempt to provide an analysis of the various project delivery methods. However, for the purposes of illustrating stages 4 and 5 of the process, we will identify some of the issues, by no means exhaustive, to be considered by the Employer when preparing the contract documents for the project delivery method referred to in item (b) above. This is where the Employer elects to commence preliminary design using the Design Consultants engaged under separate agreements (Consultancy Agreements) before engaging the D&B Contractor to perform the final design and construction.

Stages 4 and 5 below focus on developing the two key construction-related documents for this method of project delivery, which are:

- the design brief for the preliminary design to be carried out by the Design Consultants (Design Brief)
- the Employer's requirements for a D&B Contract

Given that the scope and risk profiles will vary for each project and across construction sectors, it is not possible to provide a comprehensive list of all the issues the Employer should consider when preparing the Design Brief and the Employer's requirements. However, the following sections will highlight some of the important issues that should be considered when preparing those documents.

Again, it should be noted that regardless of the type of project or the specific risk profile, it is still essential for the Employer to clearly articulate the requirements it has developed during stages 1 to 3 in both the Design Brief and the Employer's requirements. This must be in a manner that is consistent with the general conditions and clearly describes the obligation of the respective parties.

Stage 4 – Prepare the design brief for the consultancy agreements

Using the information compiled during stages 1 to 4, the Employer should prepare and include a Design Brief in the Consultancy Agreements. This is in addition to the contract documents which specify the actual scope of services and deliverables for each of the Design Consultants.

It is in this Design Brief that the Employer articulates its goals and objectives, including its time, cost, quality and other requirements and how the Design Consultants are to comply with those requirements so that the Employer can measure and enforce the Design Consultant's obligations.

The Design Brief will develop as the design develops, but one must be included at the outset in all of the Consultancy Agreements. The ultimate goal in the D&B Contract project delivery method is to have the D&B Contractor assume an overall fitness for purpose obligation for the final design and construction of the project and for it to become responsible for the preliminary design prepared by the Design Consultants on execution of the D&B Contract. Therefore, it is critical that the Design Brief prepared for the Consultancy Agreements is consistent with the Employer's requirements to be provided to the D&B Contractor.

Examples of other important aspects to be considered by the Employer when preparing the contract documents which specify the actual scope of services and deliverables for each of the Consultants include:

- a clear description of the deliverables, coordination and interface obligations and the timing for the provisions of the services, for each of the Design Consultants, during each phase of the design.
- the design programme for the performance of the services which must be consistent with the Employer's overall development programme and timing requirements described in stage 2 above
- administrative issues such as reporting and attendance at meetings and where applicable must be consistent with the D&B Contract
- a statement that each Design Consultant confirms that it understands the Employer's goals and objectives and the Design Brief

Often these obligations would be documented in the schedule of scope of services.

Stage 5 – Prepare the Employer's requirements for the D&B contract

It is fundamental to the success of the project to identify precisely what must be designed and then constructed by the D&B Contractor and the performance criteria that must be satisfied. The particulars of that essential element of the procurement process must be contained in the Employer's requirements, including the requirements of external parties identified in stages 1 and 2.

The level of detail contained in the Employer's requirements will vary depending on the timing of its preparation and the extent of design completed prior to the formation of the D&B Contract. Clearly, the later the Employer's requirements are prepared the more detail that can be incorporated. The preparation of the Employer's requirements during this stage is an excellent test to ascertain whether the Employer is in a position to sensibly articulate its requirements for the project. If it cannot describe its requirements with certainty in the Employer's requirements, then logically the contract procurement process has not reached a point where the D&B Contract can sensibly be distributed to tenderers.

The contents of the Employer's requirements will obviously vary depending on the nature of the project, the specific scope of work and risk profile. The information compiled during stages 1 to 4 will form the basis from which the Employer's requirements will be further developed and finally articulated. For instance, the Design Brief referred to in stage 4 will be further developed with the assistance of the Design Consultants and form an integral component of the Employer's requirements for the D&B Contract.

Examples of key aspects to be considered by the Employer and articulated in the Employer's requirements for any D&B Contract include:

- a list of the Employer's goals and objectives for the project. The emphasis in this regard, and at this critical stage, is on providing detailed and measurable objectives, rather than general objectives or motherhood statements
- the obligations that must be satisfied by the Employer under separate arrangements with external parties that are to be passed on to the D&B Contractor must be specified in detail. These obligations will include development and planning approvals, environmental approvals, agreements for lease, sale agreements, agreements with adjacent lands and the requirements of banks and Lenders. Fundamentally, in preparing the Employer's requirements, the Employer must ask itself whether it has procured the D&B Contractor to fulfil all of the Employer's own relevant obligations with external parties
- the Employer's future operational expenditure. The Employer must ensure that its requirements, in terms of operational expenditure once the project is taken over by it, including future concession or off-take agreements and arrangements with service and utility providers, are also specified. This is important, not only in relation to interface obligations, but also because reduced capital expenditure through design and selection of materials, which might be a source of savings for the D&B Contractor, will often only be achieved at the expense of increased future operating expenses. These are, of course, borne by the Employer
- relevant industry standards and criteria. However, considerable care must be taken before specifying a benchmark existing project or using an existing Employer's requirements document for another project as the required standard to be achieved. It will be rare that any other project will encapsulate and be consistent with all of the Employer's specific requirements of its project. The Employer must also consider the commercial implications of using an existing project to set a minimum benchmark. The D&B Contractor will inevitably assess the risk of uncertainty between the actual required standard and the minimum benchmark and pass this cost onto the Employer in the contract price
- quality of equipment and materials. For example, in a commercial or residential building project the standard of finishes, floor coverings and sound proofing should be specified, as should the telecommunications and security requirements and ecologically sustainable development (ESD) requirements. However, particular care must be taken if the Employer intends to prescribe a product. Prescribing specific items can lead to difficulties in enforcing the D&B Contract in relation to fitness for purpose and design warranties. Rather than the Employer specifying a particular product, it may be preferable for it to describe the type, appearance and purpose of the product. The reason for this is, if the Employer prescribes a specific product and a defect is found in that product after it is installed, then it will have difficulty rejecting the product on a fitness for purpose basis.

The question should be which party is to be responsible if the material or equipment ultimately does not perform as required? If the Employer wants the answer to be the D&B Contractor, then it should not tell the D&B Contractor what specific product to use. The types of description that should be avoided include sizes, thickness, strength, suppliers and models. Of course, if the Employer has a specific requirement and wishes to use a particular product and in turn take the risk of that product performing, then it must clearly set out that requirement. For a residential development project, for example, it will often be in the interests of both parties to carefully draft a mechanism in the D&B Contract providing for the construction of a prototype villa or apartment so that issues of specified finishes and design functionality can be worked through at an early point in the design and construction process.

- Separable portions, milestones, program and staging requirements for the project, particularly where the development is to occur adjacent to operating buildings and/or facilities or the Employer's external obligations dictate staged completion.

- The scope and extent of the works to be clearly delineated. The Employer must consider whether some of the works will be carried out by others and then consider the critical issue of the interaction and interface between those parties. This is a common cause of disputes and variation claims for delay.
- The scope of the D&B Contractor's design obligations and the existing design prepared by the Design Consultants. An issue that is peculiar to this type of D&B Contract delivery method involving the novation of the Employer's Design Consultants to the D&B Contractor is the status of the design work completed by those Design Consultants on behalf of the Employer (Existing Design). The purpose for using a D&B Contract delivery process is that the D&B Contractor is solely responsible for the final design of the project under the D&B Contract. However, a key question is what happens to the Existing Design? If the Existing Design contains elements that the Employer absolutely must have included in the final design then these elements must be transferred to the Employer's requirements.

In our view, the Existing Design should be considered as a work in progress that the D&B Contractor can develop and change as the final design development proceeds.

However, to avoid disputes over design responsibility, the general conditions and Employer's requirements must be consistent on this point. The general conditions should provide that the D&B Contractor warrants and takes responsibility for any Existing Design included in the Employer's requirements, so that the Employer can enforce the D&B Contractor's overall design obligations and fitness for purpose warranties. It is possible to place overall design responsibility on the D&B Contractor while still ensuring the Employer retains control of the design process by incorporating carefully drafted design review regimes.

Alternatively it is also possible to prohibit any changes by the D&B Contractor to the Existing Design, but this removes a fundamental commercial benefit to the D&B Contractor to value engineer its design and make allowance in its price the cost savings it believes it can achieve by developing the design to suit its construction methods. It also potentially limits the design promises made by the D&B Contractor and must therefore be considered in that context. This balancing act between the requirements of the Employer to control the design and the commercial driver of the D&B Contractor is a very important dynamic to understand and should be foremost in the Employer's mind when selecting the project delivery method during stage 3 and then when deciding on the level of detail to be included in the Employer's requirements.

- Design documents and maintenance manuals to be provided by the D&B Contractor, including the form of the documents.
- Performance requirements for the works identified during stages 1 to 4. These are essential for a D&B Contract arrangement and they must be exhaustively specified. For example, the Employer's requirements for the construction of a high rise building may include detailed performance requirements for air conditioning, lifts and other services, net lettable areas, environmental ratings, apartments sizes and car park numbers. These performance requirements should be carefully and thoroughly described, along with how satisfaction of those requirements will be determined. Consideration must be given to:
 - designing for whole of life requirements and the method of design review and approval
 - specific fitness for purpose requirements and a description of how satisfaction will be determined by the Employer
 - compliance with technical standards and specifications
 - performance guarantees and performance liquidated damages (if any)
 - the completion, testing and commissioning requirements including Employer supplied resources (both personnel and materials), responsibility for output (which can be blurred if the Employer provides resources), provision of input material (including quantity and quality) and provision for delayed testing if input material is not available
 - physical limits of the works including a description of the site boundaries and any connection points for services and access restrictions

- a list of exclusions that have not been included in the D&B Contractor's scope of work
- interface obligations with existing plant and/or auxiliary works
- interaction between the D&B Contractor and other Contractors
- interface obligations with adjoining property Owners
- plant or material to be supplied by the Employer
- training the D&B Contractor must provide to Employer's personnel
- future Operator/Owner access requirements for maintenance and repairs
- permits or approvals that the D&B Contractor is required obtain
- an exclusive list of Employer's responsibilities such as obtaining planning approvals and supplying facilities, equipment or materials
- project-safety, quality and coordination policies, plans or procedures which the D&B Contractor is required to comply with or prepare
- approved working hours and any requirements or restrictions as to working hours
- defect rectification – Period and access requirements
- Sub contractor and supplier warranties for specific works or materials or services for which the Employer wants a direct ongoing contractual relationship with the sub contractor, manufacturer or supplier in relation to performance and defect rectification.

Stage 6 – Global review of the D&B contract documents

Ideally, the Employer's requirements and the general conditions should not be prepared in isolation. Unfortunately they often are, despite the significant costs to the Employer in procuring the commercial, technical and legal expertise required to perform this task. It is also not uncommon for the Employer's requirements or documents prepared by the D&B Contractor (**Contractor's Proposal**) to be simply attached to the general conditions and distributed as the tender documents without a thorough global review of all components of the D&B Contract.

In practice the contract documentation, including the Employer's requirements, will continue to evolve during the tender process and negotiations until the D&B Contract is executed. However, failing to undertake a review of the entire D&B Contract prior to going to tender increases the risk of ambiguity and uncertainty existing between the Employer's requirements and the general conditions and various components of the Employer's requirements. This will inevitably lead to a disputes and costly variations.

The Employer cannot rely on inconsistencies or ambiguities being identified or raised by the D&B Contractor during the negotiation process. In fact, often Contractors will specifically look for ambiguity in contract documents during the tender process and internally identify ways to take advantage of any uncertainty during the performance of the works. For the same reason, the Employer should not include documents in the D&B Contract which have been prepared by the D&B Contractor, without a thorough review for consistency with the Employer's requirements and general conditions.

Another common cause of uncertainty is the use of unclear and inconsistent language in the Employer's requirements. The drafting must definitively articulate the Employer's requirements and the obligations of the parties. Using general motherhood statements or legalistic wording, rather than simple plain English drafting, will not only lead to uncertainty, costly disputes and/or variations, but also makes it more difficult and time consuming for the Employer's project delivery team to determine what is to be constructed and to administer and enforce the D&B Contract.

The following paragraph, taken from an existing D&B Contract used on an actual project, provides an example of drafting that fails to definitively describe the required scope, standard or duration of the D&B Contractor's design obligations in relation to designing temporary facilities and services:

The Contractor shall provide good quality design services and the like for temporary facilities necessary which may be in use for a few years pending completion of final permanent building works or infrastructure/roads to the project and which will need to be compatible with the buildings in normal use for that time.

The D&B Contractor's obligations under the above paragraph are uncertain. An alternative drafting style that more definitively describes the D&B Contractor's obligations might be:

The Consultant must design all temporary facilities required at the site to ensure that all services to existing buildings are maintained for the duration of the project and for a period not less than 3 years after the completion of the project. The temporary facilities must be compatible and, fully interface with, all existing buildings at the site.

While it is acknowledged that there are usually ambitious deadlines and budget restrictions imposed by Employers in relation to the contract procurement process, the global review, irrespective of the contract value, is critical. The review must combine input from the Employer's project management team, technical consultants and legal advisors. It must also be centrally managed by personnel with the requisite skills set and combined expertise in contract procurement, contract administration, project delivery and legal drafting.

Energy

11 Construction, operation, regulatory and bankability issues for utility scale renewable energy projects

Introduction

Over the past 15 years, Australia's renewable energy market has continued to attract massive interest from Developers, Contractors, manufacturers, governments and local and international investors. This reflects global energy trends driven by factors such as a push for diversification of energy sources and asset classes, government incentives for clean energy technology developments and, importantly, the decreasing cost of electricity from renewable energy sources.

The renewable energy industry in Australia is well-established and mature for some technologies (eg wind, rooftop solar PV), developing in others (eg utility scale solar PV, solar thermal/CSP and hybrid solar) and at commercialisation stage in others (eg geothermal, wave).

At this time of increasing market interest and development, it is relevant to consider key issues and market trends in the construction, operation and regulatory aspects of projects, and critical bankability considerations relating to each of these issues. While this paper focuses on issues that are of most interest to project Sponsors and Lenders, many of these considerations are equally relevant to Contractors. This paper considers these issues in the context of utility scale solar and wind projects in Australia.

Overview of the current state of renewable energy in Australia

Renewable energy sources (comprised of solar PV, solar thermal, wind, hydro, wave, tidal and geothermal) contributed around 13.5% of Australia's electricity generation in the 2014 calendar year¹, down from 14.76% in 2013. This fall in generation was mainly attributed to lower rainfall in hydro catchment areas. Of this amount, the largest contributions were from hydro (45.9%), wind (30.9%) and solar (15.3%)².

There was a significant scaling back in investment in 2014, with spending on large-scale renewables falling approximately 88% to \$240.0 million in the calendar year³. This was a consequence of significant uncertainty surrounding the proposed reduction of the Federal Government's Renewable Energy Target and the potential abolition of the Clean Energy Finance Corporation and the Australian Renewable Energy Agency. Despite the recent reduction in overall spending there has been a continued increase in the level of energy generated from renewable sources; an overview of energy generation from renewable sources is provided below⁴.

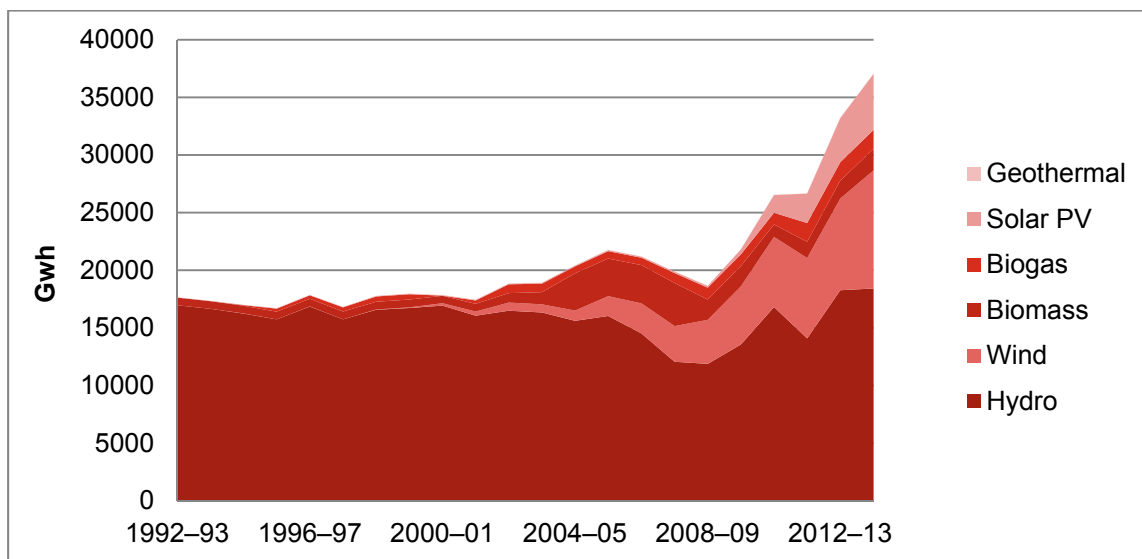
1 Clean Energy Council, *Clean Energy Australia Report 2014*, <http://www.cleanenergycouncil.org.au/policy-advocacy/reports.html>

2 Clean Energy Council, *Clean Energy Australia Report 2014*, <http://www.cleanenergycouncil.org.au/policy-advocacy/reports.html>

3 Time for Tony Abbott to join renewable energy's flow', *Sydney Morning Herald*, 22 January 2015, <http://www.smh.com.au/comment/smh-editorial/time-for-tony-abbott-to-join-renewable-energys-flow-20150122-12qlrn.html>

4 Australian energy statistics update 2015 <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-energy-statistics.aspx#>

Australian energy generation from renewable sources



Whilst investment in large scale renewable technology dropped by 88% in 2014, investment in household renewable energy dropped by only 20% in 2014. With the new change in leadership of the Coalition government, there are indications that Malcolm Turnbull's approach to renewable energy will hopefully incentivise industry and households to invest in renewable technologies.

Overview by technology

Solar PV in Australia

Despite having some of the highest average solar radiation per square metre of any continent in the world and with world-leading capabilities in solar PV research and technology development, to date Australia has lagged in the development of utility scale solar PV facilities. Currently, the four main operating utility scale PV facilities are the:

- 20 MW Royalla solar farm developed by FRV in the ACT, which began generation in September 2014
- 10 MW solar PV plant developed in 2012 at Greenough River in WA by Verve Energy, GE Energy Financial Services and First Solar
- 102 MW Nyngyn Solar Plant in western NSW developed by AGL and First Solar in 2015
- 53 MW solar PV facility at Broken Hill developed by AGL and First Solar in 2015.

Solar Choice is expected to commence construction on Australia's biggest solar farm early this year. The solar plant, which is located west of Toowoomba in Queensland, is expected to generate up to two gigawatts (2,000MW) once completed⁵.

In contrast, the small-scale rooftop solar PV sector has undergone rapid development. In the year to the end of 2014, a total of 4,040.65 MW of solar PV was installed across Australia. A total of 1.42 million small-scale solar systems were installed by the end of 2014⁶.

⁵ Solar Choice, *Solar Choice's 2GW Bulli Creek Solar Farm: The lay of the land*, 17 June 2015, <http://www.solarchoice.net.au/blog/solar-choice-bulli-creek-solar-farm-lay-of-the-land> and RPS, *Bulli Creek Solar Farm, Darling Downs, QLD* <http://www.rpsgroup.com/Australia-Asia-Pacific/Projects/Bulli-Creek-Solar-Farm.-Darling-Downs.-QLD.aspx>

⁶ Clean Energy Council, *Clean Energy Australia Report 2014*, <http://www.cleanenergycouncil.org.au/policy-advocacy/reports.html>

The rapid increase since 2008 has been primarily led by dramatic reductions in the relative cost of small-scale solar PV. This has been driven by a combination of supportive government policy environment and incentives, technological maturation, economies of scale (with rapid expansion in the global production of PV modules) and changes to the price of input costs, in particular, substantial decreases in the price of polysilicons⁷.

However, the domestic solar market experienced a significant contraction in 2014. Approximately 187,000 solar power systems were installed nationwide in 2014, down from 213,000 in 2013. This primarily reflects the impact of the roll back of state-based solar incentive schemes. However, the continuing downward trend in system costs is expected to provide a sustainable future for the industry, albeit after a period of consolidation.

The scale of household solar PV is understood to be playing an increasing role in relieving pressure on the networks, particularly in reducing peak energy demand. This was illustrated during the January 2014 heatwave across the southern states of Australia, where commentators estimate that rooftop solar PV contributed between 2.5-2.8% towards meeting peak demand, and caused the demand peak to be lower and later in the day than would otherwise have occurred⁸.

Solar thermal

While still in its infancy in Australia, a small number of solar thermal (also known as “concentrating solar power” or CSP) facilities have been, or are being, developed. In most cases, these are conversions of, or additions to, existing coal-fired power stations rather than stand-alone facilities. For example, a 9.3MW concentrated solar thermal station was added to the existing Liddell coal-fired power station in NSW, and in Queensland a 44MW plant is under construction to feed steam to an existing coal-fired facility at Kogan Creek power station. There are also a number of feasibility studies being conducted into the use of solar thermal in remote and off-grid areas. It is expected that solar thermal technologies will be used in the ACT government’s 2015 Next Generation Solar process.

Wind

Wind currently remains the lowest cost form of renewable energy that can be rolled out on a large scale and, as such, continues to dominate the renewable energy marketplace.

The amount of wind power generated in Australia has doubled over the past 5 years. The Macarthur Wind Farm (developed by AGL and Meridian Energy with a current 50/50 ownership by Morrison & Co and Malakoff as a result of a sale by AGL in September 2015) came online in April 2013 and, at 420 MW, is now the largest wind farm in Australia. At the end of 2014 there were 1,866 wind turbines spread across 71 operating wind farms, supplying more than 4.0% of Australia’s overall electricity consumption⁹.

In July 2015, the Bald Hills wind farm in Victoria commenced operation, with 106 MW of capacity. A significant number of other wind farms have been approved but are not yet operational. Like solar, the large number of wind projects in development reflects factors such as the quality of wind resources in Australia, particularly along the southern coasts which are regarded as among the best in the world. The cost of wind generation technology has significantly reduced over recent years¹⁰.

7 Australian Bureau of Resource and Energy Economics, *Energy in Australia*, 2013, <http://www.bree.gov.au/documents/publications/energy-in-aust/bree-energyinaustralia-2013.pdf>

8 Giles Parkinson, ‘Solar puts heat on big generators as demand peaks subside’ *RenewEconomy*, 17 January 2014, <http://reneweconomy.com.au/2014/solar-23763>

9 Clean Energy Council, *Clean Energy Australia Report 2014*, <http://www.cleanenergycouncil.org.au/policy-advocacy/reports.html>

10 Australian Bureau of Resource and Energy Economics, *Energy in Australia*, 2013, <http://www.bree.gov.au/documents/publications/energy-in-aust/bree-energyinaustralia-2013.pdf>

Renewable energy policy and legislative framework – Federal

The key policy mechanism driving renewable energy investment in Australia is the Renewable Energy Target (RET). The regulatory framework that establishes the RET is set out in the Renewable Energy (Electricity) Act 2000 (Cth) (Act). When passed as legislation, the Act set a target for renewable energy generation from eligible renewable energy power stations in Australia of 41,000GWh by 2020. This represented a target of 20% of Australia's electricity being supplied by renewable sources by 2020 and maintained at this level until 2030. In June 2015, however, the Coalition Government passed legislation to cut this target to 33,000GWh. This figure reflects the recommendation in the Warburton Review of the RET, discussed below. The rationale, in part, for this change was to reflect overall lower energy demand and represent a 'real 20%' figure.

At the end of 2013, the generating capacity of large-scale renewable power stations was approximately 13,100GWh of eligible renewable energy (as defined under the Act) per year, with an additional 6,400GWh contributed by small-scale systems. A study by consultancy firm SKM MMA¹¹ found that the RET had delivered \$18.5 billion of investment in renewable energy since 2001, and forecast that the RET would drive a further \$18.7 billion of investment between 2012 and 2020. The revised RET is still expected to unlock significant investment, of approximately \$10 billion¹².

The RET drives investment by creating a guaranteed market for additional renewable energy deployment using a mechanism of tradable Renewable Energy Certificates (**RECs**). RECs are market-based instruments generated by accredited renewable energy power stations and that can be traded and sold. Demand for RECs is created by a legal obligation that the Act places on parties who buy wholesale electricity (retailers and large users of electricity known as 'liable entities') to purchase and surrender a certain amount of RECs each year.

During 2009 and 2010, strong demand for small-scale renewable technologies, including solar hot water and residential solar PV, meant that an increasingly large number of RECs were entering the market from small-scale technologies. This led to market volatility and depressing of REC prices, which caused investment uncertainties and delays for large-scale renewable energy projects. In June 2010, Federal Parliament passed legislation to split the RET into the Large-Scale Renewable Energy Target (**LRET**) with Large-Scale Generation Certificates (**LGCs**) and the Small-Scale Renewable Energy Scheme (**SRES**) with Small-Scale Technology Certificates (**STCs**). The LRET covers large scale renewable energy projects including wind farms, utility scale solar PV and solar thermal, hydro and geothermal, whereas the SRES covers small-scale technologies such as residential rooftop solar PV and solar hot water systems. The reforms are aimed to allow the market to set a LRET price to provide incentives for large-scale renewables. As the increasing obligation of liable entities to purchase LRECs to 2020 increases demand, LREC prices are expected to increase, supporting the investment and expansion of large-scale renewable energy generation.

The RET scheme has been designed such that the majority of the RET will be delivered by large-scale renewable energy projects. The LRET includes legislative annual targets, starting at 10,000GWh in 2011 and increasing to 33,000GWh in 2020 and remaining at that level until 2030. Under the LRET, accredited renewable energy power stations are entitled to create one LGC for each MWh of electricity generated which can then be sold and transferred to liable entities using the REC Registry. Power stations using at least one of the more than 15 types of "eligible renewable energy sources" can become accredited.

Under the SRES, Owners of small-scale technology will receive one STC for each MWh generated by the small-scale system or displaced by the installation of a solar hot water heater or heat pump. In contrast to LGCs, STCs are available upfront on the installation of the system rather on an 'as generated' basis. The SRES is an uncapped scheme in that its annual targets are set based on the number of SRECs expected to be created in that year.

Liable entities are required to purchase an amount of both LGCs and STCs and surrender them on an annual basis (for LGCs) and a quarterly basis (for STCs). Liable entities may purchase LGCs directly from renewable energy power stations or from agents dealing in LGCs. The market price of LGCs is dependent on supply and

11 SKM MMA, *Benefits of the Renewable Energy Target to Australia's Energy Markets and Economy*, 2012

12 'New renewable energy target to unlock \$10b worth of deals, GE says', *The Age*, 24 June 2015, <http://www.theage.com.au/business/energy/australias-renewable-energy-target-to-unlock-10b-worth-of-deals-ge-says-20150624-ghwanx.html>

demand and has varied between \$10 and \$60¹³. Liable entities may purchase STCs through an agent who deals with STCs or through the STC clearing house. There is a government-guaranteed price of \$40 for all STCs sold through the clearing house, but no price is set for STCs sold in the market. If a liable entity does not meet its obligations under the Act, it must pay a "shortfall charge", currently set at \$65 per LGC or STC not surrendered.

The Act requires a review of the RET to be conducted every two years by the Climate Change Authority. The most recent review was conducted in 2012 and the key recommendation was that the RET should be left largely untouched to preserve investor confidence.

For the 2014 RET review, the Coalition Government appointed, in place of the Climate Change Authority, a panel of experts headed by Mr Dick Warburton to conduct the review with the support and involvement of the Departments of Prime Minister and Cabinet, Industry and Environment (the **Warburton Review**). The review is required to report to Government by mid-2014. The terms of reference for the review were released in February 2014¹⁴ and include:

- whether the objective of the RET scheme, to deliver 41,000 gigawatt hours (GWh) and small scale solar generation by 2020, is still appropriate
- the extent of the RET's impact on electricity prices, and the range of options available to reduce any impact while managing sovereign risk
- implications of projected electricity demand for the 41,000 (GWh) target.

The Warburton Review handed down its final report in August 2014, finding that the RET had broadly met its objectives of increasing large-scale and small-scale generation and reducing carbon emissions. However, the report stated that the additional \$22.0 billion NPV in cross-subsidy to the renewables sector expected over the remainder of the scheme, and the additional \$15.0 billion in renewable investment that this would encourage, was not necessary to meet likely growth in electricity demand, which could be met from existing generation capacity. Consequently, on the basis that the scheme "[diverts] resources from more productive uses elsewhere in the economy"¹⁵, the Warburton Review recommended:

- that the LRET should be amended in one of two ways:
 - by closing the scheme to new entrants (excepting power stations already under construction)
 - by implementing a "real 20.0%" target, setting future annual targets through to 2020 on the basis of a 50.0% share of growth in electricity demand.
- that the SRES should be abolished, or its last year of operation brought forward from 2030 to 2020 and the number of certificates created under it reduced.

The findings of the report were endorsed by the Coalition Government, and were the platform for its policy to reduce the RET. In October, the Government publicly stated that its position on renewable policy was that the RET should pursue a "real 20.0%" target, and that pressure on energy intensive trade exposed sectors should be reduced¹⁶. The figure initially suggested was 27,000GWh. Strong opposition from Labor, the Greens and some independents in the Senate led to a compromise of a reduction in the RET to 33,000GWh. It is hoped that settling the new RET will remove uncertainty in the renewable energy market, which had contributed to spending on large-scale renewables falling approximately 88.0% to \$240.0 million in the calendar year¹⁷.

13 Clean Energy Regulator, *Increasing Australia's renewable electricity generation*, <http://ret.cleanenergyregulator.gov.au/>

14 Environment Minister Greg Hunt, *Media Release – Review of the Renewable Energy Target*, 17 February 2014, <http://www.environment.gov.au/minister/hunt/2014/pubs/mr20140217.pdf>

15 RET Review Panel, *Renewable Energy Target Review – Report*, <https://retreview.dpvc.gov.au/ret-review-report-0>

16 The Hon Ian Macfarlane MP, 'Renewable Energy Target' (Press Release, 22 October 2014) <http://www.minister.industry.gov.au/ministers/macfarlane/media-releases/renewable-energy-target>

17 'Time for Tony Abbott to join renewable energy's flow', *Sydney Morning Herald*, 22 January 2015, <http://www.smh.com.au/comment/smh-editorial/time-for-tony-abbott-to-join-renewable-energys-flow-20150122-12qlrn.html>

Australia fell from 11th largest investor in large-scale renewable energy projects in 2013 to 39th in 2014¹⁸. The new legislation also allays an fears of political and sovereign risk, which could have caused major bankability impacts of current and future renewable energy projects.

The Clean Energy Regulator (**CER**) also reports to Parliament annually on the overall performance of the RET scheme. Among other functions, the CER administers the RET, the Emissions Reduction Fund and corporate services.¹⁹ Most recently, for the 2015 calendar year, the CER noted that progress towards the 2020 target was adequate and meant that the 2020 target was within reach provided 6000MW of new large-scale renewable energy capacity is built.²⁰ The CER estimates that 9000MW of additional capacity of large-scale renewables projects already have development approval which is more than sufficient to attain the 2020 RET.²¹ Various industry sources, however, are not so optimistic about the ability to meet the RET by 2020. Energy retailers have been reluctant to write long term PPAs which are required by financiers who have been disinclined to take merchant risk. Moreover, the price of LGCs being traded are near the penalty rate causing concern that this will disincentivise retailers from purchasing them and instead choose to pay the penalty and pass this cost onto consumers. The restoration of Australia amongst the top 10 most attractive countries to invest in renewable projects does demonstrate some industry confidence gained from the amended 2015 RET, policy certainty and renewable oppourtunities in Australia.²²

The recent July 2016 Federal Election may also have implications for renewable energy policy and development. The Coalition was reinstated as Federal Government, claiming 76 seats in the House of Representatives. Yet despite this majority, political uncertainty over the future of renewable energy remains. The Labor Opposition Government is supportive of renewable energy, however, the new composition of the Senate, with new parties and independents winning seats, means it is unpredictable. Moreover, recent electricity price volatility, especially in South Australia, New South Wales and Queensland, has led to negative press which may affect future energy policy and investment confidence.²³

Many industry bodies, including the Clean Energy Council, have advocated for the RET to be extended beyond the 2020 target to provide long term certainty for the sector and a stable growth pipeline.²⁴ The CER has also commented that financing has a large influence on the pace of future construction and financiers' confidence is impacted by the lack of long-term RET.²⁵

¹⁸ 'Clean energy sector 'uninvestable' due to renewable energy target uncertainty, analyst says', *Australian Broadcasting Corporation*, 12 January 2014, <http://www.abc.net.au/news/2015-01-12/ret-clean-energy-sector-uninvestable-analyst-says/6013090>

¹⁹ *Corporate Structure* (1 July 2015) Australian Government: Clean Energy Regulator <http://www.cleanenergyregulator.gov.au/About/Who-we-are/Corporate-structure>

²⁰ *Renewable Energy Target*, 2015 Administrative Report and Annual Statement, Clean Energy Regulator, 8.

²¹ *Ibid* 10.

²² *Renewable energy country attractiveness index* (May 2016) Issue 47 RECAI10.

²³ Will Turnbull's Coalition stand up to Australia's energy oligopoly?', *Reneweconomy*, 11 July 2016, <http://reneweconomy.com.au/2016/can-turnbulls-coalition-stand-australias-energy-oligopoly-67416>

²⁴ Power shift: A Blueprint for a 21st Century Energy System, *Clean Energy Council* 17.

²⁵ Tristan Edis, *Why the Renewable Energy Target won't be met in 2018* (11 February 2016) <http://reneweconomy.com.au/2016/why-the-renewable-energy-target-wont-be-met-in-2018-2018>.

Renewable energy policy and legislative framework – Commonwealth

Carbon Pricing Mechanism and the Clean Energy Plan

In July 2014, Parliament passed the *Clean Energy Legislation (Carbon Tax Repeal) Act 2014* (Cth), which repealed the Carbon Pricing Mechanism (**CPM**) that had been in place since July 2012. The CPM was originally introduced by the *Clean Energy Act 2011* (Cth) and the associated package of legislation comprising the former Labor Government's Clean Energy Plan.

Under the CPM, liable entities were required to purchase and surrender to the Federal Government a permit for every tonne of greenhouse gas emissions that it emits that is covered by the CPM. The price of permits was to be fixed for the first three years of the CPM. It was intended that, from 1 July 2015, the price of permits would be set by the market and the number of permits issued by the Federal Government will be capped based on emissions data. It was proposed for the CPM to link with the EU emissions trading scheme from 2015. Although the CPM did not directly incentivise renewable energy development, putting a price on carbon was intended to provide an economic driver to incentivise investment in renewable energy in preference to emissions-intensive fossil fuel derived energy.

Other measures implemented by the previous federal government included the creation of the Clean Energy Finance Corporation (**CEFC**) and the Australian Renewable Energy Agency (**ARENA**).

The CEFC was created to facilitate and coordinate up to \$10 billion of investment in renewable energy, enabling technologies, energy efficiency and low-emissions technologies. The aim of the CEFC is to unlock significant new private sector investment by providing equity investments, commercial loans and loan guarantees, with equity to be reinvested in the CEFC.

Recently, in April, the CEFC and Palisade Investment Partners (**Palisade**) announced a new strategy valued at \$1 billion to encourage institutional investment in renewable energy developments.²⁶ The CEFC will allocate up to \$100 million of equity to the initial \$1 billion investment strategy and Palisade will commit to up to \$400 million of additional equity through a combination of managed funds and its Direct Investment Mandate clients (some of which currently include VicSuper, LGIASuper and Qantas Super). The strategy is working up to a 500MW project pipeline and aims to attract investors at an earlier stage of project development to accelerate the construction of commercially viable projects and begin generating energy as soon as possible.

ARENA is an independent statutory body established with the aim of making renewable energy solutions more affordable and to increase the amount of renewable energy used in Australia. It was announced with an initial budget of \$3.2 billion (later revised to \$2.5 billion) in government funding to manage until the year 2022 to support a range of projects and technologies, with a particular focus on emerging and newly developed technologies and improvements, renewable energy in regional areas and knowledge sharing.

ARENA also has a range of funding programmes to support technologies and increase investor confidence in projects to improve their chances of success. ARENA's new Advancing Renewables Programme contributes to a wide range of projects and activities that have the potential to reduce the cost and increase the use of renewable energy technologies in Australia, in the long term. As part of this Programme, ARENA has allocated \$100 million in funding to support large-scale solar PV projects selected through its competitive round. 22 high merit projects, located in all mainland states, were chosen to advance to the full application stage which closes June 2016. The conclusion of these projects will be critical in supporting cost reduction in large-scale solar PV technology, and closing the cost gap between the technology and other commercial alternatives to power generation. It is also a positive step towards developing the installed capacity of comparable international markets.

²⁶ CEFC Media, Releases and announcements, *CEFC and Palisade draw major funds to support renewable energy projects valued at \$1 billion*, 14 April 2016 [http://www.cleanenergyfinancecorp.com.au/media/releases-and-announcements/files/cefc-and-palisade-draw-major-funds-to-support-renewable-energy-projects-valued-at-\\$1-billion.aspx](http://www.cleanenergyfinancecorp.com.au/media/releases-and-announcements/files/cefc-and-palisade-draw-major-funds-to-support-renewable-energy-projects-valued-at-$1-billion.aspx)

In September 2016, ARENA announced 12 large scale projects with 480MW of capacity, which were awarded \$92 million in grants. French group Neoen won three projects which are located in NSW: Parkes Solar Farm, Griffith Solar Farm, and Dubbo Solar Farm. Canadian Solar won two grants for Oakey Solar Farm and Longreach Solar Farm which are both located in Queensland and have PPAs with the Queensland government. Four further projects located in Queensland received grants: Origin Energy's Darling Downs Solar Farm, Whitsunday Solar Farm, Genex Power's Kidston Solar Farm, and RATCH's Collinsville Solar Power Station. The remaining projects are located in New South Wales and Western Australia: Manildra Solar Farm, Goldwind's White Rock Solar Farm and APA Group's Emu Downs Solar Farm.

Following the 2013 Federal Government elections, the new Coalition Government introduced a package of 11 pieces of legislation into Federal Parliament that propose to abolish the CPM, the CEFC and the Climate Change Authority and to make further changes to a range of other measures associated with the previous Labor Government's clean energy plan. Whilst the CPM was repealed in July 2014 the majority of the Government's other measures were repeatedly blocked by the Senate, including the CEFC (Abolition) Bill 2014.

At the end of March 2016, the Government announced the retention of the CEFC and the introduction of a new \$1 billion dollar Clean Energy Innovation Fund (**CEIF**), which will be jointly managed by CEFC and ARENA. . There were also proposals to defund ARENA as part of wider budget-saving measures and replace it with the CEIF.²⁷ The CEIF is set to provide both equity and debt finance for clean energy projects and will focus on companies, business and projects at early stages of development that are seeking capital to support their growth to the next level of development.²⁸ More broadly, the CEFC has continued with its investment function, in accordance with high level policy directions issued by the Government through Investment Mandates.²⁹ The CEFC Board has also established their 2018 Portfolio Vision which divides portfolio investment into a 50% renewable energy portion and a 50% energy efficiency and low emissions portion. Under the CEFC Act, the CEFC receives \$2 billion each 1 July for these investments.

AGL has also announced that it will set up a new investment fund which it believes will generate up to \$2-3 billion worth of investment in renewable energy projects. The Powering Australian Renewables Fund is expected to deliver about 1000 megawatts of new renewables which represents about 20% of the total generation required to meet the current 2020 RET target. AGL will contribute \$200 million in equity and will seek investment partners for the new fund (such as super funds and banks).³⁰ This fund is expected to incentivise companies to participate in renewable energy projects by sharing the funding risk across a portfolio of projects, rather than a single project.

The Coalition's proposal in March 2016 to defund and replace ARENA with the CEIF was strongly opposed by state governments, various NGOs, researchers and the renewable energy industry, alike.³¹ However, in late December 2016, a defunding compromise to reduce ARENA's funding by \$500 million received bipartisan support. ARENA will continue its mandate with a budget of \$800 million over the next five years until 2021.

Direct action plan

The Federal Coalition Government's policy framework for clean energy and carbon reduction measures consists of a range of measures comprising the Direct Action Plan.

The centrepiece of the Direct Action Plan is the Emissions Reduction Fund (**ERF**), which has the stated aim of providing incentives for abatement activities across the Australian economy. At present, the ERF has been capped at \$2.55 billion over 4 years.

²⁷ <http://theconversation.com/australian-renewable-energy-agency-saved-but-with-reduced-funding-experts-react-65334>

²⁸ CEFC Media, Releases and announcements, *CEFC welcomes creation of Clean Energy Innovation Fund*, 23 March 2016 <http://www.cleanenergyfinancecorp.com.au/media/releases-and-announcements/files/cefc-welcomes-creation-of-clean-energy-innovation-fund.aspx>

²⁹ See e.g. the Ministerial Direction issued on 3 December 2015 <https://www.legislation.gov.au/Details/F2015L02114>

³⁰ Clean Energy Council, *AGL tests the wind with new renewable energy fund*, 10 February 2016 <https://www.cleanenergycouncil.org.au/news/2016/February/agl-new-powering-australian-renewable-energy-fund-wind-solar.html#sthash.IXeUdWTZ.dpuf>

³¹ Sophie Vorrath & Giles Parkinson, *Coalition, Labor agree to slash \$500m from ARENA budget*, <http://reneweconomy.com.au/coalition-labor-agree-to-slash-500m-from-arena-budget-83469/>.

There are three components to the ERF:

- **Crediting emission reductions** – Participants are to be issued with one Australian Carbon Credit Unit (ACCU) for each tonne of carbon dioxide equivalent stored or avoided through registered projects. The ACCUs can be traded and sold. Eligible activities include (but are not limited to) landfill gas capture, energy efficiency and land sector projects.
- **Purchasing emissions reductions** – Participants with registered projects can:
 - apply to enter into a contract with the Clean Energy Regulator to sell ACCUs to the Clean Energy Regulator through an auction process
 - sell their ACCUs in the secondary market
 - hold their ACCUs to offset emissions.
- **Safeguarding emissions reductions** – This component will be introduced on 1 July 2016 through a mechanism which aims to safeguard against the volume of emissions reductions being outweighed by significant emissions increases above business as usual levels.

In October 2014, the Parliament passed the *Carbon Farming Initiative Amendments Act 2014*, which amends the *Carbon Credits (Carbon Farming Initiative) Act 2011* to give effect to the ERF. Existing Carbon Farming Initiative Projects have been transitioned to the ERF. To date, there have been 2 auctions of Australian Carbon Credits under the scheme.

The 2015 Energy White Paper provides very little guidance on how the Coalition will achieve its RET.

Renewable energy policy and legislative framework – State

Planning and environmental approvals

State-based planning systems and associated guidelines will also impact upon aspects of renewable energy development such as the siting and design of wind farms and solar PV farms.

For example, in Victoria, *the Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria* (January 2016)³² (guidelines) provide guidance about suitable locations for wind energy facilities, a framework to ensure the thorough assessment of proposals for wind energy facilities and inform planning decisions in relation to a wind energy facility, including in relation to compliance with the Victorian Planning Provisions and the State Planning Policy Framework. Under the guidelines, wind turbines are excluded from (among other places) listed geographical areas (including the Yarra Valley, Dandenong Ranges, Bellarine and Mornington Peninsulas) and will not be permitted to be built within one kilometre of an existing dwelling without the written consent of the Owner of the dwelling. Similar legislation has been enacted in other jurisdictions including NSW.

All types of renewable energy, and wind energy in particular, have been the subject of debate generated by a small number of extremely vocal community groups. Recently, the Victorian Civil and Administrative Tribunal³³ directed the Mitchell Shire Council's decision to be set aside and a planning permit be granted to develop the Cherry Tree Wind Farm Pty Ltd near Seymour in Victoria, subject to the conditions set out in the decision. At paragraph 47 of its reasons, the Tribunal noted "[T]here is not sufficient evidence to establish that the proportion of the population residing in proximity to a wind farm which experiences adverse health effects is large enough to warrant refusal of a land use that is positively encouraged by planning policy." The Tribunal

32 Department of Environment, Land, Water and Planning, Policy and planning guidelines for development of wind energy facilities in Victoria http://www.dtpli.vic.gov.au/_data/assets/pdf_file/0011/231779/Policy-and-Planning-Guidelines-for-Development-of-Wind-Energy-Facilities-in-Victoria_January-2016.pdf

33 *Cherry Tree Wind Farm Pty Ltd v Mitchell Shire Council* P2910/2012, 26 November 2013, http://www.vcat.vic.gov.au/sites/default/files/cherry_tree_wind_farm_pty_ltd_v_mitchell_shire_council_decision.pdf

in that case referred to a number of studies, including publications from the Victorian Department of Health and others that expressly state that there is no scientific evidence to link wind turbines with adverse health effects.

In February 2015, the National Health and Medical Research Council (NHMRC)³⁴, Australia's peak medical and scientific research body, released an information paper finding that no reliable evidence exists that wind farms directly cause health issues. The paper considered nearly 2000 published references and around 249 public submissions addressing noise, shadow flicker and electromagnetic radiation produced by wind farms.

Further discussion regarding the environmental impacts of the development of renewable energy projects is set out below.

State government policies to facilitate renewable energy investment

A large number of policies to facilitate the development of and investment in renewable energy, particularly for small-scale solar PV, have been implemented by various state governments across Australia.

The ACT Government has been among the most active of the State and Territory Governments in terms of driving investment in medium and large scale wind and solar PV projects. These policies are driven by the ACT's previous targets of 90% of energy from renewable sources by 2020, 40% reduction in greenhouse gases by 2020 and carbon neutrality by 2060. In 2016, the ACT government legislated a new renewable energy target of 100% renewables by 2020. During 2012, the ACT Government issued an RFP for a 'reverse auction' under which bids were submitted to enter into a 20 year feed-in tariff for up to 40 MW of large-scale solar PV projects. The scheme was heavily oversubscribed. The 20 MW Royalla Solar Farm developed by FRV was awarded the fast track stream in September 2012 and reached financial close in August 2013. In August 2013, two further projects – Zhenfa's 13 MW Mugga Lane Solar Farm and the 7 MW OneSun Capital Solar Farm – were also awarded feed-in tariffs. An independent review tabled by the ACT Environment Minister found that the reverse solar auction process was effective, generated strong competition, resulted in positive industry feedback and provided value for money for consumers.³⁵

In March 2014, the ACT Government enacted legislation to expand the scope of the large-scale renewables feed-in tariff scheme to lift the current 210MW cap to 550MW and to expand its application to projects in the Australian Capital Region and beyond in certain circumstances. The ACT Government also announced that it would expand the scope of the large-scale feed-in tariff scheme to incorporate auctions for wind and waste-to-energy projects, as well as further solar PV projects. The ACT Government also has a medium-scale renewable energy feed-in tariff in place. The large-scale feed-in tariff scheme incorporated an auction process for 200 MW of wind powered generation facilities, which was closed in September 2014. The ACT Government received 18 submissions, with a combined generation capacity of more than 1,000 MW³⁶. The winning bidders are expected to provide 24.0% of the ACT's electricity consumption. The three successful projects were:

- Coonoer Bridge Wind Farm, developed by Windlab
- Hornsdale Wind Farm, developed by Neoen and Megawatt Capital
- the Ararat Wind Farm, developed by RES.

In August 2015, the ACT Government invited interested parties to participate in its Second Wind Auction. Successful projects included Stage 2 of the 100MW wind farm proposed by Hornsdale Wind Farm and the 100MW Sapphire Wind Farm (Stage 1). The Hornsdale Wind Farm will be located south-east of Port

³⁴ National Health and Medical Research Council, *Information Paper – Evidence on Wind Farms and Human Health*, February 2015 https://www.nhmrc.gov.au/files_nhmrc/publications/attachments/eh57a_information_paper.pdf

³⁵ ACT Government, Environment and Sustainable Development Directorate, *ACT Solar Auction Review*, October 2013 http://www.environment.act.gov.au/data/assets/pdf_file/0004/581602/ACT_Solar_Auction_Review_-_Summary_Report.pdf

³⁶ Environment and Planning Directorate, 'Strong bidding in wind auction good news for Canberra', 8 September 2014, http://www.cmd.act.gov.au/open_government/inform/act_government_media_releases/corb/2014/strong-bidding-in-wind-auction-is-good-news-for-canberra

Augusta, South Australia, while the Sapphire Wind Farm will be located in northern New South Wales. The Sapphire Wind Farm is to be developed by CWP Renewables and is expected to commence construction in late 2016.³⁷ In August 2016, the ACT Government also awarded a 20 year feed-in tariff contract to 91MW Crookwell 2 Wind Farm which will be developed by Union Fenosa Wind Australian and located near Goulburn in New South Wales, and 109MW Hornsdale Wind Farm (Stage 3) developed by Neoen International SAS and Megawatt Capital.³⁸ This award forms part of the government's fourth reverse auction which supports the Next Generation Renewables Program. The output from these two wind farms is not only sufficient to secure the ACT's 100% renewable energy target by 2020,³⁹ but marks a record low benchmark price at \$86.60/MWh and \$73/MWh, respectively. The fifth and final winner of the ACT Government's large-scale wind reverse auction was the 270MW Sapphire wind farm located near Glen Innes in New South Wales

A number of other states and territories, including South Australia, Queensland, Victoria and the Northern Territory, have also implemented renewable energy targets to promote investment in the renewable energy sector. Queensland aims to achieve a renewable energy target of 50% by 2030. South Australia has also set a renewable energy target of 50% by 2025, after achieving its previous target of 33% renewable energy by 2020 in 2013-2014. In fact, at the end of 2016, South Australia was on track to reach its 50% RET⁴⁰. In June 2016, the Victorian Labor Government committed to renewable energy targets of 25% by 2020 and 40% by 2025.⁴¹ In December 2016, shortly after the Northern Territory Labor Government was elected in August, the government committed to adopting a target of 50% renewable energy by 2030.⁴²

Following the success of the ACT Government's reverse auction schemes, Queensland and Victoria have sought to implement their own schemes. In late 2015, the newly elected Queensland Labor government increased its initial 40MW proposal for a large scale solar auction to 150MW under its new Solar 150 initiative.⁴³ Additionally, the Victorian Government plans to hold a number of staged auctions which will commence in 2017 and extend until 2025. These will include "solar-only" and technology neutral streams. The first round of auctions in 2017 are expected to generate 1800MW of new capacity and are intended to be built by 2020. In August 2016, the Victorian scheme was opened up to businesses and community for consultation on the design of major aspects including contractual arrangements, cost recovery mechanisms and auction evaluation principles.⁴⁴

In early December 2016, the Victorian Labor government appointed former ACT Environment and Climate Change Minister Simon Corbell as Victorian Renewable Energy Advocate (**VREA**) to assist the State's RET of 40% renewable energy by 2025.⁴⁵ Corbell pioneered the ACT's large scale feed in tariff and reverse auction schemes which supported the large-scale renewable energy industry during times of ongoing RET uncertainty.

³⁷ Department of Industry: Resources & Energy, *\$200 million NSW wind farm helps Australia's capital meet Renewable Energy Target*, NSW Government, [http://www.resourcesandenergy.nsw.gov.au/about-us/news/2016/\\$200-million-nsw-wind-farm-helps-australias-capital-meet-renewable-energy-target](http://www.resourcesandenergy.nsw.gov.au/about-us/news/2016/$200-million-nsw-wind-farm-helps-australias-capital-meet-renewable-energy-target).

³⁸ Ibid.

³⁹ ACT Government, *Next Generation Energy Storage Grants*, <http://www.environment.act.gov.au/energy/cleaner-energy/next-generation-renewables> (last updates 7th November 2016).

⁴⁰ Giles Parkinson, 19 Sept 2016, http://reneweconomy.com.au/n-t-appoints-wind-solar-experts-to-50-renewables-panel-73451/?utm_source=RE+Daily+Newsletter&utm_campaign=b10fe0ece3-EMAIL_CAMPAIGN_2016_12_18&utm_medium=email&utm_term=0_46a1943223-b10fe0ece3-40370721.

⁴¹ Hon Daniel Andrews MP Media Release (15 June 2016), *Renewable Energy Targets to Create Thousands of Jobs*, Premier of Victoria <http://www.premier.vic.gov.au/renewable-energy-targets-to-create-thousands-of-jobs/>

⁴² *NT Government's Renewable Energy Panel holds first meeting*, 16 December 2016, <https://nt.gov.au/news/2016/december/nt-governments-renewable-energy-panel-holds-first-meeting>.

⁴³ Giles Parkinson, *Queensland lifts large scale solar auction target to 60MW*, Renew Economy <http://reneweconomy.com.au/2015/queensland-lifts-large-scale-solar-auction-target-to-60mw-67559>.

⁴⁴ Media Release, 5th August 2016, 'Have your say on Victoria's renewable energy auctions', <https://284532a540b00726ab7e-f7c063c60e1f1cafc9413f00ac5293c.ssl.cf4.rackcdn.com/wp-content/uploads/2016/08/160805-Have-Your-Say-On-Victoria%E2%80%99s-Renewable-Energy-Auctions.pdf>.

⁴⁵ Hon Daniel Andrews MP, *Simon Corbell Victoria's Renewable Energy Advocate*, 9th December 2016, <http://www.premier.vic.gov.au/simon-corbell-victorias-renewable-energy-advocate/>

Moreover, certain local governments in New South Wales and Victoria are promoting Environmental Upgrade Funding, a method of financing that provides funding from \$250,000 to \$10 million plus for the retrofitting of commercial buildings with 'sustainable' features such as energy efficiency lighting and heating/cooling, in addition to small solar PV installations. A number of Lenders are offering special products for Environmental Upgrade Agreements in tandem with local governments with competitive interest rates compared with traditional lending.

Features of wind and solar facilities

Wind facilities

A wind farm typically comprises a series of wind turbines, a substation, cabling (to connect the wind turbines and substation to the electricity grid), wind monitoring equipment and temporary and permanent access tracks. The wind turbines used in commercial wind farms are large rotating, three bladed machines that typically produce between 1MW and 3MW of output. Each wind turbine is comprised of a rotor, nacelle, tower and footings. The height of a tower varies with the size of the generator but can be as high as 100m. The number of turbines depends on the location and capacity of turbines.

The amount of power a wind generator can produce is dependent on the availability and the speed of the wind. The term "capacity factor" is used to describe the actual output of a wind energy facility as the percentage of time it would be operating at maximum power output.

Wind farms need to be located on sites that have strong, steady winds throughout the year, good road access and proximity to the electricity grid. Australia has one of the world's best wind resources, especially along the southeast coast of the continent and in Tasmania.

Solar PV facilities

Solar PV facilities utilise PV cells which are assembled to form PV panels or modules that are then lined up into solar arrays, PV cells convert sunlight into electric current using the photoelectric effect. Most solar arrays use an inverter to convert the DC power produced by the PV panels into AC power. Solar PV plants can use either fixed-mount solar arrays or automated tracking systems that allow the solar arrays to follow the sun's daily path across the sky and optimise electricity production.

A solar PV facility typically comprises a series of PV panel arrays and inverters, mounts, trackers (if used), cabling, monitoring equipment, substation and access tracks.

The amount of electricity generated by a PV facility will be dependent on a number of factors including the type and positioning of the panels and whether trackers are used.

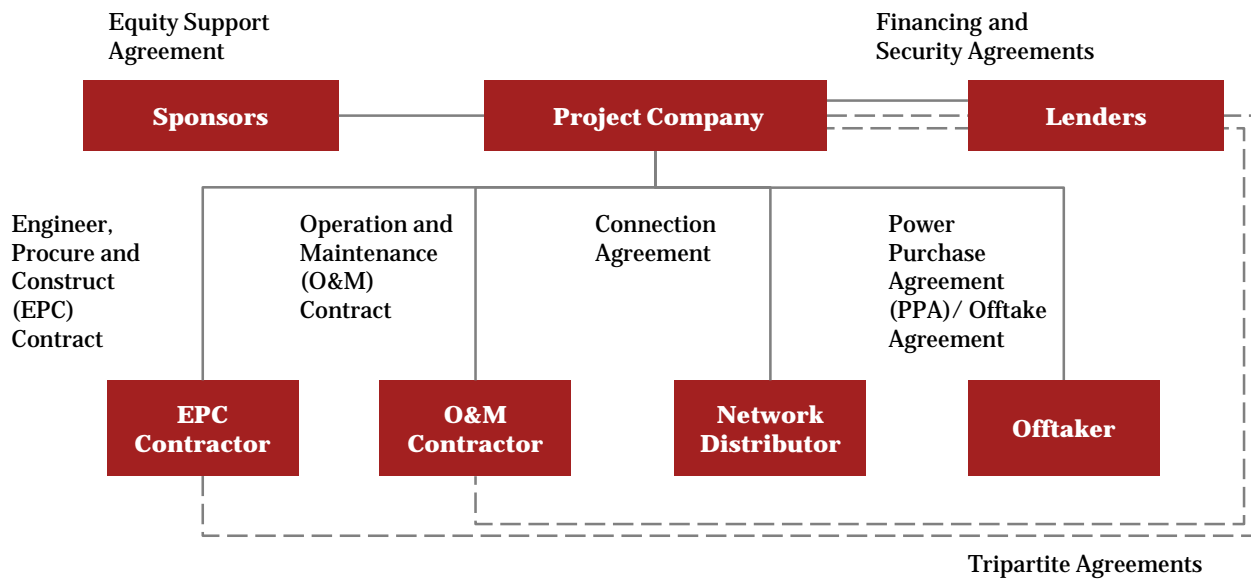
Solar thermal facilities

There are four primary technologies used in solar thermal facilities – Parabolic trough, solar tower, fresnel refractors and solar dish. Of these, the technology used in parabolic trough facilities is currently the most commercially mature, being used in 94% of solar thermal projects worldwide, followed by that used in solar tower facilities. The basic features of a solar thermal facility vary by technology but are essentially comprised of an array of mirrors used to concentrate sunlight and produce heat and steam to generate electricity using the conventional thermodynamic cycle. In parabolic trough projects, for example, curved mirrors concentrate the sun's rays on a focal line and synthetic oil, steam or molten salt is used to transfer the solar heat to a steam generator.

One of the main features driving the commercialisation of solar thermal technology is the ability to incorporate storage systems using synthetic oil or molten salt. Some solar thermal facilities with molten salt storage have storage capacities of 6-15 hours, which increase the capacity factors of the plants significantly.

Contractual structure

The diagram below illustrates the basic contractual structure of a typical project financed renewable energy project.



The detailed contractual structure will vary from project to project. For example, in some wind and hydro projects, the scope of work generally performed under an EPC Contract is split into a Turbine Supply Contract and a Balance of Plant (BOP) Contract, with the performance guarantees during the operating phase of the facility dealt with in a warranty operating and maintenance contract (WOM). However, for the purpose of this paper we have examined a project with the basic structure illustrated above.

As can be seen from the diagram, the Project Company⁴⁶ will usually enter into following agreements comprising the project documents:

- **Construction contract** – Governs various elements of the construction of the facility including the supply and assembly of equipment (such as turbines or PV panels) and construction of the balance of the plant comprising civil and electrical works. As outlined above, there are a range of contracting methods that may be used, from an EPC Contract (under which a Contractor is obliged to deliver a complete facility to a Developer who need only ‘turn a key’ to start operating the facility) to a split contracting structure (with the supply, design and construction of the facility all performed by separate parties, with or without a project manager). The choice of contracting approach will depend on a number of factors including the time available, Lender requirements, identity of the Contractor(s) and whether the Contractor is willing to ‘wrap’ or guarantee the performance of the components of the facility (eg panels, turbines). The major advantage of the EPC Contract over the other possible approaches is that it provides for a single point of responsibility. This is discussed in more detail below. In our experience most utility scale renewable energy projects use EPC Contracts.

⁴⁶ Given this paper focuses on project financed infrastructure projects we refer to the Employer as the Project Company. Whilst project companies are usually limited liability companies incorporated in the same jurisdiction as the project is being developed in the actual structure of the Project Company will vary from project to project and jurisdiction to jurisdiction

Interestingly, on large project financed projects the Contractor is increasingly becoming one of the Sponsors, (ie an equity participant in the Project Company). Contractors will ordinarily sell down their interest after financial close because, generally speaking, Contractors will not wish to tie up their capital in operating projects. In addition, once construction is complete the rationale for having the Contractor included in the Ownership consortium no longer exists. Similarly, once construction is complete a project will normally be reviewed as lower risk than a project in construction and therefore, all other things being equal, the Contractor should achieve a good return on its investment when selling down

- **Operation and maintenance contracts** – Are generally comprised of a long-term operating and maintenance contract (O&M contract) with an Operator, though the term will vary from project to project depending on factors such as the location, technology and PPA available. The Operator may be a Sponsor, particularly if one of the Sponsors is an independent power producer or utility company whose main business is operating wind or solar facilities. In some financing structures the Lenders will require the Project Company itself to operate the facility. In those circumstances the O&M contract will be replaced with a WOM contract with the manufacturer and supplier of the major equipment supplied, for example, in the case of a wind farm, the wind turbine generators.
- **PPA or offtake agreement** – Under which the Project Company will sell the electricity produced by the facility to a purchaser or ‘offtaker.’ In traditional project financed power projects there will be a power purchase agreement (PPA) between the Project Company and an offtaker such as an electricity retailer, large electricity consumer or government, under which the retailer or government undertakes to pay for a set amount of electricity for a specified amount of time, regardless of whether it actually takes that amount of electricity (referred to as a “take or pay” obligation). In turn, the Project Company will undertake to produce a minimum quantity of electricity. Sometimes a tolling agreement is used instead of a PPA, under which the power purchaser directs how the plant is to be operated and dispatched.

Merchant power projects without a PPA in place do not have the same certainty of cash flow as they would if there was a PPA, and are generally considered higher risk than non-merchant projects. This risk can be mitigated by entering into synthetic PPAs or hedge agreements to provide some certainty of revenue.

These agreements are financial hedges as opposed to physical sales contracts. These are discussed in further detail below.

- **Connection agreement** – For connection of the facility’s generation equipment into the relevant grid or electricity distribution or transmission network between the Project Company and the Owner of the network (a transmission company, distribution company, electricity utility or small grid Owner/Operator). The connection agreement will broadly cover the construction and installation of connection facilities and the terms and conditions under which electricity generated by the facility will be exported into the grid. A connection agreement will not be required where the facility is not connected to the grid, such as in the case of a ‘captive’ facility with a single offtaker.
- **Concession agreement** – In traditional power projects, a concession or project agreement is entered into between the Project Company and a government entity granting the Project Company a concession to build and operate the facility for a fixed period of time (usually between 15 and 25 years), after which it was handed back to the government. However, following the deregulation of electricity industries in many countries, merchant or independent power producer renewable energy projects are becoming increasingly prevalent. Merchant power projects do not normally require a concession agreement to be entered into – The Project Company will instead be required to obtain the necessary regulatory consents to construct and operate the project. The nature and extent of these approvals will vary from place to place, but will generally include planning, environmental and building approvals and approvals and licences to sell electricity into the market.
- **Financing and security agreements** – With the Lenders to finance the development of the project.

It is critical that the above-listed suite of documents that govern the development, construction and long-term operation of a renewable energy facility are, where practical, tailored so as to be consistent and aligned from a risk allocation perspective with the requirements of the other project documents. Further, it is vital to properly manage the interfaces between the various types of agreements.

Bankability

A bankable contract is a contract with a risk allocation between the Contractor and the Project Company that satisfies the Lenders. Lenders focus on the ability (or more particularly the lack thereof) of the Contractor to claim additional costs and/or extensions of time as well as the security provided by the Contractor for its performance. The less comfortable the Lenders are with these provisions, the greater amount of equity support the Sponsors will have to provide. In addition, Lenders will have to be satisfied as to the technical risk of the technology proposed and other project-specific features. Obviously price is also a consideration, but that is usually considered separately to the bankability of the contract because the contract price (or more accurately the capital cost of the facility) goes more directly to the bankability of the project as a whole.

Before examining the requirements for bankability, it is worth briefly considering the appropriate financing structures and lending institutions. The most common form of financing for infrastructure projects is project financing. Project financing is a generic term that refers to financing secured only by the assets of the project itself. Therefore, the revenue generated by the project must be sufficient to support the financing. Project financing is also often referred to as either “non-recourse” financing or “limited recourse” financing.

The terms “non-recourse” and “limited recourse” are often used interchangeably, however they mean different things. “Non-recourse” means there is no recourse to the project Sponsors at all and “limited recourse” means, as the name suggests, there is limited recourse to the Sponsors. The recourse is limited both in terms of when it can occur and how much the Sponsors are forced to contribute. In practice, true non-recourse financing is rare. In most projects the Sponsors will be obliged to contribute additional equity in certain defined situations.

Traditionally project financing was provided by commercial Lenders. However, as projects became more complex and financial markets more sophisticated, project finance also developed. The size of the debt required to develop a complex project means that in many cases the debt will be syndicated across multiple commercial Lenders. Additional mezzanine and other subordinated forms of debt may also be used.

Whilst commercial Lenders still provide finance, governments now also provide financing either through export credit agencies⁴⁷ or trans or multinational organisations like the World Bank, the Asian Development Bank and European Bank for Reconstruction and Development. Sponsors are also using more sophisticated products like credit wrapped bonds, securitisation of future cash flows and political risk insurance to provide a portion of the necessary finance. For example, in 2013 a ZAR 1,000,000,000 (approximately than AU\$100 million) solar financing bond was issued by an affiliate of Soitec Solar to finance the construction of a 44 MW utility-scale concentrator photovoltaic (CPV) solar power plant in Touwsrivier, South Africa⁴⁸.

In assessing bankability, Lenders will look at a range of factors and assess a contract as a whole. Therefore, in isolation it is difficult to state whether one approach is or is not bankable. Generally speaking the Lenders will require the following elements to be included for a contract to be considered to be ‘bankable’:

- A fixed completion date
- A fixed completion price
- No or limited technology risk
- Output guarantees
- Liquidated damages for both delay and performance
- Security from the Contractor and/or its parent

⁴⁷ Export credit agencies are bodies that provide finance on the condition that the funds are used to purchase equipment manufactured in the country of the export credit agency

⁴⁸ <http://www.soitec.com/en/investors/financial-press-releases/soitec-completes-zar-1-000-000-000-inaugural-solar-financing-bond-transaction-in-south-africa-1275/>

- Large caps on liability (ideally, there would be no caps on liability, however, given the nature of EPC Contracting and the risks to the Contractors involved there are almost always caps on liability)
- Restrictions on the ability of the Contractor to claim extensions of time and additional costs.

An EPC Contract delivers all of the requirements listed above in one integrated package. This is one of the major reasons why they are the predominant form of construction contract used on large-scale project financed infrastructure projects. Lenders have become comfortable with the interface risk arising in a split EPC structure and will focus on the remedies for underperformance in the WOM.

Sponsor support

In certain cases, it may be necessary to provide Sponsor support to strengthen the capacity of the Project Company to satisfy its obligations to the banks and to have a “bankable” project. Forms of Sponsor support may include equity subscription agreements (base and standby equity), completion guarantees of whole or part of the debt until the project commences commercial operation, bank guarantees to support the completion guarantee and cost overrun guarantees/facility. Completion guarantees, for example, ensure that the Lenders will be paid back a set amount if the facility does not reach completion or the repayment of scheduled debt service, of Principal plus interest, if completion is delayed. Other forms of support may be incorporated where the Sponsor is a party to a key project contract (such as a construction contract, O&M agreement or offtake agreement) by requiring the Sponsor to provide additional guarantee letters of credit or corporate support to underpin the project.

Merchant PPA

As noted above, to ensure certainty of revenue project Sponsors will generally prefer to enter into a long-term PPA in respect of the energy produced by a renewable energy facility. Where this is not available or not available on terms satisfactory to the Sponsors, the Sponsors will be required to enter into merchant arrangements and sell directly into the electricity spot market. For a fully merchant project (FMP), versus a fully or partly contracted project, from the Sponsor perspective the expected IRR will obviously need to increase to account for the significantly increased risk in returns the project will be experiencing due to exposure to spot prices.

Some FMPs may seek to implement an electricity hedge programme to reduce pricing risk in an otherwise merchant transaction. Beyond the amount of generation hedged and beyond the term of the implemented hedge, spot market pricing risk will remain. If the project and the Lenders required these hedges, their renewal on expiry (ie rolling hedges) would most likely need to be documented to involve the Lenders, or otherwise meet pre-agreed minimum criteria.

Any Lender requirement for long term foundation hedges will come down to being able to model an acceptable return for the Sponsor and Lenders. Lenders will also look to the credibility and financial strength of any offtake swap providers. In some cases, the Lenders’ own internal energy trading desk may be involved, provided there is a certain level of certainty regarding expected generation from the facility.

It can generally be anticipated that both the gearing and ratios for a FMP will be higher than for projects with full or partial PPAs in place.

Gearing could be expected to be around 45-50% for an FMP, as opposed to 60-75% for a project which had hedged/set prices for whatever it was able to generate. Our understanding is that the gearing for a recent Australian merchant wind project was 50%, but since then merchant prices have declined along with price forecasts, which could push gearing even lower.

From a Lenders’ perspective, with a long term PPA in place with known price for an accepted generation profile contracted, Debt Service Cover Ratios could be expected to be around 1.40x. If the price for the entire generation profile is not known however, given the spot price risk a DSCR of around 2.0x may be required (on a conservative forward price assumption). The higher DSCR is required on the basis that it is anticipated that far greater revenue will need to be achieved for the scheduled debt service costs.

We understand that some Lenders are contemplating the possibility of using a blended DSCR in modelling the bankability of renewable energy projects. For example, if 30% of anticipated generation is the subject of a hedge, that portion of the project may have a DSCR of 1.4x. The remainder of anticipated generation (including

the tail end of the contracted portion, which a financier would assume reverts to spot price risk) would need to achieve a higher DSCR, say around 2.0x.

Basic features of an EPC Contract

The key clauses in any construction contract are those that impact on time, cost and quality.

The same is true of EPC Contracts. However, EPC Contracts tend to deal with issues with greater sophistication than other types of construction contracts. This is because, as mentioned above, an EPC Contract is designed to satisfy the Lenders' requirements for bankability.

EPC Contracts provide for:

- **A single point of responsibility** – The Contractor is responsible for all design, engineering, procurement, construction, commissioning and testing activities. Therefore, if any problems occur the Project Company need only look to one party – The Contractor – To both fix the problem and provide compensation. As a result, if the Contractor is a consortium comprising several entities, the EPC Contract must state that those entities are jointly and severally liable to the Project Company
- **A fixed contract price** – Risk of cost overruns and the benefit of any cost savings are to the Contractor's account. The Contractor usually has a limited ability to claim additional money, which is limited to circumstances where the Project Company has delayed the Contractor or has ordered variations to the works
- **A fixed completion date** – EPC Contracts include a guaranteed completion date that is either a fixed date or a fixed period after the commencement of the EPC Contract. If this date is not met the Contractor is liable for Delay Liquidated Damages (DLDs). DLDs are designed to compensate the Project Company for loss and damage suffered as a result of late completion of the facility. To be enforceable in common law jurisdictions, DLDs must be a genuine pre-estimate of the loss or damage that the Project Company will suffer if the facility is not completed by the target completion date. The genuine pre-estimate is determined by reference to the time the contract was entered into.

DLDs are usually expressed as a rate per day, which represents the estimated extra costs incurred (such as extra insurance, supervision fees and financing charges) and losses suffered (revenue forgone) for each day of delay.

In addition, the EPC Contract must provide for the Contractor to be granted an extension of time when it is delayed by the acts or omissions of the Project Company. The extension of time mechanism and reasons why it must be included are discussed below.

Performance guarantees. The Project Company's revenue will be earned by operating the facility. Therefore, it is vital that the wind farm or solar farm performs as required in terms of output and reliability. As such EPC Contracts contain performance guarantees backed by compensation measures such as Performance Liquidated Damages (PLDs), payable by the Contractor if it fails to meet the performance guarantees. These mechanisms are described in further detail below.

PLDs must be a genuine pre-estimate of the loss and damage that the Project Company will suffer over the life of the project if the wind farm does not achieve the specified performance guarantees. As with DLDs, the genuine pre-estimate is determined by reference to the time the contract was signed. PLDs usually represent a net present value (NPV) (less expenses) calculation of the revenue forgone over the life of the project if the relevant performance guarantees are not met.

PLDs and the performance guarantee regime and its interface with DLDs and the delay regime is discussed in more detail below.

Caps on liability. As mentioned above, most EPC Contractors will not, as a matter of company policy, enter into contracts with unlimited liability. Therefore, EPC Contracts for power projects cap the Contractor's liability at a percentage of the contract price. This varies from project to project; however, an overall liability cap of 100% of the contract price is common. In addition, there are normally sub-caps on the Contractor's liquidated damages liability. For example, DLDs and PLDs might each be capped at 15% of the contract price, with an overall cap on both types of liquidated damages of 25% of the contract price.

There will also generally be an exclusion of consequential or indirect loss. Put simply, consequential damages are those damages that do not flow directly from a breach of contract, but which were in the reasonable contemplation of the parties at the time the contract was entered into. This used to mean heads of damage like loss of profit. However, loss of profit is now usually recognised as a direct loss on project financed projects and, therefore, would be recoverable under a contract containing a standard exclusion of consequential loss clause.

Given the unclear position under Australian law, parties must ensure that an exclusion of liability clause is carefully drafted. Importantly, the clause should set out clearly and exhaustively expressed in detail those losses which are intended to be categorised as consequential. Where presented with a clause excluding liability for consequential loss, project companies must expressly state the categories of loss for which the Contractor will be liable. This essentially means that project companies will need to include a definition of Direct Loss which would identify losses that are within the contemplation of the parties, (eg in a project financing of a power or process plant project a Direct Loss should include loss of revenue under a corresponding PPA). Clearly this may be difficult to negotiate, but this should nevertheless be the starting position.

Nonetheless, care should be taken to state explicitly that liquidated damages can include elements of consequential damages. Given the rate of liquidated damages is pre-agreed, most Contractors will not object to this exception to the exclusion on consequential loss.

In relation to both caps on liability and exclusion of liability, it is common for there to be some exceptions. The exceptions may apply to either or both the cap on liability and the prohibition on claiming consequential losses. The exceptions themselves are often project specific; however, some common examples include fraud or wilful misconduct, death or personal injury and breaches of intellectual property warranties.

Security. It is standard for the Contractor to provide performance security to protect the Project Company if the Contractor does not comply with its obligations under the EPC Contract. The security takes a number of forms including:

- A bank guarantee for a percentage, normally in the range of 5-15%, of the contract price. The actual percentage will depend on a number of factors including the other security available to the Project Company, the payment schedule (the greater the percentage of the contract price remaining unpaid by the Project Company at the time it is likely to draw on security to satisfy DLD and PLD obligations, the smaller the bank guarantee can be), the identity of the Contractor and the risk of it not properly performing its obligations, the price of the bank guarantee and the extent of the technology risk associated with the facility. The Project Company and the Lenders will generally require minimum standards in respect of the entity providing the guarantee, such as a minimum Standard & Poor's rating, and may also require the ability to approve the specific provider of the guarantee
- Retention, ie withholding a percentage (usually 5%-10%) of each payment. Provision may be made to replace retention monies with a bank guarantee (sometimes referred to as a retention guarantee or retention bond). However, cash retention and retention guarantees/bonds are less prevalent in the current market as both project companies and Lenders prefer this to be incorporated into the bank guarantee
- Advance payment guarantee, if an advance payment is made. This is generally in the form of a bank guarantee to the value of the advance payment
- Parent company guarantee, from the ultimate parent (or other suitable related entity) of the Contractor, which provides that it will perform the Contractor's obligations if, for whatever reason, the Contractor does not perform.

Variations. The Project Company has the right to order variations and agree to variations suggested by the Contractor. If the Project Company wants the right to either omit works in their entirety or to be able to engage a different Contractor, this must be stated specifically. In addition, a properly drafted variations clause should make provision for how the price of a variation is to be determined. In the event the parties do not reach agreement on the price of a variation, the Project Company or its representative should be able to determine the price. This determination is subject to the dispute resolution provisions. In addition, the variations clause should detail how the impact, if any, on the performance guarantees is to be treated. For some larger variations the Project Company may also wish to receive additional security. If so, this must also be specified within the variations clause.

Defects liability. The Contractor is usually obliged to repair defects that occur in the 12 to 24 months following completion of performance testing. Defects liability clauses can be tiered, ie the clause can provide for one period for the entire facility and a second, extended period for more critical items (eg wind turbines or PV panels). In such cases, the Project Company will usually seek to ensure that it is protected by manufacturer's warranties (discussed in further detail below).

Intellectual property. The Contractor warrants that it has rights to all intellectual property used in the execution of the works and indemnifies the Project Company if any third parties' intellectual property rights are infringed.

Force majeure. The parties are excused from performing their obligations if a force majeure event occurs. This is discussed in more detail below.

Suspension. The Project Company usually has the right to suspend the works.

Termination. This sets out the contractual termination rights of both parties. The Contractor usually has very limited contractual termination rights. These rights are limited to the right to terminate for non-payment or for prolonged suspension or prolonged force majeure and will be further limited by the tripartite agreement between the Project Company, the Lenders and the Contractor. The Project Company will have more extensive contractual termination rights. They will usually include the ability to terminate immediately for certain major breaches or if the Contractor becomes insolvent and the right to terminate after a cure period for other breaches. In addition, the Project Company may have a right to terminate for convenience. It is likely the Project Company's ability to exercise its termination rights will also be limited by the terms of the financing agreements.

Performance specification. Unlike a traditional construction contract, an EPC Contract usually contains a performance specification. The performance specification details the performance criteria that the Contractor must meet. However, it does not dictate how such criteria must be met. This is left to the Contractor to determine. A delicate balance must be maintained. The specification must be detailed enough to ensure the Project Company knows what it is contracting to receive but not so detailed that if problems arise the Contractor can argue that the issues are not its responsibility.

Potential drawbacks of using an EPC Contract

Whilst there are, as described above, numerous advantages to using an EPC Contract, there are some disadvantages. These include the fact that an EPC Contract may command a higher contract price than alternative contractual structures. One factor is the allocation of almost all the construction risk to the Contractor. This has a number of consequences, one of which is that the Contractor will have to factor into its price the cost of absorbing those risks. This will result in the Contractor building contingencies into the contract price for events that are unforeseeable and/or unlikely to occur. If those contingencies were not included, the contract price would be lower. However, the Project Company would bear more of the risk of those unlikely or unforeseeable events, which may not be acceptable to the Lenders. Sponsors have to determine, in the context of their particular project, whether the strict risk allocation is warranted in the face of the increased price.

As a result, Sponsors and their advisors must critically examine the risk allocation on every project. Risk allocation should not be an automatic process. Instead, the Project Company should allocate risk in a sophisticated way that delivers the most efficient result. For example, if a project is being undertaken in an area with unknown geology and without the time to undertake a proper geotechnical survey, the Project Company may be best served by bearing the site condition risk itself as it will mean the Contractor does not have to price a contingency it has no way of quantifying. This approach can lower the risk premium paid by the Project Company. Alternatively, the opposite may be true. The Project Company may wish to pay for the contingency in return for passing off the risk which quantifies and caps its exposure. This type of analysis must be undertaken on all major risks prior to going out to tender.

Another consequence of this strict approach to risk allocation is the fact that there are relatively few construction companies that can and are willing to enter into EPC Contracts, which can also result in relatively high contract prices.

Another major disadvantage of an EPC Contract becomes evident when problems occur during construction. In return for receiving a guaranteed price and a guaranteed completion date, the Project Company cedes most of the day-to-day control over the construction. Therefore, project companies have limited ability to intervene when problems occur during construction. The more a Project Company interferes, the greater the likelihood of the Contractor claiming additional time and costs. In addition, interference by the Project Company will make it substantially easier for Contractors to defeat claims for liquidated damages and defective works.

Obviously, ensuring the project is completed satisfactorily is usually more important than protecting the integrity of the contractual structure. However, if a Project Company interferes with the execution of the works, in most circumstances it will have the worst of both worlds – A contract that exposes it to liability for time and costs incurred as a result of its interference without any corresponding ability to hold the Contractor liable for delays in completion or defective performance. The same problems occur even where the EPC Contract is drafted to give the Project Company the ability to intervene. In many circumstances, regardless of the actual drafting, if the Project Company becomes involved in determining how the Contractor executes the works, then the Contractor will be able to argue that it is not liable for either delayed or defective performance.

It is critical that great care is taken in selecting a Contractor that has sufficient knowledge and expertise to execute the works. Given the significant monetary value of EPC Contracts, and the potential adverse consequences if problems occur during construction, the lowest price should not be the only factor.

Split EPC Contracts

One common variation on the basic EPC structure illustrated above is a split EPC Contract. In the case of wind and hydro projects, the split is commonly between the turbine supplier, responsible for supplying, installing and commissioning the turbines, and the civils Contractor responsible for performing the balance of the plant (BOP). Lower prices may be achieved using this form of split by avoiding the Contractor applying a risk premium for having to wrap or guarantee either equipment that it has not sourced or manufactured or works that it has not performed.

Another common split structure involves splitting an EPC Contract into an onshore construction contract and an offshore supply contract. The main reason for using this form of split contract is because it can result in a lower contract price as it allows (in an onshore/offshore split) the Contractor to make savings in relation to onshore taxes; in particular on indirect and corporate taxes in the onshore jurisdiction⁴⁹.

In multi-jurisdiction projects, a split structure may also be used to reduce the cost of complying with local licensing regulations by having certain portions of the works, particularly the design works, undertaken in other offshore jurisdictions.

In a split arrangement, unlike a standard EPC Contract, the Project Company cannot look only to a single Contractor to satisfy all the contractual obligations (in particular, design, construction and performance). In such cases a third agreement, a wrap-around guarantee or coordination and interface agreement, may be used to deliver a single point of responsibility despite the split. Under a wrap-around guarantee, an entity, usually either the offshore supplier or the parent company of the contracting entities, guarantees the obligations of both Contractors. This delivers a single point of responsibility to the Project Company and the Lenders.

However, a wrap-around guarantee will not be relevant where the manufacturer of the turbines or panels and the balance of plant Contractor are separate entities and neither company will take the single point of responsibility under the wrap-around guarantee. Accordingly, the Lenders will want to be satisfied that the interface issues are dealt with in the absence of a single point of responsibility.

⁴⁹ This is common to projects in Asia; however, detailed tax advice is required to ascertain whether this is appropriate for any specific project.

Key renewable energy specific clauses in EPC Contracts

Manufacturers' warranties

Ensuring that the EPC Contract allows for recourse by the Project Company to the manufacturers' warranties for equipment such as (in the case of solar PV) inverters, modules, trackers and other key components, is paramount to meeting bankability requirements. It is critical that the technology used for a facility is efficient, reliable, safe and serviceable.

The solar PV manufacturing landscape in particular has seen many manufacturers face a zero or negative profit margins and file for bankruptcy due to the rapid growth of the market leading to an oversupply which has depressed prices. With most solar PV facilities expected to have a lifetime of 20+ years, the Owner needs to ensure that the manufacturer behind the inverters, modules and other warranted equipment it uses can honour the warranty for the life of the project. To avoid potential issues arising, we recommend that parties are stringent in conducting their due diligence regarding the selection of manufacturers. This includes looking for (among other things) common financial metrics to indicate the relative stability of those manufacturers (eg cash flow per share, debt to capital ratio).

Key matters for consideration in reviewing any warranty offered by a manufacturer include:

- **Term of the warranty** – Although the required term will vary depending on the equipment that the warranty applies to, the term must be sufficient to cover the likely period in which issues are likely to arise and (if possible) the life of the facility. For example, in the case of PV modules, these warranties should subsist for 5 to 10 years after the commercial operation date for product guarantees or defects, and up to 25 years in respect of output guarantees and degradation
- **What is covered by the warranty** – Which piece of equipment and which level of performance? Are there any exclusions or exemptions? For example, if there is an over-sizing of the panel arrays in proportion to the inverters, will this void or otherwise affect the warranties provided in respect of the inverters
- **Choice of law** – Manufacturers will generally select the law of the country in which their operations are based. However, inconsistencies may arise where this is different to the law applying to the other project documents. Manufacturer's warranties may also be difficult to enforce in certain jurisdictions such as the People's Republic of China
- **Dispute resolution** – The warranty documents should set out the process to be followed in the event that a dispute arises. International manufacturers generally tend to prefer arbitration over litigation.

The warranties obtained by the Contractor must be fully transferrable and contain provisions to be assigned to the Project Company on project completion or in the event of the Contractor's default or insolvency. Further protections for the Project Company and the Lenders include the side agreements and Lenders' ability to take security over the warranties and to exercise the right of step-in under a tripartite agreement.

Where manufacturer's warranties are not available, or where they are available but may be inadequate or impractical to enforce, Lenders and Sponsors may need to consider other options. One option we are seeing in the market to address the risk of under-performance are specialist insurance products that guarantee the output of the system. The cost of the long-term usage of such insurance products is something that would have to be weighed against other options and, if selected, incorporated into the project financial model.

Another option to avoid over-reliance on manufacturer's warranties is to implement stringent quality assurance practices for key components. This will generally involve a multi-stage process, including factory audits and field inspections, on-site inspections of purchased equipment before it leaves the plant and field inspections following installation. To maintain stringency, it is preferable that an independent QA is used rather than relying on any QA conducted by the manufacturer.

Serial defects

Where a facility incorporates a large number of the same components that are critical to performance (such as wind turbines for wind facilities or modules or inverters for solar PV facilities), it is important that the Sponsors are protected in the instance that a fault or defect emerges in a batch or other consignment of that component with the same root cause (known as a 'serial defect'). Although Sponsors should also be protected by the manufacturer's warranties applying to those components (as noted above), it is beneficial for bankability purposes to ensure that the Contractor also has obligations to address serial defects.

Serial defects provisions are triggered where defects with the same root cause arise in respect a specified percentage of a batch or consignment of a component. Although the required percentage will vary depending on factors such as the technology used, we have seen ranges between 2-20% of a specific component. The term of the Contractor's serial defects obligations will generally be the same length as the defects liability period.

If a serial defect is identified, the Contractor will generally be required to test all other components from the same batch or consignment to determine whether the serial defect is present. An independent party or laboratory may be nominated in the EPC Contract to perform the tests if required. As a minimum, the Contractor will be required to report to the Sponsors on the result of the tests and to replace the components in which the serial defect is identified (at the cost of the Contractor, including shipping costs). Generally the Contractor will be required to replace all components within that batch or component (even those in which a serial defect was not identified in testing) to ensure that the serial defect does not arise elsewhere. A requirement may also be included to notify the Project Company in the event that serial defects are identified in other batches of the same product worldwide, in which case the Project Company may require additional monitoring to be implemented.

Grid access

Clearly, EPC Contracts will not provide for the handover of the wind farm or solar PV facility to the Project Company and the PPA will not become effective until all commissioning and reliability trialling has been successfully completed. This raises the important issue of the need for the EPC Contract to clearly define the obligations of the Project Company in providing grid access to the Contractor.

Lenders need to be able to avoid the situation where the Project Company's obligation to ensure grid access is uncertain, as this could result in protracted disputes concerning the Contractor's ability to place load onto the grid system and to obtain extensions of time where delay has been caused as a result of the failure of the Project Company to provide grid access.

Grid access issues arise at two differing levels, namely:

- the obligation to ensure that the infrastructure is in place
- the obligation to ensure that the Contractor is permitted to export power.

With respect to the first obligation, the Project Company is the most appropriate party to bear this risk vis-à-vis the Contractor, since the Project Company usually either builds the infrastructure itself or has it provided through the relevant concession agreement. Issues that must be considered include:

- What are the facilities that are to be constructed (eg substations, transmission lines) and how will these facilities interface with the Contractor's works? Is the construction of these facilities covered by the PPA, connection agreement, concession agreement or any other construction agreement? If so, are the rights and obligations of the Project Company dealt with in a consistent manner?
- What is the timing for completion of the infrastructure – Will it fit in with the timing under the EPC contract?

With respect to the Contractor's ability to export power, the EPC Contract must adequately deal with this risk and satisfactorily answer the following questions to ensure the smooth testing, commissioning and entering of commercial operation:

- What is the extent of the grid access obligation? Is it merely an obligation to ensure that the infrastructure necessary for the export of power is in place or does it involve a guarantee that the grid will take all power which the Contractor wishes to produce?
- What is the timing for the commencement of this obligation? Does the obligation cease at the relevant target date of completion? If not, does its nature change after the date has passed?
- What is the obligation of the Project Company to provide grid access in cases where the Contractor's commissioning/plant is unreliable - Is it merely a reasonableness obligation?
- Is the relevant grid robust enough to allow for full testing by the Contractor - For example, the performance of full load rejection testing?
- What is the impact of relevant national grid codes or legislation and their interaction with both the EPC Contract and the PPA?

Many EPC Contracts are silent on these matters or raise far more questions than they actually answer. It is advisable to back to back the Project Company's obligations under the EPC Contract (usually to provide an extension of time and/or costs) with any restrictions under the PPA. This approach will not eliminate the risk associated with grid access issues but will make it more manageable.

A variety of projects we have worked on have incurred significant amounts of time and costs in determining the grid access obligations under the EPC Contract, indicating that it is a matter which must be resolved at the contract formation stage. Therefore, we recommend inserting the clauses in Appendix 1, as modified to align with the relevant regulatory/grid access regime.

Development and environmental considerations

The responsibility for environmental obligations relating to the construction and operation of a wind or solar facility must be set out clearly in the EPC Contract. In particular, wind farms have a range of environmental impacts which need to be considered and managed properly and the Sponsor or Project Company will have to investigate if any aspects of the project are likely to be subject to scrutiny under the Environmental Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)⁵⁰ or other environment or planning legislation such as the relevant state planning scheme provisions.

Certain factors relating to the location of the facility or its effect on particular environmental features may limit development or trigger the need for reports or assessments to be conducted and approvals obtained before construction can proceed. For example, as outlined above, if wind turbines are located close to dwellings, written consent may be required from the Owners before development is allowed. Depending on the relevant state legislative framework, if the facility will require the clearance of native vegetation, a native vegetation offset management plan may need to be prepared, and if flora and fauna will be affected, surveys and assessments may be required. In the case of solar PV, issues may arise in respect of visual amenity and glint issues. In a recent decision Civil Aviation Safety Authority (CASA) rejected claims that potential glare from a proposed solar farm at Mt Majura in the ACT could pose a danger for aircraft using nearby Canberra Airport⁵¹.

Environmental and development impacts of solar and wind energy facilities include:

- Concern regarding visual impact, as well as the effect of shadow flicker and blade glint (for wind) or reflective glare (solar), which must be avoided or mitigated by design and siting
- Visual impacts may also pose an issue in terms of effects on particular locations of high amenity or tourist value, which may restrict or prevent development

⁵⁰ The EPBC Act prescribes the Commonwealth's involvement in environmental matters where an action has or will have a significant impact on "matters of national environmental significance". Detailed administrative guidelines are found at www.environment.gov.au/epbc

⁵¹ Energy Business News, 'Solar Glare Claims for Canberra Solar Rejected: CASA', 15 November 2013 <http://www.energybusinessnews.com.au/energy/solar/solar-glare-claims-for-canberra-solar-rejected-casa/>

- In the case of wind, noise from the swishing of the blades and mechanical noise associated with noise from the generator, along with requirements to comply with prescribed noise standards and guidelines
- Impacts on listed threatened species that inhabit the nearby area, whose habitat or surrounding ecological community may be impacted by the development, or on migratory species that may fly or move through the wind farm area, even if they do not inhabit the area. This is a particular issue in the case of migratory birds whose migration path crosses an established or proposed wind energy facility. In addition, effects on areas of high conservation and landscape values, such as national and state parks, Ramsar Wetlands, World Heritage properties and National Heritage Places, may also limit or prevent development
- Effects caused by the clearance of native vegetation during construction and continued clearing requirements during the operation of the facility to, in the case of solar, avoid shading or shadowing
- Potential electromagnetic interference with microwave, television and radio signals
- Construction issues such as the impact of construction traffic and the construction of access road and lay-down areas
- Archaeological and heritage issues including the impact on cultural heritage values and sites of significance to Indigenous peoples.

Many of these issues will be most relevant at the stage of seeking development approval and will be the responsibility of the Sponsor or Project Company. The list of permits, approvals and licences that must be obtained by the Project Company should be clearly identified in the EPC Contract, with the balance of construction consents and approvals being the responsibility of the Contractor. However, responsibility for adherence to the conditions attached to the development approvals, permits and the risks identified in the environmental impact assessment, must be passed on to the Contractor. For instance, planning approvals for wind farms are generally subject to permit conditions about noise limits. The Contractor must adhere to the required noise specifications and provide warranties that the wind farm will comply with the noise curves required by the specifications. If the environmental assessment has identified areas of ecological or archaeological importance, then these pre-construction site conditions must be documented in the EPC Contract and accepted by the Contractor.

The Contractor must also develop an environmental management plan to identify risks, mitigation and monitoring processes during construction. This should take into account factors such as erosion, dust and sediment control, storage of hazardous materials, weed control and waste management.

Consistency of commissioning and testing regimes

It is also important to ensure the commissioning and testing regimes in the EPC Contract mirror the requirements for commercial operation under the PPA. Mismatches only result in delays, lost revenue and liability for damages under the PPA, all of which have the potential to cause disputes.

Testing/trialling requirements under both contracts must provide the necessary Project Company satisfaction under the EPC Contract and system Operator/offtaker satisfaction under the PPA or connection agreement. Relevant testing issues which must be considered include:

- Are differing tests/trialling required under the EPC Contract and the PPA/connection agreement? If so, are the differences manageable for the Project Company or likely to cause significant disruption?
- Is there consistency between obtaining handover from the Contractor under the EPC Contract and commercial operation? It is imperative to prescribe back-to-back testing under the relevant PPA and the EPC Contract, which will result in a smoother progress of the testing and commissioning and better facilitate all necessary supervision and certification. Various certifications will also be required at the Lender level, and the Lenders will not want the process to be held up by their own requirements for certification. To avoid delays and disruption it is important that the Lenders' engineer is acquainted with the details of the project and, in particular, any potential difficulties with the testing regime. Therefore, any potential problems can be identified early and resolved without impacting on the commercial operation of the facility

- Is the basis of the testing to be undertaken mirrored under both the EPC Contract and the PPA? For example, what noise tests are to be performed?
- What measurement methodology is being used? Are there references to international standards or guidelines to a particular edition or version?
- Are all tests necessary for the Contractor to complete under the EPC Contract able to be performed as a matter of practice?

Significantly, if the relevant specifications are linked to guidelines such as the relevant International Electrotechnical Commission (IEC) standard, consideration must be given to changes which may occur in these guidelines. The EPC Contract reflects a snapshot of the standards existing at a time when that contract was signed, meaning that mismatches may occur if the relevant standards guidelines have changed. It is important that there is certainty as to which standard applies for both the PPA and the EPC Contract – The standard at the time of entering the EPC Contract or the standard which applies at the time of testing?

Consideration must be given to the appropriate mechanism to deal with potential mismatches between the ongoing obligation of complying with laws, and the Contractor's obligation to build to a specification agreed at a previous time. One solution is to require satisfaction of guidelines "as amended from time to time". The breadth of any change of law provision will be at the forefront of any review.

The above issues raise the importance of the testing schedules to the EPC Contract and the PPA. The size and importance of the various projects to be undertaken must mean that the days where schedules are attached at the last minute without being subject to review are gone. Discrepancies between the relevant testing and commissioning requirements will only serve to delay and distract all parties from the successful completion of testing and reliability trials.

In addition, there is a need to ensure that the interface arrangements in relation to testing and commissioning are appropriately and clearly spelled out between the EPC Contractor and the Operator under the EPC Contract, the O&M contract and any other relevant interface agreements to avoid any subsequent interface disputes.

These are all areas where lawyers can add value to the successful completion of projects by being alert to and dealing with such issues at the contract formation stage.

Interface issues between the offtaker and the EPC Contractor

It is imperative that the appropriate party corresponds with the relevant offtaker/system Operator during construction on issues such as the provision of transmission facilities/testing requirements and timing.

The Project Company must ensure the EPC Contract states clearly that it is the appropriate party to correspond with the offtaker and the system Operator. Any uncertainty in the EPC Contract may unfortunately see the EPC Contractor dealing with the offtaker and/or the system Operator, possibly risking the relationship of the Project Company with its customer. It is the Project Company which must develop and nurture an ongoing and long term relationship with the offtaker, whereas the Contractor's prime objective is generally to complete the project on time or earlier at a cost which provides it with significant profit. The clash of these conflicting objectives in many cases does not allow for such a smooth process. Again, the resolution of these issues at the EPC Contract formation stage is imperative.

Interface issues on site access

Access to land involves negotiations with the landowner or the appropriate state-based land authority. In the case of wind energy in particular, the Project Company will generally enter into access agreements with the landowners, and may be required to do so under legislation. The more common arrangements will be land leases providing possession and site access for the duration of the construction and operation of the wind farm. While the leasing of land to wind energy companies provides long-term income that complements farming income, the substance of the land lease agreements with landowners is the subject of much discussion and negotiation, Principally to ensure that the environmental and development impact of the wind farm development is considered and managed properly. Securing land rights for good development sites may be difficult if there is community opposition to these developments, particularly given controversy in recent years relating to aspects of wind farm development such as noise and “flicker” issues from wind turbines. However, there is also a large body of community support for wind farms demonstrated by pro-wind rallies and the increasing development of community wind farms such as Hepburn Wind⁵².

Principal responsibility for obtaining access to the site and negotiating the terms of the lease agreements will lie with the Project Company. However, in order for the Project Company to comply with the terms of the land lease or other access agreements, the Project Company will have to ensure that the Contractor under the EPC Contract complies with all the terms and conditions of the land lease agreements. The Contractor must also accept some degree of responsibility for the ongoing liaison and coordination with landowners during the construction and operation of the facility. Given that considerations and concerns will often differ between landowners, the specific requirements of the landowners should be taken into account at an early stage in the negotiation of the terms of the EPC Contract for any facility. Such concerns will vary from prohibitions on the depth of excavation to allow farming activity, to controlling the spread of pests and weeds.

The Project Company should only be required to provide possession and access as permitted under the negotiated land lease or site agreements, and the obligations of the Project Company under the land lease or site agreements should be flowed down into the EPC Contract. The Contractor should be appraised of the specific conditions and requirements of the landowners to ensure that the Contractor is aware of the limits on access to the site on which the facility is to be constructed and operated. The Contractor must formally acknowledge the Project Company’s obligation to comply with the terms of the land lease or site agreements and must accept responsibility for compliance with the terms of the land lease or site agreements which are affected by the Contractor’s design and construction obligations under the EPC Contract.

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Wind turbine certification

In the case of wind farms, the provision of design certificates or a statement of compliance from an independent certifying body is essential for the Project Company to ensure that the wind turbines provided by the Contractor have been designed in accordance with industry standards and will fulfil the required design parameters.

⁵² Hepburn Wind is a 4.1 MW community owned wind energy facility, located at Leonards Hills in Victoria and reached commercial operation in July 2011: <http://hepburnwind.com.au/the-project/>

Certification of wind turbines has a history of more than 25 years and different standards apply in Denmark, Germany and the Netherlands (which pioneered the development and application of certification rules). In recent years, other countries, as well as Lenders, have realised the necessity of a thorough evaluation and certification of wind turbines and their proposed installation. The certifications are commonly divided into type certification and wind turbine certification. The certification is usually required to be carried out by an independent certifying body such as Germanischer Lloyd Industrial Services GmbH (GL Renewables) (an international operating certification body for renewable energy equipment, including wind turbines), and is performed in accordance with that body's rules – In the case of GL Renewables in accordance with the *Regulations for the Certification of Wind Energy Conversion Systems, 1999 edition and the Guideline for the Certification of Wind Turbines, 2010 edition*⁵³. Under these regulations, type certification comprises design assessment, evaluation of quality management and prototype testing and is preferably obtained by the Project Company prior to shipment of components to site. Where possible, the certification should encompass confirmation on the design life of the wind turbines.

Wind turbine certification involves a complete third party assessment and certification of specific wind turbines from design assessment to commissioning, witnessing, site assessment and periodic monitoring. Wind turbine certification can only be carried out for type certified wind turbines and on locations for which the necessary data is available.

The Project Company may also require a site certification to be provided by an independent certifying body confirming that real site conditions of the wind farm as a whole (including factors such as wind, climate, topography and turbine layout) complies with the design parameters of the relevant international standard. The real climatic conditions of the relevant site will be provided to the certifying body for assessment of factors such as the wind conditions prevalent at the site as compared with standard wind conditions and the calculation of loads for the site conditions compared with the design basis.

Staged completion

As each wind turbine generator or solar PV array is usually constructed sequentially, they may be taken over by the Project Company as they each pass the required tests on completion. While the taking over of each wind turbine generator or solar PV array and associated equipment as and when it is installed and commissioned is not unusual, it is important to ensure that the issue of a taking over certificate for each individual wind turbine does not affect the Contractor's obligations under the EPC Contract. Issues such as the management of staggered defects liability periods, the method of calculation of the availability guarantees and the point at which performance security held by the Project Company should be released are among the important issues that must be considered carefully by the Project Company when contemplating staged taking over.

Despite taking over individual wind turbine generators or solar PV arrays, the performance security held by the Project Company should only be reduced or released when the facility has passed all tests required for commercial operation of the entire facility. Factors such as the time period between taking over of each wind turbine generator or solar PV array and the generation of electricity by the wind turbine generators or solar PV arrays taken over by the Project Company, will influence the point at which it is reasonable to reduce the performance security held by the Project Company. If the operation and maintenance obligations of an Operator of the facility commences on the taking over each wind turbine generator or solar PV array, the performance security to be provided by the Operator can be increased in accordance with the number of wind turbine generators or solar PV arrays taken over.

The issue of a taking over certificate for individual wind turbine generators or solar PV arrays will also trigger commencement of the defects liability period for that particular wind turbine generator or solar PV array. If a facility has, in the case of a wind farm, between 20 and 25 wind turbines, this could mean that the Project Company will have to administer defects liability periods equivalent to the number of wind turbines on the wind farm. If there is a substantial gap between taking over of the first wind turbine and the last wind turbine, this could also result in the defects liability period for the first wind turbine expiring substantially earlier than the last wind turbine taken over and could affect the Contractor's defects rectification or warranty obligations for

⁵³ Other certifications include certification according to the Dutch prestandard NVN 11400-0, Wind Turbines – Part 0: Criteria for type certification-technical criteria", Issue April 1999 and certification according to the Danish Technical Criteria.

defects affecting the entire wind farm. The ideal position would be to require the defects liability period to commence on taking over of each wind turbine generator but to expire only from a set time from taking over of the entire wind farm. If this proves too onerous for the Contractor, the wind turbine generators could be divided into circuits, each comprising a separable portion. A taking over certificate will therefore only be issued in relation to each circuit, making it easier to administer the defects liability periods or to manage other issues such as the reduction of security.

Another important consideration is to ensure that the delay liquidated damages imposed for failure to complete the entire facility by the required date for practical completion takes into account any revenue that may be generated by the Project Company from individual wind turbine generators or solar PV arrays that are taken over and operated prior to commercial operation of the entire facility. This is to ensure that the delay liquidated damages represent a genuine pre-estimate of the Project Company's loss.

Key performance clauses in renewable energy EPC Contracts

Liquidated damages

Almost every construction contract will impose liquidated damages for delay and standards in relation to the quality of construction. Most, however, do not impose PLDs. EPC Contracts impose PLDs because the achievement of the performance guarantees has a significant impact on the ultimate success of a project.

Similarly, it is important that the wind farm or solar PV facility commences operation on time because of the impact on the success of the project and because of the liability the Project Company will have under other agreements (eg under a PPA or financing agreements). This is why DLDs are imposed. DLDs and PLDs are both "sticks" used to motivate the Contractor to fulfil its contractual obligations.

The law of liquidated damages

As discussed above, liquidated damages must be a genuine pre-estimate of the Project Company's loss. If liquidated damages are more than a genuine pre-estimate they will be deemed to be a penalty and unenforceable. There is no legal sanction for setting a liquidated damages rate below that of a genuine pre-estimate, however, there are the obvious financial consequences.

In addition to being unenforceable as a penalty, liquidated damages can also be void for uncertainty or unenforceable because they breach the Prevention Principle. 'Void for uncertainty' means, as the term suggests, that it is not possible to determine how the liquidated damages provisions work. In those circumstances, a court will void the liquidated damages provisions.

The Prevention Principle was developed by the courts to prevent Employers, ie project companies, from delaying Contractors and then claiming DLDs. It is discussed in more detail below in the context of extensions of time.

Prior to discussing the correct drafting of liquidated damages clauses to ensure they are not void or unenforceable it is worth considering the consequences of an invalid liquidated damages regime. If the EPC Contract contains an exclusive remedies clause the result is simple – The Contractor will have escaped liability unless the contract contains a 'fail safe' clause with an explicit right to claim damages at law if the liquidated damages regime fails.

If, however, the EPC Contract does not contain an exclusive remedies clause the non-challenging party should be able to claim at law for damages they have suffered as a result of the challenging party's non or defective performance. What then is the impact of the caps in the now invalidated liquidated damages clauses?

Unfortunately, the position is unclear in common law jurisdictions, and a definitive answer cannot be provided based upon the current state of authority. It appears the answer varies depending upon whether the clause is invalidated due to its character as a penalty, or because of uncertainty or unenforceability. Our view of the current position is set out below. We note that whilst the legal position is not settled the position presented below does appear logical.

- **Clause invalidated as a penalty** – When liquidated damages are invalidated because they are a penalty (ie they do not represent a genuine pre-estimate of loss), the liquidated damages or its cap will not act as a cap on damages claims at general law. We note that it is rare for a court to find liquidated damages are penalties in contracts between two sophisticated, well-advised parties
- **Clause invalidated due to acts of prevention by the Principal** – If a liquidated damage clause is invalidated as a result of the Contractor not being entitled to an extension of time for an act of prevention by the Principal, the amount of liquidated damages or the cap on liquidated damages specified in the EPC Contract will not act as a cap or limit in respect of general damage claims at law
- **Clause void for uncertainty** – A liquidated damages clause that is unworkable or too uncertain to ascertain what the parties intended is severed from the EPC Contract in its entirety, and will not act as a cap on the damages recoverable by the Principal from the Contractor at law. Upon severance, the clause is, for the purposes of contractual interpretation, ignored. However, it should be noted that the threshold test for rendering a clause void for uncertainty is high, and courts are reluctant to hold that the terms of a contract, in particular a commercial contract where performance is well advanced, are uncertain.

Drafting of liquidated damages clauses

Given the role liquidated damages play in ensuring EPC Contracts are bankable, and the consequences detailed above of the regime not being effective, it is vital to ensure they are properly drafted to ensure Contractors cannot avoid their liquidated damages liability on a legal technicality.

Therefore, it is important, from a legal perspective, to ensure DLDs and PLDs are dealt with separately. If a combined liquidated damages amount is levied for late completion of the works, it risks being struck out as a penalty because it will overcompensate the Project Company. However, a combined liquidated damages amount levied for underperformance may under compensate the Project Company.

Our experience shows that there is a greater likelihood of delayed completion than there is of permanent underperformance. One of the reasons why projects are not completed on time is Contractors are often faced with remedying performance problems. This means, from a legal perspective, if there is a combination of DLDs and PLDs, the liquidated damages rate should include more of the characteristics of DLDs to protect against the risk of the liquidated damages being found to be a penalty.

If a combined liquidated damages amount includes a NPV or performance element, the Contractor will be able to argue that the liquidated damages are not a genuine pre-estimate of loss when liquidated damages are levied for late completion only. However, if the combined liquidated damages calculation takes on more of the characteristics of DLDs the Project Company will not be properly compensated if there is permanent underperformance.

It is also important to differentiate between the different types of PLDs to protect the Project Company against arguments by the Contractor that the PLDs constitute a penalty. For example, if a single PLDs rate is only focused on availability and not efficiency, problems and uncertainties will arise if the availability guarantee is met but one or more of the efficiency guarantees are not. In these circumstances, the Contractor will argue that the PLDs constitute a penalty because the loss the Project Company suffers if the efficiency guarantees are not met are usually smaller than if the availability guarantees are not met.

Drafting of the testing, performance guarantee and compensation regime

A properly drafted performance testing and guarantee regime is critical because the success or failure of the project depends, all other things being equal, on the performance of (ie revenue generated by) the wind farm or solar farm.

The major elements of the performance regime are:

- Testing
- Performance Guarantees
- Performance Liquidated Damages or other compensation measures. These are discussed in turn below.

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Testing

Performance tests may cover a range of areas. Three of the most common are:

Functional tests – These test the functionality of certain parts or components of the facility, rather than the facility as a whole. For example, in the case of wind farms, tests may be in relation to SCADA systems, power collection systems and meteorological masts, etc. Performance liquidated damages and other compensation measures do not normally attach to these tests; they are absolute obligations that must be achieved in order to reach the next stage of completion.

Various components of the wind turbine generators themselves (including blades, hubs and nacelles) will also be subject to functional tests. In the case of solar PV, key components to be tested are panels, inverters, trackers (if used) and transformers.

Performance guarantee tests – These test the ability of the facility to meet the performance guarantees for the facility specified in the contract.

Performance tests and corresponding performance guarantees vary between technologies. Common across most renewable energy technologies is a two stage performance testing framework. The first round of performance tests is generally performed in order to achieve commercial operation and a second round (and potentially further subsequent rounds) is performed after the facility has been operating for a period of time.

For wind farms, tests on commercial operation will generally be comprised of a commissioning test with a reliability run of around 240 hours (though this may vary by project). A capacity or output test and corresponding guarantee may be provided, depending on (among other factors) the requirements of the PPA or other concession arrangements. Tests after commercial operation generally include a range of acoustic tests and power curve tests. Power curve tests are generally performed 12-18 months after commercial operation; however, the time and expense of the performing the power curve test means that it will generally only be performed if the facility is experiencing performance issues.

For solar PV farms, performance tests on commercial operation may include both capacity and performance ratio tests. Capacity tests may be in respect of installed capacity (measuring the aggregate nameplate DC capacity of all panels installed) and/or output or achieved capacity (measuring the aggregate DC capacity of the panels based on peak hourly conditions and net of auto-consumption and other system losses applicable under these conditions). Performance ratio tests (measuring the efficiency of the facility) will also generally be performed on commercial operation after an evaluation period of around 60 days. Tests after commercial operation are usually performance ratio tests and are generally completed over multiple 12 month evaluation periods corresponding with the duration of the defects liability period.

In respect of the pre-commercial operation performance tests, the Contractor will continue to be liable for DLDs until either the facility achieves the guaranteed level or the Contractor pays compensation (such as PLDs) where the facility does not operate at the guaranteed level. Obviously, DLDs will be capped (usually at 15% of the contract price), therefore the EPC Contract should give the Project Company the right to call for the payment of the compensation and accept the facility.

It is common for the Contractor to be given an opportunity to modify the facility if it does not meet the performance guarantees on the first attempt. This is because the compensation amounts are normally very large and most Contractors would prefer to spend the time and the money necessary to remedy performance instead of paying compensation. Not giving Contractors this opportunity will likely lead to an increased contract price both because Contractors will build a contingency for paying compensation into the contract price. Also, in most circumstances the Project Company will prefer to receive a facility that achieves the required performance guarantees.

If the Contractor is to be given an opportunity to modify and retest, the EPC Contract must deal with who bears the costs required to undertake the retesting. The cost of the performance of a power curve test in particular can be significant and should generally be to the Contractor's account because the retesting only occurs if the performance guarantees are not met at the first attempt.

For each performance test, a corresponding performance guarantee will be set. This may be an absolute level (eg due to a corresponding regulatory requirement) or a percentage of the performance level to be reached. If the minimum performance guarantees are not met the Project Company will generally (subject to the requirements of any tripartite arrangements) have the right to terminate and may have the right to reject the facility and require the Contractor to dismantle the facility and return the site to a greenfield state.

The level at which performance guarantees (including minimum performance guarantees) are set will depend on a variety of factors such as technical and project-specific considerations. The performance guarantees should be set at a level of performance at which it is economic to accept the facility. Lender's input will be vital in determining what this level is. However, it must be remembered that Lenders have different interests to the Sponsors. Lenders will, generally speaking, be prepared to accept a facility that provides sufficient income to service the debt. However, in addition to covering the debt service obligations, Sponsors will also want to receive a return on their equity investment. If that will not be provided via the sale of electricity because the Contractor has not met the performance guarantees, the Sponsors will have to rely on the compensation mechanisms to earn their return.

If the Contractor fails to achieve any of the required performance guarantees, the facility may not be able to generate energy at the rate included in the financial model and, as such, there will be a revenue shortfall. To ensure that the required ratios and covenants are met under the financing agreements, as well as to provide an equity return to the Sponsors, an EPC Contract will generally provide compensation mechanisms such as performance liquidated damages or a reduction in the contract price. A lump sum reduction in the contract price or 'buy down' is commonly used where the facility does not meet its capacity guarantees, and will be set at a level to reflect the NPV of the Project Company's losses over the life of the facility due to lost production. Further commentary in respect of PLDs is set out above.

If performance guarantees on commercial operation are not met and a reduction in the contract price and/or PLDs are paid by the Contractor, there will be an adjustment made to the level of post-commercial operation performance guarantees and compensation measures to ensure that the Project Company does not 'double recover' for the same loss.

A diagram setting out a sample performance testing and performance guarantee framework for solar PV is set out at Appendix 1.

Technical issues

Ideally, the technical testing procedures should be set out in the EPC Contract. However, for a number of reasons, including the fact that it is often not possible to fully scope the testing program until the detailed design is complete, the testing procedures may be left to be agreed during construction by the Contractor, the Project Company's representative or engineer and, if relevant, the Lenders' engineer. However, a properly drafted EPC Contract should include the guidelines for testing.

The complete testing procedures must, as a minimum, set out details of:

- **Testing methodology** – Reference is often made to standard methodologies, for example, the IEC 61-400 methodology⁵⁴
- **Testing equipment** – Who is to provide it, where it is to be located, how sensitive must it be
- **Tolerances** – What is the margin of error. For instance excluding wind or solar irradiance in excess of specified speeds or levels
- **Ambient conditions** – What atmospheric conditions are assumed to be the base case (testing results will need to be adjusted to take into account any variance from these ambient conditions).

Key general clauses in EPC Contracts

Delay and extensions of time

(a) The Prevention Principle

As noted previously, one of the advantages of an EPC Contract is that it provides the Project Company with a fixed completion date. If the Contractor fails to complete the works by the required date they are liable to pay DLDs. However, in some circumstances the Contractor is entitled to an extension of the date for completion. Failure to grant an extension of time for a Project Company caused delay can void the liquidated damages regime and “set time at large”. This means the Contractor is only obliged to complete the works within a reasonable time.

This is the situation under common law governed contracts due to the Prevention Principle. The Prevention Principle was developed by the courts to prevent Employers (ie project companies) from delaying Contractors and then claiming DLDs.

The legal basis of the Prevention Principle is unclear and it is uncertain whether you can contract out of the Prevention Principle. Logically, given most commentators believe that given the Prevention Principle is an equitable principle, explicit words in a contract should be able to override the principle. However, the courts have tended to apply the Prevention Principle even in circumstances where it would not, on the face of it, appear to apply. Therefore, there is a certain amount of risk involved in trying to contract out of the Prevention Principle. The more prudent and common approach is to accept the existence of the Prevention Principle and provide for it the EPC Contract.

The Contractor’s entitlement to an extension of time is not absolute. It is possible to limit the Contractor’s rights and impose pre-conditions on the ability of the Contractor to claim an extension of time. A relatively standard Extension of Time (EOT) clause would entitle the Contractor to an EOT for any of the following events:

- An act, omission, breach or default of the Project Company
- Suspension of the works by the Project Company (except where the suspension is due to an act or omission of the Contractor)
- A variation (except where the variation is due to an act or omission of the Contractor)

⁵⁴ The IEC (<http://www.iec.ch/home-e.htm>) is a global organisation that prepares and publishes international standards for all electrical, electronic and related technologies. The main technical committee for wind turbine systems is TC88 which publishes standards for the wind turbine industry.

Force majeure

Which cause a delay to an activity on the critical path and about which the Contractor has given notice within the period specified in the contract. It is permissible (and advisable) from the Project Company's perspective to make both the necessity for the delay to impact the critical path and the obligation to give notice of a claim for an extension of time conditions precedent to the Contractor's entitlement to receive an EOT. In addition, it is usually good practice to include a general right for the Project Company to grant an EOT at any time. However, this type of provision must be carefully drafted because some judges have held (especially when the Project Company's representative is an independent third party) then the inclusion of this clause imposes a mandatory obligation on the Project Company to grant an extension of time whenever it is fair and reasonable to do so, regardless of the strict contractual requirements. Accordingly, from the Project Company's perspective it must be made clear that the Project Company has complete and absolute discretion to grant an EOT, and that it is not required to exercise its discretion for the benefit of the Contractor.

Similarly, following some recent common law decisions, the Contractor should warrant that it will comply with the notice provisions that are conditions precedent to its right to be granted an EOT.

We recommend using the clause in Appendix 1.

(b) Concurrent delay

You will note that in the suggested EOT clause, one of the subclauses refers to concurrent delays. This is relatively unusual because most EPC Contracts are silent on this issue. For the reasons explained below we do not agree with that approach.

A concurrent delay occurs when two or more causes of delay overlap. It is important to note that it is the overlapping of the causes of the delays, not the overlapping of the delays themselves that leads to concurrent delay. In our experience, this distinction is often not made. This leads to confusion and sometimes disputes. More problematic is when the contract is silent on the issue of concurrent delay and the parties assume the silence operates to their benefit. As a result of conflicting case law it is difficult to determine who, in a particular factual scenario, is correct. This can also lead to protracted disputes and outcomes contrary to the intention of the parties.

There are a number of different causes of delay which may overlap with delay caused by the Contractor. The most obvious causes are the acts or omissions of a Project Company.

A Project Company often has obligations to provide certain materials or infrastructure to enable the Contractor to complete the works. The timing for the provision of that material or infrastructure (and the consequences for failing to provide it) can be affected by a concurrent delay. For example, the Project Company is usually obliged, as between the Project Company and the Contractor, to provide a transmission line to connect to the wind farm by the time the Contractor is ready to commission the wind farm. Given the construction of the transmission line can be expensive, the Project Company is likely to want to incur that expense as close as possible to the date commissioning is due to commence. For this reason, if the Contractor is in delay the Project Company is likely to further delay incurring the expense of building the transmission line. In the absence of a concurrent delay clause, this action by the Project Company, in response to the Contractor's delay, could entitle the Contractor to an extension of time.

Concurrent delay is dealt with differently in the various international standard forms of contract. Accordingly, it is not possible to argue that one approach is definitely right and one is definitely wrong. In fact, the 'right' approach will depend on which side of the table you are sitting.

In general, there are three main approaches for dealing with the issue of concurrent delay. These are:

- **Option One** – The Contractor has no entitlement to an extension of time if a concurrent delay occurs
- **Option Two** – The Contractor has an entitlement to an extension of time if a concurrent delay occurs
- **Option Three** – The causes of delay are apportioned between the parties and the Contractor receives an extension of time equal to the apportionment. For example, if the causes of a 10-day-delay are apportioned 60:40 Project Company:Contractor, the Contractor would receive a six-day extension of time.

Each of these approaches is discussed in more detail below.

(i) Option One: Contractor not entitled to an extension of time for concurrent delays.

A common, Project Company friendly, concurrent delay clause for this option one is:

*“If **more than one event** causes concurrent delays and the cause of at least one of those events, but not all of them, is a cause of delay which would not entitle the Contractor to an extension of time under [EOT Clause], then **to the extent of the concurrency**, the Contractor will not be entitled to an extension of time.”*

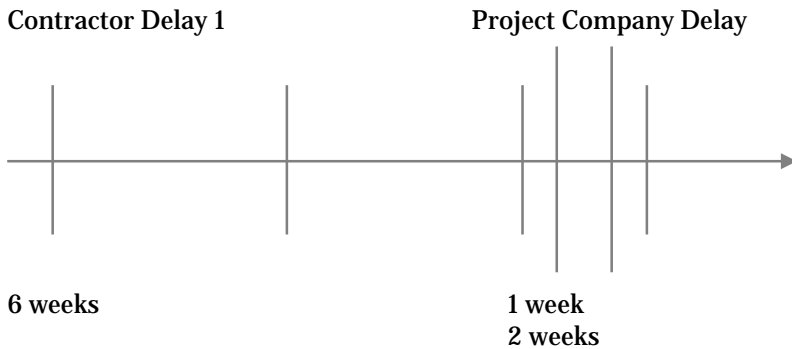
The most relevant words are bolded.

Nothing in the clause prevents the Contractor from claiming an extension of time under the general extension of time clause. What the clause does do is to remove the Contractor’s entitlement to an extension of time when there are two or more causes of delay and at least one of those causes would not entitle the Contractor to an extension of time under the general extension of time clause.

For example, if the Contractor’s personnel were on strike and during that strike the Project Company failed to approve drawings, in accordance with the contractual procedures, the Contractor would not be entitled to an extension of time for the delay caused by the Project Company’s failure to approve the drawings.

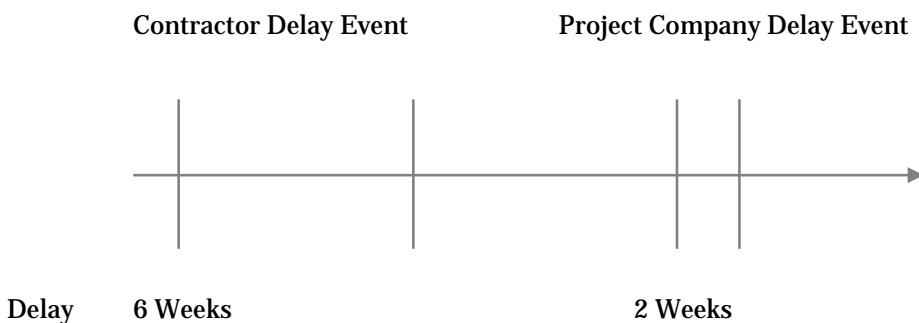
The operation of this clause is best illustrated diagrammatically.

Example 1: Contractor not entitled to an extension of time for Project Company caused delay



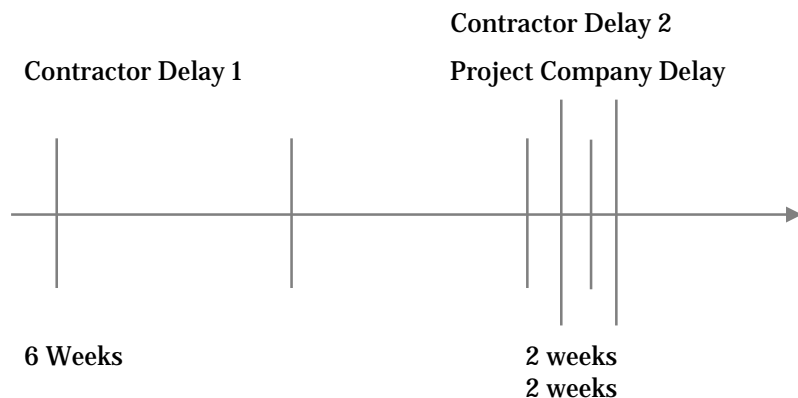
In this example, the Contractor would not be entitled to any extension of time because the Contractor Delay 2 overlap entirely the Project Company Delay. Therefore, using the example clause above, the Contractor is not entitled to an extension of time to the extent of the concurrency. As a result, at the end of the Contractor Delay 2 the Contractor would be in eight-week delay (assuming the Contractor has not, at its own cost and expense accelerated the works).

Example 2: Contractor entitled to an extension of time for a portion of the Project Company caused delay



In this example, there is no overlap between the Contractor and Project Company delay events and the Contractor would be entitled to a two-week extension of time for the Project Company delay. Therefore, at the end of the Project Company delay the Contractor will remain in six weeks delay, assuming no acceleration.

Example 3: Contractor entitled to an extension of time for a portion of the Project Company caused delay



In this example, the Contractor would be entitled to a one week extension of time because the delays overlap for one week. Therefore, the Contractor is entitled to an extension of time for the period when they do not overlap (ie when the extent of the concurrency is zero). As a result, after receiving the one-week extension of time, the Contractor would be in seven weeks delay, assuming no acceleration.

From a Project Company’s perspective, we believe, this option is both logical and fair. For example, if, in example 2 the Project Company delay was a delay in the approval of drawings and the Contractor delay was the entire workforce being on strike, what logic is there in the Contractor receiving an extension of time? The delay in approving drawings does not actually delay the works because the Contractor could not have used the drawings given its workforce was on strike. In this example, the Contractor would suffer no detriment from not receiving an extension of time. However, if the Contractor did receive an extension of time it would effectively receive a windfall gain.

The greater number of obligations the Project Company has the more reluctant the Contractor will likely be to accept option one. Therefore, it may not be appropriate for all projects.

(ii) Option Two: Contractor entitled to an extension of time for concurrent delays

Option two is the opposite of option one and is the position in many of the Contractor friendly standard forms of contract. These contracts also commonly include extension of time provisions to the effect that the Contractor is entitled to an extension of time for any cause beyond its reasonable control which, in effect, means there is no need for a concurrent delay clause.

The suitability of this option will obviously depend on which side of the table you are sitting. This option is less common than option one but is nonetheless sometimes adopted. It is especially common when the Contractor has a superior bargaining position.

(iii) Option Three: Responsibility for concurrent delays is apportioned between the parties

Option three is a middle ground position that has been adopted in some of the standard form contracts. For example, the Australian Standards construction contract AS4000 adopts the apportionment approach. The AS4000 clause states:

“34.4 Assessment

When both non qualifying and qualifying causes of delay overlap, the Superintendent shall apportion the resulting delay to WUC according to the respective causes’ contribution.

In assessing each EOT the Superintendent shall disregard questions of whether:

- a) *WUC can nevertheless reach practical completion without an EOT*
- b) *the Contractor can accelerate, but shall have regard to what prevention and mitigation of the delay has not been effected by the Contractor."*

We appreciate the intention behind the clause and the desire for both parties to share responsibility for the delays they cause. However, we have some concerns about this clause and the practicality of the apportionment approach in general. It is easiest to demonstrate our concerns with an extreme example. For example, what if the qualifying cause of delay was the Project Company's inability to provide access to the site and the non-qualifying cause of delay was the Contractor's inability to commence the works because it had been black banned by the unions. How should the causes be apportioned? In this example, the two causes are both 100% responsible for the delay.

In our view, an example like the above where both parties are at fault has two possible outcomes. Either:

- The delay is split down the middle and the Contractor receives 50% of the delay as an extension of time
- The delay is apportioned 100% to the Project Company and therefore the Contractor receives 100% of the time claimed. The delay is unlikely to be apportioned 100% to the Contractor because a judge or arbitrator will likely feel that that is "unfair", especially if there is a potential for significant liquidated damages liability. We appreciate the above is not particularly rigorous legal reasoning, however, the clause does not lend itself to rigorous analysis.

In addition, option three is only likely to be suitable if the party undertaking the apportionment is independent from both the Project Company and the Contractor.

Exclusive remedies and fail safe clauses

It is common for Contractors to request the inclusion of an exclusive remedies clause in an EPC Contract. However, from the perspective of a Project Company, the danger of an exclusive remedies clause is that it prevents the Project Company from recovering any type of damages not specifically provided for in the EPC Contract.

An EPC Contract is conclusive evidence of the agreement between the parties to that contract. If a party clearly and unambiguously agrees that their only remedies are those within the EPC Contract, they will be bound by those terms. However, the courts have been reluctant to come to this conclusion without clear evidence of an intention of the parties to the EPC Contract to contract out of their legal rights. This means if the common law right to sue for breach of EPC Contract is to be contractually removed, it must be done by very clear words.

(a) Contractor's perspective

The main reason for a Contractor insisting on a Project Company being subject to an exclusive remedies clause is to have certainty about its potential liabilities. The preferred position for a Contractor will be to confine its liabilities to what is specified in the EPC Contract. For example, an agreed rate of liquidated damages for delay and, where relevant, underperformance of the wind farm. A Contractor will also generally require the amount of liquidated damages to be subject to a cap and for the EPC Contract to include an overall cap on its liability.

(b) Project company's perspective

The preferred position for a Project Company is for it not to be subject to an exclusive remedies clause. An exclusive remedies clause limits the Project Company's right to recover for any failure of the Contractor to fulfil its contractual obligations to those remedies specified in the EPC Contract. For this reason, an exclusive remedies clause is an illogical clause to include in an EPC Contract from the perspective of a Project Company because it means that the Project Company has to draft a remedy or exception for each obligation – This represents an absurd drafting position. For example, take the situation where the EPC Contract does not have any provision for the recovery of damages other than liquidated damages. In this case, if the Contractor has either paid the maximum amount of liquidated damages or delivered the wind farm in a manner that does not require the payment of liquidated damages (ie it is delivered on time and performs to specification) but subsequent to that delivery the Project Company is found to have a claim, say for defective design which

manifests itself after completion, the Project Company will have no entitlement to recover any form of damages as any remedy for latent defects has been excluded.

The problem is exacerbated because most claims made by a Project Company will in some way relate to performance of the facility and PLDs were expressed to be the exclusive remedy for any failure of the facility to perform in the required manner. For example, any determination as to whether the facility is fit for purpose will necessarily depend on the level and standard of the performance of the facility. In addition to claims relating to fitness for purpose, a Project Company may also wish to make claims for, amongst other things, breach of contract, breach of warranty or negligence. The most significant risk for a Project Company in an EPC Contract is where there is an exclusive remedies clause and the only remedies for delay and underperformance are liquidated damages. If, for whatever reason, the liquidated damages regimes are held to be invalid, the Project Company would have no recourse against the Contractor as it would be prevented from recovering general damages at law, and the Contractor would escape liability for late delivery and underperformance of the facility.

(c) Fail safe clauses

In contracts containing an exclusive remedies clause, the Project Company must ensure all necessary exceptions are expressly included in the EPC Contract. In addition, drafting must be included to allow the Project Company to recover general damages at law for delay and underperformance if the liquidated damages regimes in the EPC Contract are held to be invalid. To protect the position of a Project Company (if liquidated damages are found for any reason to be unenforceable and there is an exclusive remedies clause), we recommend the following clauses be included in the EPC Contract:

"[] .1 If clause [delay liquidated damages] is found for any reason to be void, invalid or otherwise inoperative so as to disentitle the Project company from claiming Delay Liquidated Damages, the Project company is entitled to claim against the Contractor damages at law for the Contractor's failure to complete the Works by the Date for Practical Completion.

[] .2 If [] .1 applies, the damages claimed by the Project company must not exceed the amount specified in Item [] of Appendix [] for any one day of delay and in aggregate must not exceed the percentage of the EPC Contract Price specified in Item [] of Appendix []."

These clauses (which would also apply to PLDs) mean that if liquidated damages are held to be unenforceable for any reason the Project Company will not be prevented from recovering general damages at law. However, the amount of damages recoverable at law may be limited to the amount of liquidated damages that would have been recoverable by the Project Company under the EPC Contract if the liquidated damages regime had not been held to be invalid (see discussion above). For this reason, the suggested drafting should be commercially acceptable to a Contractor as its liability for delay and underperformance will be the same as originally contemplated by the parties at the time of entering into the EPC Contract.

In addition, if the EPC Contract excludes the parties' rights to claim their consequential or indirect losses, these clauses should be an exception to that exclusion. The rationale being that the rates of liquidated damages are likely to include an element of consequential or indirect losses.

Force Majeure

(a) What is force majeure?

Force majeure clauses are almost always included in EPC Contracts. However, they are rarely given much thought unless and until one or more parties seek to rely on them. Generally, the assumption appears to be that "the risk will not affect us" or "the *force majeure* clause is a legal necessity and does not impact on our risk allocation under the contract". Both of these assumptions are inherently dangerous, and, particularly in the second case, incorrect. Therefore, especially in the current global environment, it is appropriate to examine their application.

Force majeure is a civil law concept that has no real meaning under the common law. However, *force majeure* clauses are used in contracts because the only similar common law concept – The doctrine of frustration – Is of limited application. For that doctrine to apply the performance of a contract must be radically different from what was intended by the parties. In addition, even if the doctrine does apply, the consequences are unlikely to be those contemplated by the parties. An example of how difficult it is to show frustration is that many of the

leading cases relate to the abdication of King Edward VIII before his coronation and the impact that had on contracts entered into in anticipation of the coronation ceremony.

Given *force majeure* clauses are creatures of contract their interpretation will be governed by the normal rules of contractual construction. *Force majeure* provisions will be construed strictly and in the event of any ambiguity the *contra proferentem* rule will apply. *Contra proferentem* literally means “against the party putting forward”. In this context, it means that the clause will be interpreted against the interests of the party that drafted and is seeking to rely on it. The parties may contract out of this rule.

The rule of *ejusdem generis*, which literally means “of the same class”, may also be relevant. In other words, when general wording follows a specific list of events, the general wording will be interpreted in light of the specific list of events. In this context it means that when a broad “catch-all” phrase, (such as “anything beyond the reasonable control of the parties”) follows a list of more specific *force majeure* events the catch all phrase will be limited to events analogous to the listed events. Importantly, parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions.

The underlying test in relation to most *force majeure* provisions is whether a particular event was within the contemplation of the parties when they made the contract. The event must also have been outside the control of the contracting party. There are generally three essential elements to *force majeure*:

- It can occur with or without human intervention
- It cannot have reasonably been foreseen by the parties
- It was completely beyond the parties’ control and they could not have prevented its consequences.

Given the relative uncertainty surrounding the meaning of *force majeure* we favour explicitly defining what the parties mean. This takes the matter out of the hands of the courts and gives control back to the parties. Therefore, it is appropriate to consider how *force majeure* risk should be allocated.

(b) Drafting *force majeure* clauses

The appropriate allocation of risk in project agreements is fundamental to negotiations between the Project Company and its Contractors. Risks generally fall into the following categories:

- Risks within the control of the Project Company
- Risks within the control of the Contractor
- Risks outside the control of both parties.

The negotiation of the allocation of many of the risks beyond the control of the parties, for example, latent site conditions and change of law, is usually very detailed so that it is clear which risks are borne by the Contractor. The same approach should be adopted in relation to the risks arising from events of *force majeure*.

There are two aspects to the operation of *force majeure* clauses:

- The definition of *force majeure* events
- The operative clause that sets out the effect on the parties’ rights and obligations if a *force majeure* event occurs.

The events which trigger the operative clause must be clearly defined. As noted above, it is in the interests of both parties to ensure that the term *force majeure* is clearly defined.

The preferred approach for a Project Company is to define *force majeure* events as being any of the events in an exhaustive list set out in the contract. In this manner, both parties are aware of which events are *force majeure* events and which are not. Clearly, defining *force majeure* events makes the administration of the contract and, in particular, the mechanism within the contract for dealing with *force majeure* events simpler and more effective.

An example exhaustive definition is:

“An Event of Force Majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent provided that event or circumstance is limited to the following:

- a) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not) acts of terrorism, civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any governmental or competent authority*
- b) ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component*
- c) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;*
- d) earthquakes, flood, fire or other physical natural disaster, but excluding weather conditions regardless of severity*
- e) strikes at national level or industrial disputes at a national level, or strike or industrial disputes by labour not employed by the affected party, its subContractors or its suppliers and which affect an essential portion of the Works but excluding any industrial dispute which is specific to the performance of the Works or this Contract.”*

An operative clause will act as a shield for the party affected by the event of *force majeure* so that a party can rely on that clause as a defence to a claim that it has failed to fulfil its obligations under the contract.

An operative clause should also specifically deal with the rights and obligations of the parties if a *force majeure* event occurs and affects the project. This means the parties must consider each of the events it intends to include in the definition of *force majeure* events and then deal with what the parties will do if one of those events occurs.

An example of an operative clause is:

- [].1 Neither party is responsible for any failure to perform its obligations under this Contract, if it is prevented or delayed in performing those obligations by an Event of Force Majeure*
- [].2 Where there is an Event of Force Majeure, the party prevented from or delayed in performing its obligations under this Contract must immediately notify the other party giving full particulars of the Event of Force Majeure and the reasons for the Event of Force Majeure preventing that party from, or delaying that party in performing its obligations under this Contract and that party must use its reasonable efforts to mitigate the effect of the Event of Force Majeure upon its or their performance of the Contract and to fulfil its or their obligations under the Contract*
- [].3 Upon completion of the Event of Force Majeure the party affected must as soon as reasonably practicable recommence the performance of its obligations under this Contract. Where the party affected is the Contractor, the Contractor must provide a revised Program rescheduling the Works to minimise the effects of the prevention or delay caused by the Event of Force Majeure*
- [].4 An Event of Force Majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.*
- [].5 The Contractor has no entitlement and the Project Company has no liability for:*
- (a) any costs, losses, expenses, damages or the payment of any part of the Contract Price during an Event of Force Majeure*
 - (b) any delay costs in any way incurred by the Contractor due to an Event of Force Majeure.”*

In addition to the above clause, it is important to appropriately deal with other issues that will arise if a *force majeure* event occurs. For example, as noted above, it is common practice for a Contractor to be entitled to an extension of time if a *force majeure* event impacts on its ability to perform the works. Contractors also often request costs if a *force majeure* event occurs. In our view, this should be resisted. *Force majeure* is a neutral risk in that it cannot be controlled by either party. Therefore, the parties should bear their own costs.

Another key clause that relates to *force majeure* type events is the Contractor's responsibility for care of the works and the obligation to reinstate any damage to the works prior to completion. A common example clause is:

- [].1 *The Contractor is responsible for the care of the Site and the Works from when the Project Company makes the Site available to the Contractor until 5.00 pm on the Date of Commercial Operation*
- [].2 *The Contractor must promptly make good loss from, or damage to, any part of the Site and the Works while it is responsible for their care*
- [].3 *If the loss or damage is caused by an Event of Force Majeure, the Project Company may direct the Contractor to reinstate the Works or change the Works. The cost of the reinstatement work or any change to the Works arising from a direction by the Project Company under this clause will be dealt with as a Variation except to the extent that the loss or damage has been caused or exacerbated by the failure of the Contractor to fulfil its obligations under this Contract*
- [].4 *Except as contemplated in clause [].3, the cost of all reinstatement Works will be borne by the Contractor."*

This clause is useful because it enables the Project Company to, at its option, have the damaged section of the project rebuilt as a variation to the existing EPC Contract. This will usually be cheaper than recontracting for construction of the damaged sections of the works.

Operation and maintenance

(a) Operating and maintenance manuals

The Contractor is usually required to prepare a detailed operating and maintenance manual (O&M manual). The EPC Contract should require the Contractor to prepare a draft of the O&M manual within a reasonable time to enable the Project Company, the Operator and possibly the Lenders to provide comments which can be incorporated into a final draft at least six months before the start of commissioning.

The draft should include all information that may be required for start-up, all modes of operation during normal and emergency conditions and maintenance of all systems of the facility.

(b) Operating and maintenance personnel

It is standard for the Contractor to be obliged to train the operations and maintenance staff supplied by the Project Company. The cost of this training will be built into the contract price. It is important to ensure the training is sufficient to enable such staff to be able to efficiently, prudently, safely and professionally operate the facility upon commercial operation. Therefore, the framework for the training should be described in the Appendix dealing with the scope of work (in as much detail as possible). This should include the standards of training and the timing for training.

The Project Company's personnel trained by the Contractor will also usually assist in the commissioning and testing of the facility. They will do this under the direction and supervision of the Contractor. Therefore, absent specific drafting to the contrary, if problems arise during commissioning and/or testing the Contractor can argue they are entitled to an extension of time etc. We recommend inserting the following clause:

- [].1 *The Project Company must provide a sufficient number of competent and qualified operating and maintenance personnel to assist the Contractor to properly carry out Commissioning and the Commercial Operation Performance Tests*

[]2 Prior to the Date of Commercial Operation, any act or omission of any personnel provided by the Project Company pursuant to GC []1 is, provided those personnel are acting in accordance with the Contractor's instructions, directions, procedures or manuals, deemed to be an act or omission of the Contractor and the Contractor is not relieved of its obligations under this Contract or have any claim against the Project Company by reason of any act or omission."

Spare parts

The Contractor is usually required to provide, as part of its scope of works, a full complement of spare parts (usually specified in the appendices (the scope of work or the specification) to be available as at the commencement of commercial operation.

Further, the Contractor should be required to replace any spare parts used in rectifying defects during the defects liability period, at its sole cost. There should also be a time limit imposed on when these spare parts must be back in the store. It is normally unreasonable to require the spare parts to have been replaced by the expiry of the defects liability period because that may, for some long lead time items, lead to an extension of the defects liability period.

The Project Company also may wish to have the option to purchase spares parts from the Contractor on favourable terms and conditions (including price) during the remainder of the concession period. In that case it would be prudent to include a term which deals with the situation where the Contractor is unable to continue to manufacture or procure the necessary spare parts. This provision should cover the following points:

- Written notification from the Contractor to the Project Company of the relevant facts, with sufficient time to enable the Project Company to order a final batch of spare parts from the Contractor
- The Contractor should deliver to, or procure for the Project Company (at no charge to the Project Company), all drawings, patterns and other technical information relating to the spare parts
- The Contractor must sell to the Project Company (at the Project Company's request) at cost price (less a reasonable allowance for depreciation) all tools, equipment and moulds used in manufacturing the spare parts, to extent they are available to the Contractor provided it has used its reasonable endeavours to procure them.

The Contractor should warrant that the spare parts are fit for their intended purpose, and that they are of merchantable quality. As a minimum, this warranty should expire on the later of:

- The manufacturer's warranty period on the applicable spare part
- The expiry of the defects liability period.

The Project Company should be aware that the Contractor may be purchasing the spare parts from the Original Equipment Manufacturer (OEM). The OEM will have typically imposed non-negotiable warranties on the spare parts that the Contractor will try to pass-through to the Project Company. This should be resisted on the part of the Project Company. However, the Project Company should be prepared to pay higher prices for those spare parts to reflect the greater risk the Contractor will be accepting in place of the pass-through of the OEM warranties.

Interface issues

In some circumstances, a split contract structure may be used to achieve a lower overall contract price than would be achieved under an EPC Contract. For example, a structure with a BOP contract and an equipment supply contract may be used. However, if a split structure is used, it is critical that a single point of responsibility is provided. If not, the Project Company will be left with interface risk which will impact on bankability.

Matters that are critical to providing a single point of responsibility are:

- Providing that no claim is available by the Contractor against the Project Company arising out of an act or omission of any other Contractor

- Preventing split Contractors from having the ability to make a claim on the Project Company due to the default of one of the other contracting entities (eg equipment supply Contractor claiming against the Project Company for a default caused by the balance of plant Contractor).

If a split contract structure is used, we recommend inserting the following clauses:

“No relief

[] Neither Contractor 1 nor Contractor 2 will be entitled to payment of any sum from the Project Company or to relief from any obligation to make payment of any sum to the Project Company or be entitled to relief from or reduction of any other liability, obligation or duty arising out of or in connection with the contracts including (without limitation):

[].1 any extension of time

[].2 any relief from liability for liquidated damages; [].3 any relief from liability for any other damages; [].4 any relief for deductions from payments

[].5 any relief from liability to rectify defects

[].6 any increase in the contract sum under the contracts

[].7 payment of any costs incurred

which arises out of or in connection with any act or omission of the other, whether pursuant to or in connection with any of the contracts or otherwise.

Horizontal defences

[] Contractor 1 and Contractor 2 each waive any and all rights, under contract, tort or otherwise at law, to assert any and all defences which either of Contractor 1 or Contractor 2 may have to a claim by the Project Company for the non-performance, inadequate performance or delay in performance under their respective Contract due to any non-performance or inadequate performance or delay in performance by the other party under its Contract.”

Dispute resolution

Dispute resolution provisions for EPC Contracts could fill another entire paper. There are numerous approaches that can be adopted depending on the nature and location of the project and the particular preferences of the parties involved.

However, there are some general principles which should be adopted. They include:

- Ensuring that the dispute resolution process is aligned with that under the PPA
- Having a staged dispute resolution process that provides for internal discussions and meetings aimed at resolving the dispute prior to commencing action (either litigation or arbitration)
- Obliging the Contractor to continue to execute the works pending resolution of the dispute
- Not permitting commencement of litigation or arbitration, as the case may be, until after commercial operation of the facility. This provision must make exception for the parties to seek urgent interlocutory relief
- Providing for consolidation of any dispute with other disputes which arise out of or in relation to the construction of the facility. The power to consolidate should be at the Project Company’s discretion.

Appendix 1 Example clauses

Part I – Extension of time regime

- [].1 The Contractor must immediately give notice to the Project Company of all incidents and/or events of whatsoever nature affecting or likely to affect the progress of the Works.
- [].2 Within 15 days after an event has first arisen the Contractor must give a further notice to the Project Company which must include:
- (a) the material circumstances of the event including the cause or causes
 - (b) the nature and extent of any delay
 - (c) the corrective action already undertaken or to be undertaken
 - (d) the effect on the critical path noted on the Program
 - (e) the period, if any, by which in its opinion the Date for Commercial Operation should be extended
 - (f) a statement that it is a notice pursuant to this GC [].2.
- [].3 Where an event has a continuing effect or where the Contractor is unable to determine whether the effect of an event will actually cause delay to the progress of the Works so that it is not practicable for the Contractor to give notice in accordance with GC [].2, a statement to that effect with reasons together with interim written particulars (including details of the likely consequences of the event on progress of the Works and an estimate of the likelihood or likely extent of the delay) must be submitted in place of the notice required under GC [].2. The Contractor must then submit to the Project Company, at intervals of 30 days, further interim written particulars until the actual delay caused (if any) is ascertainable, whereupon the Contractor must as soon as practicable but in any event within 30 days give a final notice to the Project Company including the particulars set out in GC [].2.
- [].4 The Project Company must, within 30 days of receipt of the notice in GC [].2 or the final notice in GC [].3 (as the case may be), issue a notice notifying the Contractor's Representative of its determination as to the period, if any, by which the Date for Commercial Operation is to be extended.
- [].5 Subject to the provisions of this GC [], the Contractor is entitled to an extension of time to the Date for Commercial Operation as the Project Company assesses, where a delay to the progress of the Works is caused by any of the following events, whether occurring before, on or after the Date for Commercial Operation:
- (a) any act, omission, breach or default by the Project Company, the Project Company's Representative and their agents, employees and Contractors
 - (b) a Variation, except where that Variation is caused by an act, omission or default of the Contractor or its SubContractors, agents or employees
 - (c) a suspension of the Works pursuant to GC [], except where that suspension is caused by an act, omission or default of the Contractor or its SubContractors, agents or employees
 - (d) an Event of *Force Majeure*
 - (e) a Change of Law.

- [].6 Despite any other provisions of this GC [], and notwithstanding that the Contractor is not entitled to or has not claimed an extension of time to the Date for Commercial Operation, the Owner may, in its absolute sole and unfettered discretion, at any time grant an extension of the Date for Commercial Operation. The Owner has no obligation to grant, or to consider whether it should grant, an extension of time and is not required to exercise this discretion for the benefit of the Contractor.
- [].7 The Contractor must constantly use its best endeavours to avoid delay in the progress of the works.
- [].8 If the Contractor fails to submit the notices required under GCs [].1, [].2 and [].3 within the times required then:
- (a) the Contractor has no entitlement to an extension of time
 - (b) the Contractor must comply with the requirements to perform the Works by the Date for Commercial Operation
 - (c) any principle of law or equity (including those which might otherwise entitle the Contractor to relief and the “Prevention Principle”) which might otherwise render the Date for Commercial Operation immeasurable and liquidated damages unenforceable, will not apply.
- [].9 It is a further condition precedent of the Contractor’s entitlement to an extension of time that the critical path noted on the Program is affected in a manner which might reasonably be expected to result in a delay to the Works reaching Commercial Operation by the Date for Commercial Operation.
- [].10 If there are two or more concurrent causes of delay and at least one of those delays would not entitle the Contractor to an extension of time under this GC [] then, to the extent of that concurrency, the Contractor is not entitled to an extension of time.
- [].11 The Project Company may direct the Contractor’s Representative to accelerate the Works for any reason including as an alternative to granting an extension of time to the Date for Commercial Operation.
- [].12 The Contractor will be entitled to all extra costs necessarily incurred, by the Contractor in complying with an acceleration direction under GC [].11, except where the direction was issued as a consequence of the failure of the Contractor to fulfil its obligations under this Contract. The Project Company must assess and decide as soon as reasonably practical, the extra costs necessarily incurred by the Contractor.

Part II – Grid access regime

- [].1 The Contractor must co-ordinate the connection of the Facility to the Transmission Line and provide, in a timely manner, suitable termination facilities in accordance with Appendix 1. The Contractor must liaise with the Network Service Provider, Government Authorities and other parties to avoid delays in connecting the Facility to the Transmission Line.
- [].2 On the Date for First Synchronisation the Project Company must ensure that there is in place a Transmission Network which is capable of receiving the generated output the Facility is physically capable of producing at any given time.
- [].3 The Project Company’s obligation to ensure that the Transmission Network is in place is subject to the Contractor being able (physically and legally) to connect the Facility to the Transmission Line and import and/or export power to the Transmission Network.
- [].4 If the Contractor notifies the Project Company that First Synchronisation is likely to take place before the Date for First Synchronisation, the Project Company must endeavour, but is under no obligation to ensure that the Transmission Network is in place, to enable First Synchronisation to take place in accordance with the Contractor’s revised estimate of First Synchronisation.

- [].5 At the time of and following First Synchronisation the Project Company will ensure that the Contractor is permitted to export to the Transmission Network power which the Facility is physically capable of exporting, provided that:
- (a) it is necessary for the Contractor to export that amount of power if the Contractor is to obtain Commercial Operation
 - (b) the Contractor has complied in all respects with its obligations under GC [].7
 - (c) in the reasonable opinion of the Project Company and/or the Network Service Provider the export of power by the Facility will not pose a threat to the safety of persons and/or property (including the Transmission Network).
- [].6 For the avoidance of doubt, the Project Company will not be in breach of any obligation under this Contract by reason only of the Contractor being denied permission to export power to the Transmission Network in accordance with the Grid Code.
- [].7 The Contractor must carry out the testing of the Works, in particular in relation to the connection of the Facility to the Transmission Network so as to ensure that the Project Company and the Contractor as a Participant (as defined in the Electricity Code) comply with their obligations under the Electricity Code in respect of the Testing of the Works,
- [].8 The Contractor must carry out the Testing of the Works, in particular in relation to the connection of the Facility to the Transmission Network, so as to ensure that:
- (a) any interference to the Transmission Network is minimised
 - (b) damage to the Transmission Network is avoided.
- [].9 The Contractor must promptly report to the Project Company's Representative any interference with and damage to the Transmission Network which connects with the Facility.
- [].10 Without derogating from the Contractor's obligations under this Contract, in carrying out any test which requires the Contractor to supply electricity to the Transmission Network, the Contractor must:
- (a) issue a notice to the Project Company's Representative at least 24 hours prior to the time at which it wishes to so supply, detailing the testing or commissioning and including the Contractor's best estimate of the total period and quantity (in MWh per half-hour) of that supply
 - (b) promptly notify the Project Company's Representative if there is any change in the information contained in such notice
 - (c) do all things necessary to assist the Project Company (including but not limited to cooperating with the Network Service Provider and complying with its obligations under GC 20.15), so that the Project Company can comply with its obligations under the National Electricity Code.

Part III – Performance testing and guarantee regime

1 Testing

Tests and inspections

- 1.1 The Contractor must, at its own expense, carry out at the place of manufacture and/or on the Site all tests and/or inspections of the Equipment and any part of the Works as specified in this Contract or as required by any applicable Laws, and as necessary to ensure the Facility operates safely and reliably under the conditions specified in the Schedule of Scope of Work and the Schedule of Tests.

[Note: Schedule of Tests should specify all the categories of tests other than the Tests (example: test at manufacturers plant, test on site, functional test etc.)]
- 1.2 The Contractor must also comply with any other requirements of the Owner in relation to testing and inspection.
- 1.3 The Owner and the Lenders' Representative are entitled to attend any test and/or inspection by its appointed duly authorised and designated inspector.
- 1.4 Whenever the Contractor is ready to carry out any test and/or inspection, the Contractor must give a reasonable advance notice to the Owner of the test and/or inspection and of the place and time. The Contractor must obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Owner's inspector and the Lenders' Representative to attend the test and/or inspection.
- 1.5 The Contractor must provide the Owner's Representative with a certified report of the results of any test and/or inspection within 5 days of the completion of that test or inspection.
- 1.6 If the Owner or the Lenders' Representative fails to attend the test and/or inspection, or if it is agreed between the parties that the Owner or the Lenders' Representative will not attend, then the Contractor may proceed with the test and/or inspection in the absence of the Owner's inspector and provide the Owner and the Lenders' Representative with a certified report of the results.
- 1.7 The Owner may require the Contractor to carry out any test and/or inspection not described in this Contract. The Contractor's extra costs necessarily incurred, which do not include head office or corporate overheads, profit or loss of profit, in the carrying out of the test and/or inspection will be added to the Contract Price only if the test shows that the relevant Works conform with the requirements of the Contract, but otherwise all costs will be borne by the Contractor.
- 1.8 If any Equipment or any part of the Works fails to pass any test and/or inspection, the Contractor must either rectify to the Owner's satisfaction or replace such Equipment or part of the Works and must repeat the test and/or inspection upon giving a notice under GC 1.4.
- 1.9 The Contractor must afford the Owner and the Lenders' Representative access at any time to any place where the Equipment is being manufactured or the Works are being performed in order to inspect the progress and the manner of manufacture or construction, provided that the Owner gives the Contractor reasonable prior notice.
- 1.10 The Contractor agrees that neither the execution of a test and/or inspection of Equipment or any part of the Works, nor the attendance by either or both the Owner and the Lenders' Representative nor the issue of any test report pursuant to GC 1.5 releases the Contractor from any other responsibilities under this Contract.
- 1.11 No part of the Works are to be covered up on the Site without carrying out any test and/or inspection required under this Contract and the Contractor must give reasonable notice to the Owner whenever any part of the Works are ready or about to be ready for test and/or inspection.

- 1.12 The Contractor must uncover any part of the Works or make openings in or through the same as the Owner may from time to time require at the Site and must reinstate and make good that part.
- 1.13 If any part of the Works have been covered up at the Site after compliance with the requirement of GC 1.12 and are found to be performed in accordance with the Contract, the Contractor's extra costs, which do not include head office or corporate overheads, profit or loss of profit, necessarily incurred in uncovering, making openings in or through, reinstating and making good the same will be added to the Contract Price.

Performance tests procedures and guidelines

- 1.14 The relevant Performance Tests must be conducted by the Contractor after Commissioning to ascertain whether the Facility can achieve Completion and after Completion to ascertain whether the Facility can meet the Performance Guarantees.
- 1.15 All Performance Tests must be conducted in a professional, timely, safe and environmentally responsible manner and in accordance with the Schedule of Scope of Work and the Schedule of Tests, all other terms and conditions of this Contract, applicable standards, Laws, Government Approvals and must be accomplished at no additional cost or expense to the Owner.
- 1.16 The Facility must not be operated during any Performance Test in excess of:
- (a) the limits allowed by any manufacturer to maintain its warranty
 - (b) the limits imposed by the Law and Government Approvals applicable standards
 - (c) the limits stated in the Schedule of Tests.
- 1.17 The Contractor agrees that the Owner and the Lenders' Representative will monitor the conduct of the Performance Testing to ensure compliance with the terms and conditions of this Contract.
- 1.18 The Contractor agrees that an inspection pursuant to GC 1.17 by the Owner and/or the Lenders' Representative does not release the Contractor from any other responsibilities under this Contract, including meeting the Performance Guarantees.
- 1.19 If a Performance Test is interrupted or terminated, for any reason, that Performance Test must be re-started from the beginning, unless otherwise approved by the Owner or the Lenders' Representative.
- 1.20 The Owner or the Contractor is entitled to order the cessation of any Performance Test if:
- (a) damage to the Works, the Facility or other property or personal injury
 - (b) breach of the conditions specified in the relevant environmental Laws or Government Approvals, is likely to result from continuation.
- 1.21 If the Contractor fails to pass a Performance Test (or any repetition in the event of prior failure) or if a Performance Test is stopped before its completion, that Performance Test must, subject to 24 hours prior notice having been given by the Contractor to the Owner and the Lenders' Representative, be repeated as soon as practicable. All appropriate adjustments and modifications are to be made by the Contractor with all reasonable speed and at its own expense before the repetition of any Performance Test.
- 1.22 The results of the Performance Tests must be presented in a written report, produced by the Contractor and delivered to the Owner and the Lenders' Representative within 5 days of the completion of the Tests. Those results will be evaluated by the Owner and the Lenders' Representative. In evaluation of the results, no additional allowance will be made for measurement tolerances over and above those specified in the applicable ISO test standard.

Sale of electricity during the performance tests

1.23 The Contractor acknowledges and agrees that:

- (a) the Owner is entitled to all energy, revenues and other benefits, including all Renewable Energy Certificates under the REC Act, carbon credits and all other “green” renewable energy credits, that may be generated or derived from the Facility during the Performance Tests or otherwise
- (b) nothing in this Contract imposes any restrictions on the Owner from selling any electricity generated during the Performance Tests.

2 Precommissioning, commissioning and tests on completion

Precommissioning

- 2.1 The Contractor must perform the Precommissioning of the Facility in accordance with the Owner’s requirements and procedures in relation to Precommissioning as set out in the Schedule of Scope of Work.
- 2.2 As soon as all works in respect of Precommissioning are completed and, in the opinion of the Contractor, the Facility is ready for Commissioning, the Contractor must give notice to that effect to the Owner. As soon as reasonably practicable after receipt of that notice, the Owner must issue a notice to the Contractor specifying the date for commencement of Commissioning.

Commissioning

- 2.3 On the date specific in the notice issued by the Owner under clause 2.3, the Contractor must commence Commissioning of the Facility in accordance with the requirements and procedures in relation to Commissioning as set out in the Schedule of Scope of Work.

Performance tests

2.5

- (a) After the completion of Commissioning the Contractor must give the Owner at least 10 Days prior written notice that the Equipment, Works and Facility (or any component part of the Works and Facility) are ready for the Commercial Operation Performance Tests.
- (b) The Owner must, as soon as reasonably practicable, after receipt of a notice under GC 2.5(a), issue a notice to the Contractor specifying the date for commencement of the Commercial Operation Performance Tests if such a date is not already identified in the Program and the Schedule of Tests.

3 Commercial operation, post-commercial operation and final completion

Completion

3.1

- (a) The Contractor must notify the Owner at least [70] Days before the whole of the Works will, in the opinion of the Contractor reach the stage of Commercial Operation and be suitable for the issue of the Facility Completion Form by the Independent Engineer.
- (b) As soon as the whole of the Works have, in the opinion of the Contractor, satisfied each of the preconditions for achieving Commercial Operation, including that the Facility Completion Form has been issued to the Owner by the Independent Engineer, the Contractor must give a notice to that effect to the Owner.

- (c) The Owner's Representative must, promptly, and no later than 10 days after receipt of the Contractor's notice under GC 3.1(b), either issue a Certificate of Commercial Operation stating that the Facility has achieved Commercial Operation or notify the Contractor that the Facility has not achieved Commercial Operation and indicate any defects and/or deficiencies.
- (d) Despite any other provision of this Contract, no payment and no partial or entire use or occupancy of the Site, the Works or the Facility by the Owner in any way constitutes an acknowledgment by the Owner that Commercial Operation has occurred, nor does it operate to release the Contractor from or otherwise affect any of the Contractor's warranties, obligations or liabilities under or in connection with this Contract.
- (e) If the Owner's Representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in this GCs 3.1 must be repeated until the Owner issues a Certificate of Commercial Operation.
- (f) Upon the issue of the Certificate of Commercial Operation, the Contractor must handover care, custody and control of the Facility to the Owner.

Post-commercial operation performance tests

3.2

- (a) The Contractor must give the Owner prior written notice of when it intends to carry any of the Post Commercial Operation Performance Tests at the times and in accordance with the requirements set out in the Schedule of Tests.
- (b) As soon as reasonably practicable after receipt of a notice under GC 3.2(a), the Owner must issue a notice to the Contractor specifying the date for commencement of the Post Commercial Operation Performance Tests at the times and in accordance with the Schedule of Tests.

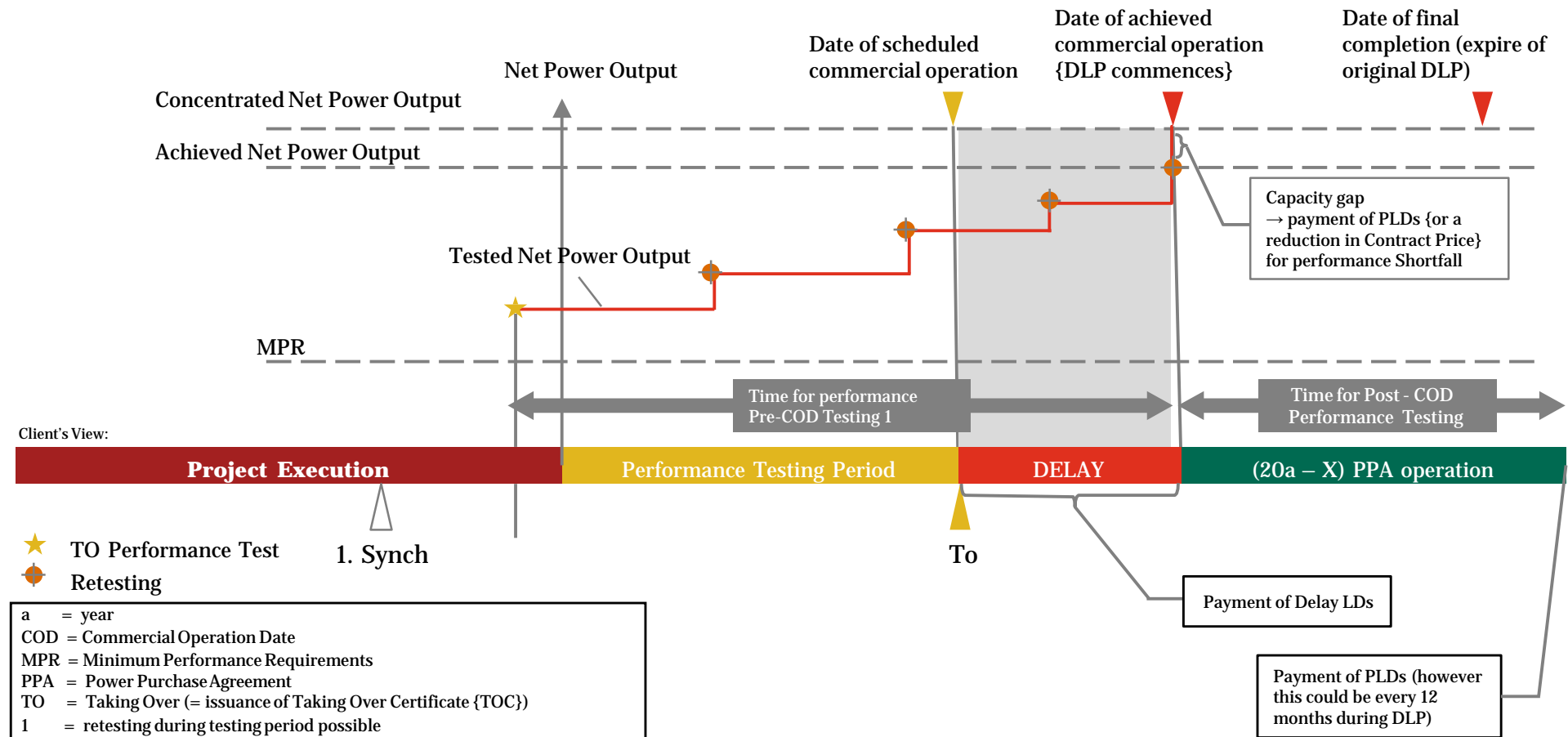
Final completion

3.3

- (a) As soon as the Facility, in the opinion of the Contractor, reaches the stage of Final Completion the Contractor must give a notice to the Owner.
- (b) The Owner's Representative must, promptly, and no later than 10 days after receipt of the Contractor's notice under GC 3.6(a), either issue a Certificate of Final Completion stating that the Facility has reached Final Completion or notify the Contractor of any defects and/or deficiencies.
- (c) If the Owner's Representative notifies the Contractor of any defects and/or deficiencies, the Contractor must then correct those defects and/or deficiencies and the procedures described in GCs 3.6(a) and (b) must be repeated until the Owner issues a Certificate of Final Completion.
- (d) Despite any other provision of this Contract, no partial or entire use or occupancy of the Site, the Works or the Facility by the Owner, whether during the Tests after Completion or otherwise, in any way constitutes an acknowledgment by the Owner that Final Completion has occurred, nor does it operate to release the Contractor from any of its warranties, obligations or liabilities under this Contract including the satisfactory performance of its obligations during the Defects Liability Period, the carrying out of the Tests after Completion and meeting the Performance Guarantees.

Appendix 2 Diagrammatic representation of performance testing, performance guarantee and compensation arrangements for a sample solar PV project

Diagrammatic representation of performance testing, performance guarantee and compensation arrangements for a sample solar PV project



12 The elephant in the room dispute resolution processes for RE IPP programme introduction

Now that the successful bids from Phase 1 of South Africa's Renewable Energy Independent Power Producer (RE IPP) Programme have reached financial close, project companies overseeing the development of these projects need to turn their minds to the administration of the contracts underpinning these projects.

One matter with the potential to create issues is where there are differences between the dispute resolution procedure set out in the Power Purchase Agreement (**PPA**) that project companies are required to enter into with Eskom Holdings SOC Limited (**Eskom**) and the dispute resolution procedures negotiated in the construction and operation contracts (generally Engineering, Procurement and Construction (EPC) and Operation and Management (**O&M**) Contracts) between project companies and EPC and O&M Contractors.

The dispute resolution procedure set out in the PPA provides for litigation of disputes in the High Court of South Africa. In contrast, the dispute resolution procedure negotiated in many of the EPC and O&M Contracts under the RE IPP Programme provide for arbitration of disputes, commonly under the International Chamber of Commerce (**ICC**) Rules of Arbitration or the Arbitration Foundation of South Africa Rules.

This paper discusses the dispute resolution processes under the PPA and EPC and O&M Contracts, along with issues that may arise in disputes under the aforementioned contracts under the RE IPP Programme that, due to the nature of the dispute or the relationship of the parties, have not been resolved at any intermediate stage in a dispute resolution process and proceed to the final stage of litigation or arbitration, as relevant. Although it is acknowledged that some types of disputes that may arise in respect of the RE IPP Programme projects may be more appropriately resolved by alternative dispute resolution procedures (such as disputes involving valuations, defects and other technical issues relating to the facility which may more appropriately be resolved by an independent expert), these matters are not the subject of this paper.

Why provide for arbitration under the EPC and O&M contracts?

The question may be asked: why don't all EPC and O&M Contracts provide dispute resolution procedures that mimic the procedure set out in the PPA?

Issues identified in PPA drafting

Firstly, a number of issues have been identified with the dispute resolution processes provided under the PPA.

The standard "internal referral" process (outlined below) does not provide for service of a notice of dispute to define and crystallise the nature of the issues for discussions between the parties. The provision for the dispute to be referred to the liaison officers or "other designated executives from each party" is undesirable as it leaves the nomination of personnel open-ended and may allow the parties to manipulate a dispute by delaying the appointment of relevant officers to deal with the dispute at the initial stage.

The PPA also provides the additional “fast track” process of dispute resolution using an independent expert. There have also been a number of issues identified with this process including that:

- it is not always clear in what circumstances the fast track dispute procedure is to be applied under the PPA
- there is no provision for the method of appointing the expert
- the expert’s discretion is wide-ranging with only limited checks and balances
- there is no provision to appeal the decision of the expert.

As the PPA is non-negotiable, these identified issues cannot be addressed or mitigated under the PPA by the parties. As a result of the non-negotiable nature of these issues, parties have been reluctant to adopt the dispute resolution processes set out in the PPA in the EPC and O&M Contracts.

Preference for arbitration

Given that many of the parties involved in the RE IPP Programme projects are international developers, contractors and suppliers, there has been a strong preference for the parties to use arbitration (rather than litigation) as the preferred dispute resolution mechanism. This preference is based on a range of reasons such as:

- the enforceability of the arbitration award on a near-worldwide basis, as opposed to the more limited recognition of foreign judgments
- finality of the arbitration award, as opposed to the avenues of appeal that exist in litigation
- specific expertise of arbitrators in particular subject matter areas
- privacy due to the confidentiality of arbitral proceedings and awards
- time savings
- a broad acknowledgement and understanding of commonly used arbitration rules such as the ICC rules
- in some cases, the perception of increased impartiality due to resolution of the dispute occurring outside of a country-specific judiciary.

Recognition of a judgment can be uncertain where either or both jurisdictions are not party to formal reciprocity agreements such as the *Hague Convention on the Recognition and Enforcement of Foreign Judgments in Civil and Commercial Matters*, or are not nominated as reciprocal jurisdictions in their domestic legislation. In some cases it may be that the issue of enforcement can only be resolved by further litigation.

Dispute resolution procedure – PPA

If a party to the PPA defaults in the performance of its obligations and a dispute arises “in relation to or in connection with any aspect of” the PPA, as noted above the two dispute resolution procedures that may apply under the PPA are “internal referral” and “fast track”.

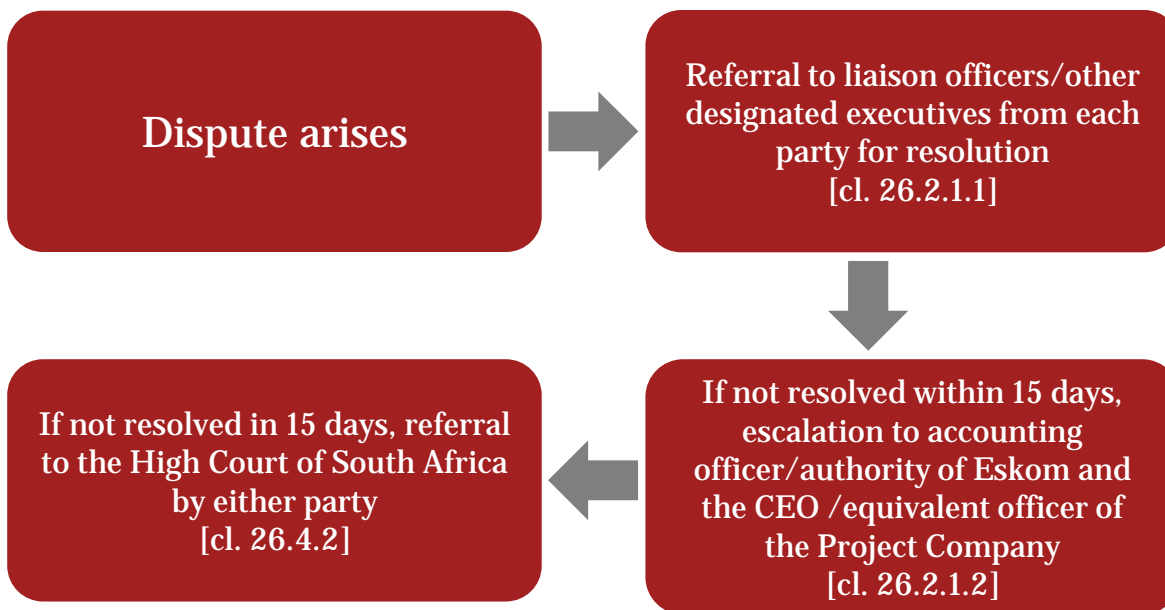
Internal referral

If a dispute arises, either party can refer the dispute to a meeting of the liaison officer, or other designated executives from each party who are

- actively involved in the ownership or lease of the project site and the ownership, construction, operation and maintenance of the facility
- sufficiently authorised to resolve the dispute.

Should the parties be unable to resolve the dispute within 15 days of this referral, either party may refer the dispute for a decision by the accounting officer/authority of Eskom and the CEO/equivalent officer of the Project Company. The parties and their employees and representatives must use reasonable endeavours to resolve the dispute and must not be delayed by negotiations or any other informal procedure that the relevant representatives may adopt. If the dispute is not resolved within 15 days of referral, the dispute may be referred to litigation in the South African High Court by either party.

The following flowchart provides a diagram of the dispute resolution procedure under the PPA:



Fast track procedure

The “fast track” procedure required to be followed in specified circumstances under the PPA results in referral of a dispute to an independent expert. This procedure is notable in terms of the risks posed to a Project Company if it is deemed to have failed to cooperate in the fast track procedure.

Under this fast track procedure, the expert is expressly afforded the same powers as a judge of the High Court of South Africa, unless restrained by law from exercising such power or ordering such relief. Should the Project Company fail to cooperate with the independent expert, for example, on the basis that the Project Company considers that the subject of the dispute was caused by the Contractor under the EPC or O&M Contract, as relevant, and the independent expert believes that such default or omission prejudices the adjudication procedure, the independent expert can order that the Project Company forfeits the right to continue to participate in the adjudication, the outcome of which is final and binding.

General dispute resolution procedure – EPC and O&M contracts

Escalating dispute procedure

EPC and O&M Contracts generally provide a staged dispute resolution procedure that commences with internal discussions for a specified amount of time aimed at resolving the dispute prior to commencing formal proceedings – An example of such a procedure is set out below.

The dispute must first be referred to the Project Company's representative and the Contractor's representative, who then have a specified period in which to resolve the dispute. After the specified period has elapsed, either party may refer the dispute to an executive panel comprised of the CEO or equivalent of the Project Company and the Contractor. After considering the issues, the executive panel may then issue a written decision that is binding upon the parties. If the executive panel does not resolve the dispute within a specified period, or agree upon alternative procedures to determine the dispute, then either party may commence arbitration.

The completion of this staged escalating procedure is a condition precedent to arbitration. Only once one of the parties has attempted to follow the procedure (and the procedure has failed to resolve the dispute) can the parties agree to resolve the dispute by way of arbitration.

The elephant in the room?

The misalignment between the PPA and the EPC and O&M Contracts or procedures may present an issue if a dispute arises:

- under an EPC or O&M Contract where the relevant Contractor alleges default by the Project Company
- under the PPA where Eskom alleges default by the Project Company.

and the Project Company alleges that its default in either scenario is due to an act or omission of a third party that is not a party to the specific contract under which the Project Company is alleged to have defaulted, but that third party is actively involved in the project and has entered into a separate agreement with the Project Company (eg Eskom in example 1 and the EPC or O&M Contractor in example 2).

In such a situation the Project Company will be faced with two issues:

Recourse from the defaulting party

The third party is not obliged to participate in a dispute resolution procedure under a contract to which it is not a party. If a third party is not willing to negotiate its liability or participate in the dispute resolution process by consent (notwithstanding that it may have contributed to a default of the contract by a party to that contract), the party seeking to join that third party will need to begin a sometimes protracted process of requiring joinder.

Continuing obligation to follow dispute resolution procedures

As the party with concurrent obligations under both the PPA and the EPC and O&M Contracts, the Project Company will be contractually obliged to follow the dispute resolution procedure under both contracts through the escalating stages that are a condition precedent to initiating formal proceedings, be that litigation or arbitration.

Issues arising when a dispute under the EPC or O&M contract is due to a default of ESKOM.

Hypothetically, if Eskom, through its own act or omission, has caused the Project Company to default on one of its contractual obligations under the EPC or O&M Contracts, as Eskom is not a party to these contracts it cannot be compelled to participate in the dispute resolution procedure due to the lack of privity of contract.

Whilst the ICC rules, for example, allow for joinder of parties under article 7, this is only possible where the parties consent to be joined or are also subject to ICC arbitration agreements. No rule allows for the joinder of a party, however relevant to the dispute, that is not a party to an ICC arbitration agreement.

Action under the PPA

If Eskom's act or omission that caused the Project Company to default under the EPC or O&M Contract can also be characterised as being the cause of "any dispute arising in relation to or in connection with any aspect" of the PPA, the Project Company could initiate a dispute under the PPA against Eskom. The dispute would then continue through the procedure set out by the PPA until it was resolved between Eskom and the Project Company.

Action under the EPC or O&M Contracts

If a Contractor sought to enforce its contractual rights against the Project Company and to initiate the dispute resolution procedure under the EPC or O&M Contract by serving notice of dispute upon the Project Company, given that it would not be able to join Eskom to the arbitration without consent, the Project Company should seek a stay of procedure to prevent the dispute from proceeding to arbitration until it is able to resolve the dispute with Eskom.

If it is clear that the Contractor will not agree to a stay or otherwise cooperate, the Project Company should apply pursuant to section 3(2) of the Arbitration Act No. 42 of 1965 for an order that the dispute should not be referred to arbitration. To be successful in such an application, the Project Company must show "good cause" as to why such an order should be made – in such a case this could be argued to be due to the futility of the arbitration process without the involvement of Eskom. An application under this section would not place the Project Company in default of the EPC or O&M Contracts, provided that the relevant contract contains the standard provision that, notwithstanding any dispute resolution procedure set out in the contract, allows a party to apply to a court of competent jurisdiction to seek urgent or interim relief.

If, through its own act or omission, the Contractor caused the Project Company to default on its obligations to Eskom under the PPA, the Contractor (which is not a party to the PPA) cannot be compelled to participate in the resolution of the dispute under the process set out in the PPA due to the lack of privity of contract.

Action under the EPC or O&M contracts

If the act or omission leading to the default under the PPA can also be characterised as a default causing a dispute to arise under the EPC or O&M Contract, the Project Company could initiate the dispute resolution procedure under the relevant contract by giving the Contractor notice of the dispute. The dispute would then continue through the escalating dispute resolution process until resolved.

If the dispute resolution clause is broadly drafted such that the dispute resolution process will apply to "any dispute arising" under the EPC or O&M Contracts, a practical solution may be to have the Contractor consent to the dispute in respect of the PPA being dealt with under the EPC or O&M Contract, as relevant. However, if the dispute resolution clause is more narrowly drafted or if the Contractor's act or omission cannot be characterised as being a breach of its obligations under the EPC or O&M Contract, it will mean that the act or omission in question could not be the basis of a dispute under the relevant contract. In these instances, resistance by the Contractor to follow the dispute resolution procedure set out in the EPC or O&M Contract may be difficult to challenge.

Action under the PPA

If the dispute with Eskom regarding the Project Company's alleged breach of the PPA proceeds to the High Court of South Africa, the Project Company could apply to the court pursuant to rule 13 of the Uniform Rules of Court for a joinder of the Contractor as a third party to the proceedings.

Joinder of the Contractor is not without its difficulties. Section 6 of the Arbitration Act No. 42 of 1965 provides a party to an arbitral agreement the right to apply for a stay of a third-party notice served under the Uniform Rules of Court, as service of this notice and any purported litigation falls outside of the agreed dispute resolution procedure under the EPC or O&M Contract. If an application for stay was made by the Contractor, the Project Company could raise arguments as to why a stay should not be ordered, such as the futility of the dispute resolution procedure or the risk of multiple proceedings in order to satisfy the court that the dispute should not be determined by arbitration in accordance with the relevant contract.

Even if the Contractor is successfully joined and a judgment is entered against the Contractor, as discussed above the Project Company may encounter problems in enforcing the South African judgment in the Contractor's jurisdiction due to specific rules of recognition of judgments between countries.

What steps can parties take to mitigate these issues?

Importantly, the Project Company should aim to maintain a strong commercial relationship with the Contractor and Eskom. In addition to allowing disputes to be quickly identified, this should also assist all parties to remain engaged and receptive to practical resolutions discussed in this paper, such as agreeing to joinder or consolidation of claims. EPC and O&M Contracts should also include clauses that provide for consolidation of disputes.

Robust contract administration will also assist in order to avoid disputes arising in the first place, or to resolve disputes at an early stage to avoid costs and delays.

Given that processes under both the EPC and O&M Contracts and the PPA provide for a stage that involves discussions between the parties' representatives, it is critical to ensure that the representatives nominated for these discussions have the sufficient decision-making authority allocated to allow them to negotiate and agree on a resolution to the matter.

Finally, given that the potential issues outlined in this paper all carry a risk of incurring significant cost and delays, all parties should be aware of these matters as risks to be avoided during the development and operation of the project and of the imperative for cooperation.

13 Liquidated damages – Delay and performance

Introduction

The standard form international contracts designed for use on infrastructure projects (for example, ENAA and FIDIC) differentiate between liability for delay and liability for underperformance of a plant or facility.

This paper explains why, from a legal and practical perspective, it is necessary to differentiate between liability for delay liquidated damages and performance liquidated damages as well as different types of performance liquidated damages.

Delay liquidated damages

The purpose of liquidated damages for delay is to compensate the Project Company for loss and damage suffered as a result of late completion of the plant or facility. In order to be enforceable, delay liquidated damages must be a genuine pre-estimate of the loss or damage that the Project Company will suffer if the plant or facility is not completed by the target completion date. The genuine pre-estimate is determined at the time of entering into the contract.

Delay liquidated damages are usually expressed as a rate per day which represents the estimated extra costs incurred (such as extra insurance, supervision fees and financing charges) and losses suffered (revenue forgone) for each day of delay.

Performance liquidated damages

The purpose of liquidated damages for underperformance is to compensate the Project Company for loss and damage suffered as a result of underperformance of the plant or facility. In order to be enforceable, performance liquidated damages must be a genuine pre-estimate of the loss and damage that the Project Company will suffer over the life of the project if the plant or facility does not achieve the specified performance guarantees. As with delay liquidated damages, the genuine pre-estimate is determined at the time of entering into the contract.

The nature of performance liquidated damages means that the measure of liquidated damages will depend on the relevant performance guarantee, for example efficiency, output or availability. Performance liquidated damages are usually a net present value (NPV) calculation of the revenue forgone over the design life of the project. For example, in the case of a power station, if the output of the plant is 5 MW less than the specification the performance liquidated damages are designed to compensate the Project Company for the revenue forgone over the life of the project by being unable to sell that 5 MW.

Differentiation between delay and performance liquidated damages

The law relating to penalties and uncertainty of liquidated damages regimes is clear. If the amount of liquidated damages is held to constitute a penalty or if the liquidated damages regime is uncertain, it will be held by a court to be invalid.

We have seen contracts where delay and performance liquidated damages are combined. This is not recommended as there is a very real risk of a combined liquidated damages regime being struck down as a penalty as it will necessarily include many of the features of performance liquidated damages.

This means, from a legal perspective, if there is a combination of delay and performance liquidated damages, the liquidated damages rate must include more of the characteristics of delay liquidated damages if they are to remain a genuine pre-estimate of the Project Company's losses. If a combined liquidated damages amount includes an NPV or performance element the Contractor will be able to argue that the liquidated damages are not a genuine pre-estimate of loss when liquidated damages are levied for late completion only. The reason for

this is if the plant or facility is finished late but performs exactly as required the liquidated damages can only legally compensate the Project Company on an extra costs/revenue forgone basis not an NPV basis.

However, if the combined liquidated damages calculation takes on more of the characteristics of delay liquidated damages it means the Project Company would not be properly compensated if there is permanent underperformance of the plant or facility.

From a practical perspective, the best way of demonstrating why it is necessary to differentiate between delay liquidated damages and performance liquidated damages is to examine situations at both margins, that is, when the plant or facility is 99 percent complete and when it is 95 percent (or less) complete. The examples below assume that the project is being project financed and the Project Company and, more importantly, the Lenders will accept the plant or facility operating at least 95 percent of guaranteed output in preference to terminating the contract and commencing litigation to recover losses.

If the plant or facility is 99 percent complete at the date for commercial operation issues of acceptance will arise as the financing agreements will require 100 percent compliance. In order to accept the plant or facility and thereby commence commercial operation and service the debt (which under the financing agreements will take place after commercial operation) the Project Company will have to waive full compliance with the requirements under the contract. The Lenders are likely to approve the waiver because the defective performance will not impact on the project's ability to service the debt. However, if a single combined liquidated damages calculation is used (which takes on more of the characteristics of delay liquidated damages as described above) it will impact on the return earned by the Sponsors/equity participants. This situation would not arise if there was a differentiation between delay liquidated damages and performance liquidated damages because the project company would be able to accept the plant or facility and recover the NPV of the lost revenue from the Contractor.

If the example at the other margin (when it is 95 per cent or less complete) is examined the risks to the Project Company are even greater. If performance of the plant or facility is at only 95 percent and there is no prospect, in the foreseeable future, of increasing that performance the Project Company has relatively few options if a combined liquidated damages calculation is used (which takes on more of the characteristics of delay liquidated damages as described above). Obviously, the Project Company can wait for the performance to be rectified and receive liquidated damages. However, because they are presumably inadequate to fully compensate the Project Company for underperformance, it is likely that the Project Company will default under the financing arrangements which, at a minimum, will trigger additional equity contributions from the Sponsors. It may even lead to the Lenders taking over the project. A better option for the Project Company is to be able to accept the plant and commence operation and recover at least a portion of the forgone revenue as performance liquidated damages. The other alternative is to terminate the contract and sue to recover losses. However, that will be time consuming and expensive and it will not solve the problems under the financing agreements.

Differentiation between types of performance liquidated damages

The same arguments arise in relation to differentiating between types of performance liquidated damages as apply to differentiating between delay and performance liquidated damages.

It is important to differentiate between the different types of performance liquidated damages to protect the Project Company against arguments by the Contractor that the performance liquidated damages constitute a penalty. For example, if a single performance liquidated damages rate is only focused on output and not efficiency, problems and uncertainties will arise if the output guarantee is met but one or more of the efficiency guarantees are not. In these circumstances, the Contractor will argue that the liquidated damages constitute a penalty because the loss the Project Company suffers if the efficiency guarantees are not met are smaller than if the output guarantees are not met.

Conclusion

The prime goal of a Project Company is to receive a plant or facility on time and on budget that operates to specification. The contract should be aimed at achieving that outcome, however the contract should also protect the Project Company when the ideal outcome in relation to performance is not achieved, even where the technology is standard.

A contract which differentiates between delay liquidated damages and performance liquidated damages as well as different types of performance liquidated damages achieves an optimal mix between the two outcomes described above, is industry practice and is bankable.

Although a single combined liquidated damages calculation may appear simpler, it is legally flawed and will cause significant practical and commercial difficulties. The parties cannot have a single liquidated damages amount which takes into account all the potential permutations and combinations of delay and underperformance as it would not represent a genuine pre-estimate of loss and would be struck down by the courts as a penalty. In addition, a single combined liquidated damages regime is also likely to be held invalid for reasons of uncertainty.

14 Offtake and construction interface issues in infrastructure projects

Introduction

In reviewing the bankability of an infrastructure project, Lenders focus on the offtake agreements to ensure the Project Company will be able to meet its repayment obligations under the financing arrangements.

However, the suite of construction-related documents, and primarily the Engineering, Procurement and Construction (EPC) contract for the design, supply, construction and commissioning of the facility for the project (referred to in this paper as the EPC Contract), have a significant ability to impact on the viability and long-term success of a project and are a key area of focus for the Lenders and their lawyers in terms of bankability. If a single EPC Contract structure is not used, it is likely that the issues dealt with below will be more difficult to manage given the increased number of parties and the dilution of each party's responsibility.

This paper focuses on a number of hidden issues that must be considered in a review of the offtake agreement and the EPC Contract, namely:

- the access of the EPC Contractor to the grid or system to allow timely completion of construction, commissioning and testing (Grid Access)
- interfacing of testing regimes
- fuel specification requirements
- interface issues between the relevant government agencies and system operator and the EPC Contractor.

Not all these issues will be applicable to all projects. Therefore, they will be discussed in the context of a particular project type, eg power, liquefied natural gas (LNG), petrochemical, etc. Importantly, these issues are of equal, if not more, concern to Owners/Sponsors than they are to Lenders.

Obligation to provide grid access

This issue is of particular relevance to power projects; however, it may also apply, albeit in a different context, to oil and gas, LNG and desalination projects, amongst others.

EPC Contracts provide for the handover of the facility to the Project Company and the offtake agreement (normally a power purchase agreement (PPA) or tolling agreement in a power context) will become effective once all testing has been successfully completed and certified. This raises the important issue of the EPC Contractor's Grid Access and the need for the EPC Contract to clearly define the obligations of the Project Company in providing Grid Access.

Lenders need to be able to avoid the situation where the Project Company's obligation to ensure Grid Access is uncertain. Uncertainty may result in protracted disputes with the EPC Contractor concerning the EPC Contractor's ability to place load onto the grid system (ie as necessary to undertake the commissioning and performance testing required to achieve practical completion) and to obtain extensions of time in situations where the EPC Contractor is delayed as a result of the failure or inability of the Project Company to provide that access.

Grid Access issues primarily arise at two levels:

- the obligation to ensure the grid connection infrastructure is in place
- the obligation to ensure the EPC Contractor is permitted to export power.

Typically the Project Company bears the risk of the obligation to ensure the grid connection infrastructure is in place, since it is usually responsible for procuring the construction of that infrastructure. Issues that need to be considered include:

- What physical grid connection infrastructure is to be designed and constructed and how will that infrastructure interface with the EPC Contractor's works? Are the limits and points of connection clearly defined? Do any of those works have to be designed and constructed by specialist consultants and Contractors accredited by the offtaker or other system operator? Is the construction of these facilities covered by the PPA, concession agreement or any other contract? If so, are the rights and obligations of the Project Company dealt with in a consistent manner (ie to avoid a situation where the EPC Contractor causes the Project Company to be in breach of the PPA or to avoid a situation where the EPC Contractor is entitled to relief such as an extension of time or delays costs where the Project Company does not get corresponding relief under the PPA)?
- What is the timing for completion of the grid connection infrastructure – Will it fit in with the project program and the timing under the EPC Contract? Is there a sufficient buffer between the date for completion of the grid connection infrastructure and the target date by which the Project Company must provide the EPC Contractor with access to those facilities?

With respect to the EPC Contractor's ability to export power, the EPC Contract needs to adequately deal with this risk and the parties respective obligations, including:

- What is the extent of the Grid Access obligation? Is it merely an obligation to ensure the infrastructure necessary for the export of power is in place or does it involve a guarantee that the grid will take all power the EPC Contractor wishes to produce? Are there restrictions under the PPA in terms of the Project Company's ability to export power to the grid that need to be reflected in the EPC Contract?
- What is the timing for the commencement of this obligation (ie the date for first synchronisation set out in the EPC Contract)? Does the obligation cease at the relevant target date of completion? If not, does its nature change after the date has passed?
- What is the obligation of the Project Company to provide Grid Access in cases where the Contractor's works are late or the plant is unreliable – Is it merely a reasonableness obligation? Is the Project Company obliged to accelerate the completion of the grid connection infrastructure where the EPC Contractor anticipates early completion of its works?
- Is the grid (including both the existing infrastructure and the new grid connection infrastructure) robust enough to allow for full testing by the EPC Contractor – for example, the performance of full-load rejection testing?
- What is the impact of relevant national grid codes or legislation and their interaction with both the EPC Contract and the PPA?

Many EPC Contracts are silent on these matters or pose more questions than they actually answer. However, experience has taught us that Grid Access is a matter which must be resolved at the contract-formation stage and requires input from project management, technical and legal advisors, with experience in the relevant sector and regulatory framework.

In addition, given the Project Company's failure to provide Grid Access will often stem from restrictions imposed on it under the PPA, where it is feasible to do so, it would be prudent for the Project Company to backits obligations under the EPC Contract (usually to provide an extension of time and/or costs) with the PPA. This approach will not eliminate the risk associated with Grid Access issues but will make it more manageable and reduce the contingency/Sponsors support required by Lenders.

Interfacing of the testing regimes

This issue is relevant to most types of infrastructure projects, especially power and process plant projects.

The testing regime in EPC Contracts must mirror the requirements for testing and commencement under the offtake agreement. Mismatches can result in delays, lost revenue and liability for damages under the offtake agreement, all of which have the potential to reduce returns and cause disputes.

Testing requirements under both contracts need to satisfy the Project Company's requirements under the EPC Contract and the system operator/offtaker requirements under the offtake agreement. Relevant testing issues which need to be considered include:

- Are different tests required under the EPC Contract and the offtake agreement? If so, are the differences manageable for the Project Company or likely to cause significant disruption? Can the testing regimes be further streamlined?
- Is there consistency between the commissioning, testing and obtaining handover under the EPC Contract and commencement under the offtake agreement? Does the testing regime under the EPC Contract address the requirements of relevant national grid codes? It is imperative to ensure back-to-back testing under the offtake agreement and the EPC Contract, including notice periods and reporting obligations. This will result in smoother progress of the testing and better facilitate all necessary supervision and certification by the Project Company, the independent engineer under the PPA, the offtaker/system operator and/or the relevant authorities. Various certifications will also be required at the Lender level. Lenders do not want the process to be delayed by their own requirements for certification, however, the process may be held up if the Lenders are not satisfied that the facility meets the requirements of all of the various project documents. To avoid delay and disruption, it is important that the Lenders' engineer is acquainted with the details of the project and, in particular, any potential difficulties with the testing regime and any unique requirements under the relevant national grid codes or legislation. Therefore, potential problems must be identified early and resolved without impacting on testing, handover and operation. Consideration should also be given to streamlining the certification process by engaging a single independent certifier to perform the certifications required under the EPC Contract, the PPA and by the Lenders.
- Is the basis of the testing mirrored under both the EPC Contract and the offtake agreement? For example, what basis are various environmental tests to be undertaken? Are they to be undertaken on a "per train" basis or a "plant output" basis?
- What measurement methodology is being used? Is the method for certifying plant capacity and the achievement of other performance guarantees specified in the EPC Contract consistent with the PPA? Are uniform testing conditions, correction factors and degradation assumptions applied under the relevant documents? Are references to local and international technical standards or guidelines to a particular edition or version?
- Are all tests necessary for the EPC Contractor to complete able to be practically performed given limitations imposed on the facility by third parties, including any restrictions imposed under environmental or other project approvals?
- Are the relevant specifications linked to current guidelines such as the World Bank environmental guidelines and has consideration been given to changes that may occur to these guidelines? The EPC Contract represents a snapshot of the standards existing at the date that contract was signed. The actual construction of the facility may occur months or years from that date. Possible mismatches may occur if the guidelines have changed. Accordingly, it is important there is certainty as to which standard applies for both the offtake agreement and the EPC Contract – is it the standard at the time of entering the EPC Contract or is it the standard that applies at the time of testing? Is this issue dealt with uniformly throughout the project documentation?

The above issues raise the significant importance of the testing and performance guarantee schedules in the EPC Contract and the offtake agreement. The complexity, size and importance of various projects, and the impact that the testing and performance guarantee regimes can have on the bankability of a project and the Sponsors' return of equity, means the days where the technical schedules and specifications were prepared in isolation from the balance of the EPC Contract and other project documentation, and then attached at the last minute without being subject to a combined technical/legal/commercial review, are gone.

Fuel specification issues

This issue is particularly relevant to power projects, some oil and gas projects, LNG projects and certain process plant projects. It is discussed below in the context of a power project.

The nature of the fuel to be supplied to the EPC Contractor is another important issue. Where there is a tolling agreement, as opposed to a PPA, it is vitally important that an adequate review is undertaken at the EPC Contract level to ensure the fuel provided under the tolling agreement meets the requirements of the EPC Contract. In a gas plant or LNG project, if the project relies on gas from a new source, great care should be taken in making any representations under the EPC Contract as to the gas specification, which should be back-to-back with the specification in the tolling agreement or other fuel supply agreement.

Differing fuel specification requirements will result in cost claims and extension of time claims at the EPC Contract level. They can also impact on the EPC Contractor's ability to achieve the plant output performance guarantees and enable the EPC contractor to avoid paying corresponding performance liquidated damages that underpin the bankability of the EPC Contract. Fuel specification issues may be hidden away in the technical schedules and specifications. Accordingly, the technical schedules and specifications must be reviewed before being incorporated into the EPC Contract to ensure the fuel specification issues are dealt with appropriately.

In addition, where certain tests require specific types or quality of fuel, the review should confirm that arrangements are in place for that type of quality of fuel to be provided at the agreed times set out in the EPC Contract, eg high sulphur coal may be required to properly test flue gas desulphurisation equipment.

Day-to-day interface between the offtaker and the EPC Contractor

At a fundamental level, it is imperative the appropriate party corresponds with the relevant offtaker/system operator during construction on issues such as the provision of transmission facilities/fuel requirements/testing requirements and timing.

Whilst the EPC Contractor must be obliged to coordinate and interface its works with the offtaker/system Operator, the Project Company will need to ensure that the EPC Contract provides sufficient certainty that it, rather than the EPC Contractor, is the appropriate party to correspond with the offtaker/system operator. Otherwise the EPC Contractor may deal directly with the offtaker/system operator. The Project Company will always want to develop and nurture an ongoing and long-term relationship with the offtaker and ensure the EPC Contractor does not cause the Project Company to be in breach of the PPA. On the other hand, it is the EPC Contractor's prime objective to complete the project on time or earlier to maximise its profit. In many cases, the clash of these conflicting objectives does not allow for a smooth process. Again, the resolution of these issues and clear articulation of the parties' corresponding rights and obligations at the EPC Contract formation stage is imperative.

Conclusion

The above review provides a snapshot of various issues we have dealt with on a variety of infrastructure projects in the region. The failure of the Project Company and EPC Contractor to deal with these issues with certainty at the contract formation stage will only, in our experience, result in delay, cost, lost revenue and disputes. Accordingly, these issues must be recognised and dealt with appropriately in the project documentation.

15 *Operating and maintenance agreements – Key issues*

Introduction

The Operating and Maintenance Agreement (**Agreement**) supporting an infrastructure project has a significant impact on the projects' long-term success. Accordingly, it is a key document from both the point of view of the Owner and the Lenders in reviewing the bankability of a project-financed project.

The purpose of this paper is to highlight the key issues in a draft Agreement that must be addressed. Not all these issues will be applicable to all projects. However, this “checklist” will be useful in identifying areas of the Agreement that may require further attention.

This paper assumes the Operator is not one of the project Sponsors and has a true “arms-length” relationship with the construction Contractor. If that is not the case there will be a range of additional issues to consider, especially for the Lenders in a project-financed project. Some of these issues are considered briefly at the end of this paper.

Pre-operational phase

Key issues to consider in relation to the pre-operational phase are:

- Does the Operator have a contractual role on the project before the handover of the facility by the Owner? In particular, does the Owner require the Operator to advise, prior to acceptance testing of the facility, on matters such as the necessary staffing levels, work programmes, organisational matters and other administrative functions that must be put in place upon acceptance and handover of the facility to the Operator?
- Does the Agreement set out the testing, commissioning and handover procedures, particularly having regard to the transfer of responsibility for the care of the facility from the construction Contractor to the Owner and/or Operator? Are these procedures back-to-back with the construction contract? Is there more than one construction contract or a number of different work packages with varying completion and handover dates?

An issue likely to arise in the negotiations will be the degree to which the Operator will be responsible during the period when the Operator's staff are in control of the facility but under the supervision of the construction Contractor – eg during the acceptance testing phase but prior to handover. Usually, as a matter of contract, the construction Contractor remains responsible for the facility until handover. However, acceptance, commissioning and performance testing will normally be carried out by operations personnel. In these circumstances, the Operator is unlikely to agree to be liable. Therefore, there must be a clear statement in the construction contract that the construction Contractor remains liable until handover, regardless of whose personnel are physically conducting the testing.

Where there are a number of construction contracts for different components of the project with varying completion dates (for example, mining or hospital projects delivered under an Engineering, Procurement and Construction Management (**EPCM**) or construction management model with a number of separate work packages), the Owner needs to consider the extent to which the construction Contractors, the Owner and/or Operator will be responsible for care of the works during the period from when the first work package is completed and ready to be handed over, to the date of handover of the entire project to the Operator.

Ideally, from the Owner's and Lenders' perspective, the individual construction Contractors will remain liable for their scope of works until handover of the entire project. However, this may not be feasible depending on the nature of the project and the stage in the construction program, particularly as the Contractors will want to achieve handover as early as possible under fixed lump sum contracts to reduce their overheads and increase profit. In these circumstances the Contractor is unlikely to agree to be liable and to minimise gaps in liability, Lenders may require the Operator (rather than the Owner) to accept responsibility on completion of the individual work packages. Accordingly, there must be a clear statement in the Agreement that the Operator is

responsible during the interim period and must have the necessary resources available to perform those obligations from the time of handover of each work package.

Operation of the facility

The substantive contractual obligation of the Operator is to operate and maintain the facility for the period specified in the Agreement. A key issue is whether the responsibilities of the Operator during this period are set out in sufficient detail.

The Agreement will need to cover matters such as:

- operating procedures
- maintenance of the facility (including major overhauls and scheduled/unscheduled outages)
- responsibility for procurement and maintenance of a spare parts inventory
- performance levels and performance guarantees to be met by the Operator
- interface with the construction Contractor(s) prior to handover and during the defects liability period
- interface with other Owners' operations team (for example, where the Owner elects to undertake certain site-related services in respect of the operation of the facility) and the potential impact on the Operators performance guarantees
- owner's option to extend the term
- reporting requirements to the Owner, Lenders and perhaps to the government authorities
- maintenance of the continuing contractual relationship with the government authorities (if relevant) and utility suppliers on behalf of the Owner
- compliance with operational requirements imposed under the regulatory regime (for example, compliance with environmental controls and local Ownership and industry participation requirements imposed on the project) and other project documents.

The description of the Operator's obligations is often complex and requires significant project management and technical expertise relevant to the project type and technology. This can, to some extent, be simplified by attempting to describe the general requirements of the Operator and relating those obligations to the performance results required to be achieved out of the operation of the facility, including all matters necessary and incidental to that performance. However, there are arguments against this approach, particularly if it is relatively simple for the Operator to claim additional payments under the agreed compensation regime. Therefore, care should be taken in electing this simplified drafting approach and advice should first be sought from appropriately qualified and experienced technical advisors.

Finally, having regard to the long-term nature of operation and maintenance agreements, the parties should be aware that there is a real likelihood of a substantial change of circumstances during the period of the Agreement (for example, where political change occurs, legislative regimes are expanded/alterd or the original contract regime is otherwise altered). Accordingly, the Operator's entitlement to relief and additional compensation in such circumstances must be clearly stated in the Agreement. Ideally, from the perspective of the Owner and Lenders, those entitlements will be back-to-back with the Owner's entitlement under any offtake agreements or other project documents.

Fully wrapped agreement vs side agreements

By “fully wrapped” Agreement, we mean that all obligations and responsibility in relation to operations and maintenance of the facility are allocated to a single party (the Operator) and both the Owner and the Lenders have a clear line of recourse to that party.

If, for example, key aspects of the operation and maintenance of the facility (particularly those that may impact on the performance of the facility) will be performed by a third party under a different agreement, then the Lenders will require a clear allocation and delineation of all obligations and responsibilities for the operation and maintenance of the facility between the parties so there are no “gaps” where residual risk or obligations are left with the Owner.

If, in respect of a project-financed project, the Owner retains significant risk or responsibility for operating and maintaining the facility, the Lenders will usually require some form of Sponsor support.

Owner’s obligations

The main obligation on the Owner during the period of the Agreement should be to pay the Operator. Payment will, as a practical matter, be made out of the proceeds of the offtake agreement and should, if possible, be quarantined to these amounts.

However, there will probably be other major continuing obligations, for example, the supply of utilities, fuel, water and other consumables. In addition, the Agreement should provide for other specific obligations on the part of the Owner. For example, there may be an obligation on the Owner to provide an initial spare parts inventory (which should be back-to-back with the spare parts inventory to be provided by the Contractor under the construction contract). Further, there may well be an obligation on the Owner under the offtake agreement to maintain records in relation to the Operator’s compliance with particular matters (for example, use of fuel and waste disposal), which may affect the Owner’s payment obligations under the Agreement. The Agreement should also provide for payment mechanisms (for example, mechanisms to cater for payment of Owner-supplied spare parts, major overhaul expenses, costs arising for work performed by the Operator beyond the scope of services described in the Agreement, changes in law and other potential factors that give rise to necessary adjustments to the payment provisions).

Performance obligations

The Agreement must specify the performance obligations of the Operator during the period of the Agreement. The performance criteria should typically include matters such as availability, outages, production levels and other technical, quality, safety and environmental protection performance criteria, depending on the nature of the project. The Agreement should also specify the performance levels that might give rise to rights to damages and/or termination under the Agreement where performance falls below certain levels. This is discussed in more detail later in this paper. In some cases, there may also be a gain share mechanism providing for bonuses where the Operator’s performance exceeds particular levels. Reference should also be made to the performance levels achieved by the construction Contractor at handover. These levels, with appropriate adjustments (for example, degradation curves), should form a baseline of the Operator’s performance obligations. In addition, on a power project for example, it is imperative that the technical and legal advisors ensure that the performance testing and performance guarantee and liquidated damages schedules to the Agreement are back-to-back with the corresponding schedules to the construction contract.

Force majeure

An important issue is: does the Agreement adequately provide for the consequences of a *force majeure* event?

In the negotiation of the project documents (where the Owner’s obligations are largely limited to payment, as is the case with operation and maintenance agreements), the *force majeure* provisions should be common to all of the documents. To the extent such provisions are not aligned and there are significant gaps in liability retained by the Owner, the Lenders will usually require some form of Sponsor support.

The parties should be aware that the consequences of a *force majeure* event during the construction period are severe but probably manageable in that the *force majeure* event, even if prolonged, will simply increase the cost of construction and delay completion. This risk can be allocated between the parties to the project prior to commencement of the project and taken into consideration in determining the economics of the project and contingencies.

The consequences of a prolonged *force majeure* event during the operation period, however, may lead to an insoluble difficulty. In this event, the Operator may not be able (even if it was prepared to increase its financial commitment which, typically, it is not) to perform its obligations to the performance standard set out in the Agreement. This will have a direct effect on the offtake agreement and the project revenue stream, affecting (possibly beyond repair) the ability of the project to repay the Lenders.

The Agreement should, therefore, impose an obligation on the party affected by the *force majeure* event to take all possible steps to overcome the event, including reasonable expenditure of funds. The failure to perform contractual obligations because of the event, however, will typically prevent such a party from being in default.

Underperformance

The Agreement must include detailed provisions for the consequences of default by the Operator in its performance obligations.

In particular cases (for example on a power project) the Agreement should specify the performance levels below which the Operator is in default under the Agreement and the options for remedy available to the Owner in the various circumstances arising out of the different levels of that default.

Typically (again, for example on a power project) such performance requirements should specify matters such as output, availability, outages and other specific performance-related events.

The Agreement may also specify a liquidated damages regime to be imposed where the Operator fails to perform to the specified levels. The inclusion of a liquidated damages mechanism under the Agreement is necessarily linked to a limitation of liability clause, which effectively caps the Operator's potential losses in respect of any underperformance by the Operator. Typically, liability for consequential losses (which are losses caused to one of the parties because of the particular economic situation of that party) is expressly excluded. Such exclusion will usually expressly include loss of revenue, profit and/or other economic consequences of underperformance by the Operator (other than in respect of any pre-agreed liquidated damages).

Changes/variations during the term of the agreement

Another key issue is whether the Agreement makes provision for adjustments to the payment to be made to the Operator where, within limits, the obligations of the Operator under that Agreement are extended or reduced during the period of that Agreement.

For example, where amounts paid to the Operator are based on the operational efficiency of the facility, the Agreement should make allowance for an adjustment in the payment to the Operator where the quality of fuel or other consumables falls below the technical criteria specified in the Agreement.

Similarly, the Agreement should typically provide for an adjustment in the payment entitlements of the Operator where there is a material adverse event (such as change in law), which results in the Operator being required to perform obligations beyond those obligations described in the Agreement at the time of execution (for example, increased environmental regulations leading to a more detailed treatment of wastes being required).

To the extent that particular changes can be and are anticipated in the Agreement at the time of execution (for example, inadequate quantities of or low-grade fuels), the payment adjustment provisions should be specified in the Agreement at the time of execution. To the extent that such changes cannot be anticipated (for example, changes in law) or, where the parties elect not to specify at the time of execution of the Agreement (for example the effects of inclement weather), the Agreement will need to provide a mechanism to determine the resulting price adjustment.

In the absence of any such contractual mechanism, the Operator will probably be able to resist the imposition by the Owner of the obligation to perform the Operator's changed duties. As a result, it is imperative that the Owner includes a suitable contractual mechanism in the Agreement to cater for such changed circumstances.

Termination/step-in

If, during the period of the Agreement, the Owner or the Operator defaults to the point where the other party seeks to terminate the Agreement, the Lenders will insist on creating a suitable regime to ensure the continued operation of the facility to repay the Lenders from the proceeds of the offtake agreement.

For this reason, the provisions of the Agreement should, in addition to the normal contractual terms setting out the grounds for and procedures to be employed in relation to termination of the Agreement, contain additional provisions requirement the Operator to enter into an agreement with the Owner and the Lenders to give, first, temporary step in rights and, if necessary, assignment rights to the Lenders.

Operator is also a Project Sponsor

If the Operator is also a Project Sponsor, it will be critical for the Lenders in a project-financed project, to ensure that the Operator cannot use its position as a Project Sponsor to avoid obligations or obtain concessions under the Agreement. This issue should be dealt with in the joint venture or shareholders' agreement between the project Sponsors.

In addition, in such circumstances consideration should be given to the most appropriate way to remunerate the Operator. For example, should the Operator be earning a profit, or should all profits be earned by the project?

Operator and Construction Contractor are the same or related entities

In circumstances where the Operator and the Construction Contractors are the same or related entities ultimately controlled by the same parent company, rather than a true "arms-length" relation, the Owner should include a mechanism that prevents the Operator and Construction Contractor from (i) relying on the delay or underperformance by the other to obtain relief from the Owner under their respective contracts and (ii) seeking to rely on the actions of the other as a defence to a claim by the Owner for delay or non-performance ("no relief and horizontal defences provisions").

These provisions can be included in the Agreement itself (in which case back-to-back clauses should be included in the construction contract) or otherwise in a separate coordination or wrap agreement that sets out the coordination and interface obligations of the parties in relation to the project.

16 Performance testing regime

Introduction

The prime goal of a Project Company in relation to the design, engineering, procurement and construction of a plant is to receive a plant on time and on budget that operates to specification. Central to achieving this goal is the existence of a clear and workable performance testing regime that is consistent across all project agreements.

The drafting of a performance testing regime is a complex task and is usually the subject of detailed negotiations between the Project Company, the Contractor and the Lenders. This paper provides an overview of the key features of a performance testing regime.

Types of tests

Performance tests may cover a range of areas. Three of the most common are:

- **Functional tests:** These test the functionality of certain parts of the plant. For example, pumps, conveyors, pressure vessels etc. They are usually discrete tests which do not test the plant as a whole. No liquidated damages normally attach to these tests. Instead, they are absolute obligations that must be complied with. If they are not complied with, the plant will not reach the next stage of completion (for example, mechanical completion or provisional acceptance)
- **Emissions tests:** These test compliance against environmental requirements. Again, these are normally absolute obligations because the consequences of failure can be as severe as being forced to shut down the plant. These tests should ensure that the most stringent obligations imposed on the Project Company, whether by government regulations or by Lenders, are met. Emissions tests occur at various times, including during and after guarantee tests
- **Guarantee tests:** These test the ability of the plant to meet the performance criteria specified in the contract. There are often minimum and maximum levels of performance specified and providing the minimum levels are met the consequence of failure is normally the payment of performance liquidated damages (PLDs). Satisfaction of the minimum performance guarantees is normally an absolute obligation. In some projects, the guarantee tests occur after handover of the plant to the Project Company. This means the Contractor no longer has any liability for delay liquidated damages during performance testing. In our view, it is preferable, especially in project financed projects, for handover to occur after completion of performance testing. This means the Contractor continues to be liable for delay liquidated damages until either the plant operates at the guaranteed level or the Contractor pays PLDs where the plant does not operate at the guaranteed level.

Performance liquidated damages

As stated above, PLDs are payable if the guaranteed levels are not met. The guaranteed levels relate to those aspects of the operation of the plant which will have an economic impact on the project. They will differ depending on the project, however, the most common are linked to:

- **Output:** The rate of production of the plant
- **Efficiency:** The efficiency of the plant in producing the required level of output
- **Availability:** The reliability of the plant.

The guaranteed levels and the associated PLDs will be a key issue for the Lenders. PLDs should be calculated as the present value of the revenue forgone over the design life of the project as a result of the failure of the plant to operate at the guaranteed levels.

For further discussion regarding PLDs, refer to our paper entitled “Liquidated Damages – Delay and Performance”.

Technical issues

Ideally, the technical testing procedures should be set out in the contract. However, it is often left to be agreed by the Contractor, the Project Company’s representative or engineer and, if relevant, the Lenders’ engineer, during construction. If the testing procedures are left to be agreed during construction (which we do not recommend), the contract must, at a minimum, set out general guidelines.

Regardless of when it is agreed, the testing procedures must, as a minimum, set out details of:

- **Testing methodology:** Reference is often made to standard methodologies, for example, the American Society of Mechanical Engineers methodology
- **Testing equipment:** Who is to provide it, where it is to be located, how sensitive must it be
- **Tolerances:** What is the margin of error
- **Ambient conditions:** What atmospheric conditions are assumed to be the base case (testing results will need to be adjusted to take into account any variance from these ambient conditions)

In addition, for multi-unit plants the testing procedures must state those tests to be carried out on a per unit basis and those on an entire plant basis.

Provision of consumables and fuel

The responsibility for the provision of consumables and fuel, required to carry out the performance tests, must be clearly set out in the contract. In general, the Project Company will be responsible for the provision of those consumables.

As the proper interpretation of the Project Company’s obligation to supply consumables is often a matter of dispute between the Project Company and Contractor, it is important for the contract to precisely identify the quality and quantity of consumables to be provided as well as the time for provision of those consumables (which should be linked to the progress of the works rather than a specific date). The responsibility for the cost of providing consumables and fuel must also be clearly identified.

Provision of necessary associated infrastructure

The responsibility for the provision and availability of the associated infrastructure required for the performance of the performance tests must be clearly set out in the contract. In general, the Project Company will be responsible for the provision and availability of associated infrastructure. For example, the provision of transmission facilities and responsibility for grid access is a key obligation of the Project Company in the context of the testing and commissioning of a power station.

For further discussion regarding the provision of grid access, refer to our paper entitled “Offtake and Construction Interface Issues”.

It is important for the contract to precisely identify the extent of the Project Company’s obligations and the timing for commencement and completion of those obligations.

Performance of tests

The contract must clearly specify the arrangements for reperformance of tests where the performance guarantees have not been achieved. It is common practice to have an extended testing period which gives the Contractor additional time to achieve the performance guarantees after the minimum performance guarantees have been met. An extended testing period is preferable to termination or immediately requiring the payment of PLDs because the Contractor is often best placed to be able to rectify any problems with the plant to increase performance. The Contractor is also likely to be liable for delay liquidated damages during this extended testing period (subject to our comments above). The Project Company should not suffer financially by giving the Contractor an opportunity to retest.

Consequences of failing to achieve performance guarantees

There are a number of options which may be included in the contract if the plant fails to achieve the performance guarantees. These are:

- payment of PLDs by the Contractor (consider whether this should be at the direction of the Project Company or the election of the Contractor or both)
- termination of the contract
- rejection of the plant.

The contract must clearly specify the time when each of these remedies may be exercised. For example, the contract could specify that the Project Company's right to direct the Contractor to stop reperformance of tests and to pay PLDs may not be exercised by the Project Company until after the expiry of the extended testing regime.

Consistency across the project agreements

It is important to ensure back-to-back performance testing arrangements under each of the project agreements, in particular, the EPC Contract and the offtake agreement. This will result in smoother progress of the testing and commissioning of the plant and will facilitate necessary supervision and certification under various project agreements.

For further discussion regarding the interface of testing regimes, refer to our paper entitled "Offtake and Construction Interface Issues".

The specific nature of a performance testing regime will depend on the type of plant and will differ from project to project as it is a matter for negotiation between the parties. However, we recommend that for a performance testing regime to be effective it must, as a minimum, appropriately deal with the key issues outlined in this paper.

17 Monetising utility solutions at master planned community projects

1 Options for a Developer to participate and monetise

1.1 Executive Summary

There are a number of options available to a Developer of master planned community projects in terms of the development and operation and corresponding monetisation of a district cooling utility and other utilities. These are set out in detail in this Section 1 and also in Sections 2, 3, 4 and 5 of this briefing paper. Note we have also benchmarked the corporate, financial and contractual structuring of district cooling on master planned community projects on an international basis. The options available include:

- a concession fee, which could be structured as a lease payment for use of the land or in other ways and factored into end-user payments
- a structure that allows a Developer to realise the spread between the cost of production and the market rate for various products and services
- developer equity participation in the concession company itself, through which it could receive dividend payments and other forms of return on equity including subsequent divestments
- not having a concession at all and proceeding on a more traditional basis with a DBO or a split EPC and operating arrangement.

In particular, the third option could be considered given the increasing appetite of international and domestic superannuation/pension and infrastructure funds to invest in infrastructure assets (on a greenfield or a brownfield basis) which meet their following investment criteria:

- monopoly asset
- guaranteed revenue stream
- low technology risk.

The above criteria also applies to the banks providing project financing if the district cooling utility is developed on a concession basis and requires off-balance sheet financing and has strong counterparties.

In addition, industry participants particularly in the operation phase (which includes billing and collection) actively seek opportunities to participate in Developer equity in the concession company.

Discussion Point: The above depends on key commercial considerations including:

- level of control required over the construction and operation of the asset/willingness to transfer risk to another party (including ensuring quality control and avoiding reputational damage)
- use of capital and the applicability of off-balance sheet financing
- potential divestment or partial divestment of the asset or combined assets in the medium to long term
- impact on rates payable by end-users.

1.2 Introduction

There are a variety of ways in which a Developer can participate in, and monetise for its own benefit, the revenue of utilities that it is developing.

Any utility being developed by a Developer provides an opportunity for monetisation, including:

- district cooling
- wastewater and polished water from treated sewerage effluent
- municipal solid waste disposal and conversion to electricity
- municipal solid waste collection
- potable water
- gas
- telephone, internet and other telecommunications
- electricity generation
- roads and other transport.

albeit in Australia (and in other countries) the specific regulatory regime for each utility must be taken into account (refer to Section 5 “Regulatory Issues”).

Developers usually choose to develop their utilities on a concession model in order better to shift risk to private utility companies and to utilise off balance sheet project financing to avoid its own capital expenditure, ie on-balance sheet financing (refer to Section 3 “Benchmarking and International Best Practice”). However, a Developer may participate in the revenues of its utilities whether they are developed on a concession model or a more traditional design, build and operate (DBO) direct funding model, or in some other way (refer to Section 2 “Concession vs DBO vs EPC/O&M contracting models” for a more detailed discussion of these models).

The primary options available to a Developer include:

- a concession fee, which could be structured as a lease payment for use of the land or in other ways and factored into end-user payments
- a structure that allows a Developer to realise the spread between the cost of production and the market rate for various products and services
- developer equity participation in the concession company itself, through which it could receive dividend payments and other forms of return on equity including subsequent divestments (note that the current forms of PwC Standard Concession Agreements allow for this)
- not having a concession at all and proceeding on a more traditional basis with a DBO or a split EPC and operating arrangement (note that this structure places more risk on the Developer and generally involves on-balance sheet financing).

Regardless of the specific means selected by a Developer to realise some of the value of its utilities projects, Developers usually set up a separate special purpose company (SPV) which can capture the benefit of its share of project revenue or other value.

The utilities SPV can then be utilised in a variety of additional structures to further enhance value. For example, in order to allow a Developer to realise the present value of the future earnings of the SPV, the Developer could sell shares of one or more of the utilities SPVs into an investment fund, or they could be offered publicly in an initial public offering.

Discussion Point: Given potential stamp duty and other implications, consider the best time to formulate and complete the corporate structure and corresponding project structure.

Discussion Point: There are a number of infrastructure asset sales coming to the market in 2015, 2016 and beyond there are a large number of domestic and international superannuation/pension and infrastructure funds actively seeking infrastructure assets which meet the following criteria

- monopoly asset
- guaranteed revenue stream
- low technology risk.

Given the Queensland asset sales are currently off the agenda following the election result, the above funds will increasingly look at alternative or private asset sales.

Further discussion point on the identity of those domestic and international superannuation/pension and infrastructure funds and the likely participants from that group will depend on the size of the equity involvement eg IFM, QIC, Australian Super, Future Fund, REST and the Canadian Pension Funds such as CPP, PSPI and OTPP will generally require a minimum investment of upwards of \$250 million and a controlling share. Others, such as ICG or Palisade, have a lower investment threshold. Accordingly, aggregating utilities and/or developments may provide the size the larger superannuation/pension funds require.

The utilities SPV or SPVs could be initially structured as a joint venture with a financial institution, an industry participant or other investor in order to reduce the amount of upfront capital provided by a Developer and to otherwise spread the risk of the projects. A variety of structures for doing this are available.

Discussion Point: Comment on the identity of those domestic and international industry participants that bring complementary expertise and have international experience in the construction and operation phases of utilities, eg Veolia, GDF Suez (Cofley Ineo) and others.

These options are discussed in more detail below.

One point worth noting is that any monetisation by a Developer of value from its utilities (whether through revenue sharing or otherwise) will inevitably be reflected to some extent in end-user tariffs and charges and may thereby reduce the value and attractiveness of the Developer's properties to potential purchasers. However, in some cases, there could be an increase in value. The extent of this impact should be quantified through financial analysis and considered by the Developer. Similarly, the financial characteristics and profitability of individual concessions must also be considered in determining whether any of the following monetisation alternatives is viable in a specific context. Accordingly, until appropriate financial analysis is made, note that none of the following monetisation options constitutes a specific recommended course of action.

Discussion Point: The impact on the end-user tariff may be positive or negative.

1.3 Sharing of utilities revenue

Revenue sharing arrangements in which the Developer participates in the revenues of utilities that are in a concession model, a DBO model or any similar or hybrid model could be structured in many ways. For example:

- **Regular Payments:** One way is to require the concession company to make regular payments, either as a percentage of revenue earned or as a fixed fee, to the Developer over the term of the concession, commencing from commercial operations of the facilities. A variation of this option is to require the concession company to make "regular lease" payments for use of the site or to require a "rental charge" for use of the development networks by the concession company. A combination of the above options is also possible. Ultimately, any option chosen by the Developer will have some impact on the tariff charged to end users.
- **Spread between Production and Market Prices:** The Developer may also purchase the relevant output from the utilities plants based on minimum purchase requirements or a percentage of installed capacity of the plant and based on the price required by the concession company, and then sell the output at a higher price to the end users.

Note that in the alternatives mentioned above, the Developer would be expected to take some demand risk which is a key issue in district cooling arrangements, especially when developments are scaled down, postponed or cancelled.

1.4 Equity interest in the utilities

An alternative option involves the Developer either:

- obtaining shares in the concession company at a zero cost (that is, fully carried) or a discounted price, in return for the grant of the concession rights
- setting up a subsidiary to own the utilities assets and develop them on a traditional DBO or split EPC Contract/operating contract model, or on a similar basis.

Shareholders agreement

The relationship between shareholders (such as equity contribution, profit and loss sharing) will be governed by a shareholders agreement between the Developer and the other shareholders of the company. The Developer's rights to transfer, assign or resell its equity interest will be governed by that agreement and the agreement should be drafted to give the Developer as much flexibility as possible to transfer its equity interest.

For example, the Developer should not be required to hold its interest for a minimum period of time, or to limit the transfer to another party of equivalent financial standing. If the Developer's involvement is purely as a passive investor, it is likely that the other shareholders would be open to a relaxation of the Developer's transfer rights.

Equity benefits and risk mitigation approaches

The advantage of taking an equity interest in the concession company or owning the utilities assets directly is that the Developer will be able to share in all the profits of the concession company, and to be involved in the construction and operation of the facilities, in a way that perhaps it otherwise would not have as a Developer. On the other hand, the disadvantage of this option is that it dilutes the risk transfer under the concession.

Since one of the objectives of the concession is to transfer certain risk from the Developer to the private sector, taking an equity interest in the company would mean that a portion of the risk transferred to the company will ultimately be retained by the Developer. One way to manage the risk transfer is to structure the "buy in" into the company at a time when a portion of the risk has been eliminated, for example when construction is completed. With regard to total Ownership by a Developer, the risk of construction and operations is only transferred to the private sector to the extent provided in the DBO or the split EPC Contract and the operating contract. The Developer is insulated financially from project risks only if the Contractor is creditworthy and the contracts are properly structured.

In order to further reduce immediate equity risk exposure, rather than taking a direct equity stake at the commencement of the project, the Developer may wish to obtain an option to purchase shares in the company at a later time for a discounted price. The option could be structured so it is available to be exercised anytime during the concession term (ie from the commercial operation date) or some other time period. Once construction risks are eliminated, and commercial operation is achieved, it is likely there will be a significant increase in the value of the company. The Developer will have the right to buy shares at a price which may be significantly lower than its market value. At this point in time, the Developer may wish to exercise the option and either retain its interest in the company and receive dividends, or sell its shares and gain the increase in value. The Developer may also be able to sell the options, but this may not result in the same amount of gain.

1.5 Developer SPV

The Developer could establish an SPV as the vehicle to hold the shareholding interest it acquires in concession companies or its direct ownership interest in the utilities (in those cases where a more traditional DBO or split EPC/operating contract and the Developer direct funding approach is taken).

Special considerations where the SPV is a concession company shareholder

If the Developer seeks to acquire an interest in a concession company, the entitlement of the Developer (through the SPV) to acquire a shareholding interest (presumably, fully carried) in concession companies will not be dealt with in the concession agreement itself. Instead, it will be addressed in a separate share

subscription and shareholders agreement between the Developer (or the SPV as its nominee), the concession company and each of the other shareholders of concession company. This agreement will set out the terms and conditions attaching to SPV's shareholding, anti-dilution rights and so on.

The SPV's ongoing interests in the utilities, whether taking the form of a shareholding interest in the concession companies themselves, direct ownership of the utilities assets, ongoing revenue sharing entitlements to income derived by concession companies from end consumers or state utilities, or a combination of the above, are assets of material value that would fit into an infrastructure fund or could be the subject of an initial public offering.

Allocation of utilities assets

The utilities assets could be held by an SPV on:

- an individual concession basis (such as a district cooling concession)
- a project or territory basis (such as all the concessions for a master development together)
- an asset type basis (such as all the wastewater treatment plant concession)
- some combination of the above.

The best asset combination will depend upon a cash flow and valuation analysis and the maximisation of value to the Developer. Depending on the analysis the Developer could have several separate SPVs or something that is more like an SPV holding company. A financial analysis should be conducted to determine the optimal asset combination. In addition the regulatory aspects of each utility will also need to be considered (again, refer to Section 5 "Regulatory Issues").

1.6 Developer SPV as a joint venture

A financial institution, an industry participant or other investor could also partner with the Developer in the establishment of the SPV which has been the case on a range of international district cooling projects (refer to Section 3 "Benchmarking and International Best Practice").

Discussion Point: Refer to previous discussions on financial institutions including superannuation/pension and infrastructure funds. Also, note international industry participants operating in Australia (and internationally) such as Veolia, GDF Suez (Cofley Ineo) and others.

Some of the primary steps that would be involved in this are as follows:

- **Term Sheet/MOU:** The parties agree and execute a detailed term sheet (heads of agreement, MOU or similar) setting out the terms of their commercial arrangement for the SPV. Careful consideration to be given to the obligations assumed by the investor in relation to financing of the SPV and the nature of the SPV's entitlements and obligations within concession company. We expect that the arrangements within the concession company will vary from utilities project to utilities project. It will also be necessary to consider the specific nature of the SPV, ie whether a simple company, a unit trust or other structure that enables the investor must make an additional lump sum payment to the Developer each time the SPV is granted an interest in another concession holder or utilities project. Consideration must also be given to the jurisdiction of incorporation of the SPV along with the tax and other considerations that will also arise from the nature and jurisdiction of the concession companies.
- **Investor Due Diligence:** The investor will conduct due diligence in relation to each concession to be granted for evaluation and valuation purposes. The investor's financial modelling of the SPV's shareholding in each concession company will be of obvious interest to the Developer. That model will likely provide the basis for calculating each purchase price that the SPV must pay the Developer to gain the right to receive the allotment of shares in a concession company. At the time that shares in the additional concession company are allotted to the SPV, the investor will subscribe for new shares (or units) in the SPV (possibly with a different class being issued for each new concession company shareholding) at the predetermined price. The SPV will then pay total purchase price for the concession company shares by (a) a cash payment of the

amount received from the investor, plus (b) an allotment of the new shares (or units) in the SPV to the Developer of the same class as allotted to the investor.

The proportionate interests of the Developer and the investor at the initial and ongoing stages will be as contained in the final transaction documentation between those parties.

- **Developer Due Diligence:** The Developer will conduct due diligence in relation to the investor's investment structure, including its fund. Relevant considerations will include the size and underlying ability of the investor fund to perform and ensuring that the Developer does not have any competitive or other concerns with any investors in the fund.
- **Preparation of Documentation:** Concurrently with the above steps, formal transaction documentation will be prepared for review. The suite of documents is likely to include a master agreement that details the total transaction and annexes a subscription agreement, shareholder (or unit holder) agreement and, potentially, put and call option arrangements.
- **Other Steps:** Additional issues and steps will need to be addressed as matters progress further with utilities projects and tenderers and with any the investor, such as:
 - Whether the Developer prefers to contract with an the investor on an individual concession basis, a project or territory basis, or an asset type basis, as described above; and
 - Whether the Developer expects to also share in any additional revenue streams that the investor identifies for itself in relation to the concessions and concession companies (eg as a financial adviser or financier to the concession company itself).

Discussion Point: The banks providing the financing will have similar criteria to that of the superannuation/pension and infrastructure funds ie:

- monopoly asset
- guaranteed revenue stream
- low technology risk
- strong counterparties.

Further discussion point on the identity of those domestic and international banks and also the increasing involvement of ECAs (primarily from Asia, eg K-Exim, K-Sure, JBIC and China Exim) in infrastructure project financings in Australia.

2 Concession vs DBO vs EPC/O&M contracting models

2.1 Introduction

This Section 2 supplements Section 1 above. It examines in more detail whether the provision of utilities by the Developer at its master planned community project should be on a concession or a DBO basis.

The options for provision of these utilities for a Developer are to provide them on either a:

- concession basis (where, in its traditional form, a third party designs, build, operates, owns and finances the utility) (see Diagram 1).
- DBO basis (where, in its traditional form, a third party designs, builds and operates the utility, but does not finance the utility or own it) (see Diagram 2).
- engineering, procurement and construction (EPC) and operation and maintenance (O&M) basis again where, in its traditional form, a third party designs and builds the utility and the same or a separate third party operates the facility, but does not finance the utility or own it (see Diagram 3).

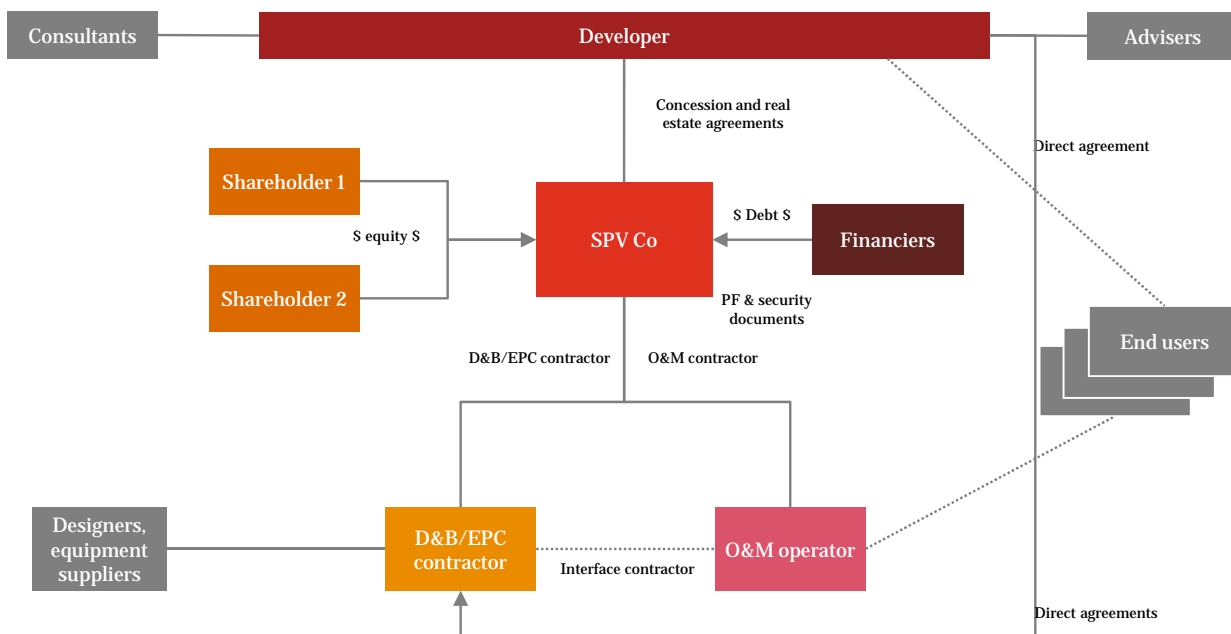
A further option is to combine both approaches. The Developer would incorporate a SPV, and grant a simple form of concession to this SPV; the SPV would then contract for the provision of the utilities on a DBO basis.

This option is useful in that it shields the Developer from a direct contractual relationship with the DBO Contractor (although a DBO Contractor may require guarantees from the Developer) (see Diagram 3). Other variations of the DBO and concession approaches may also be implemented based upon the result of negotiations on various contract issues.

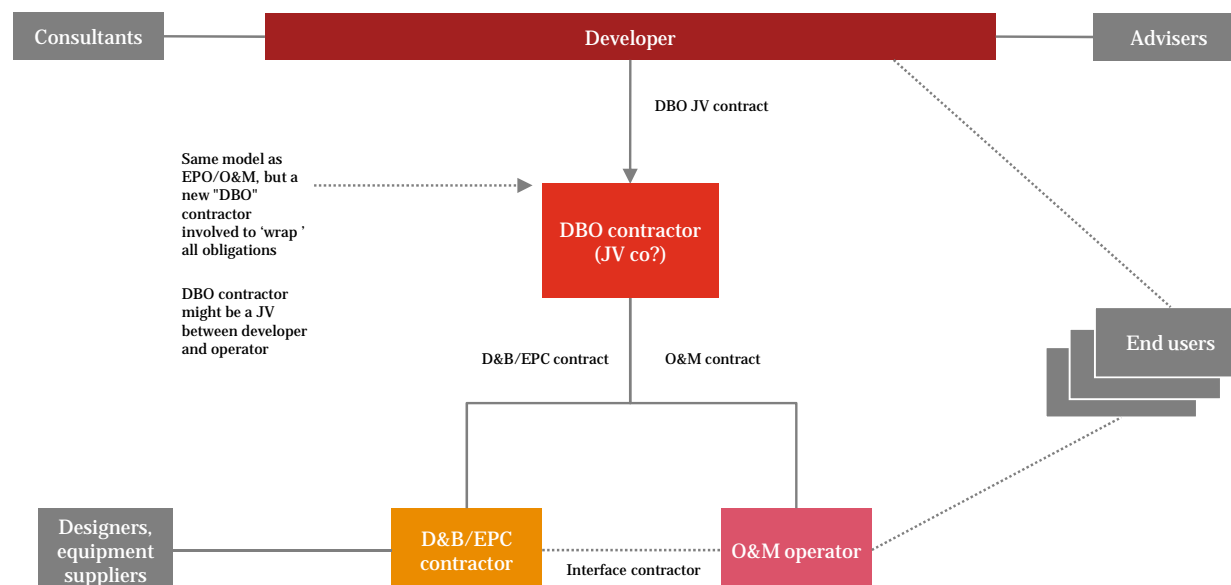
The significant differences between these options are:

- the source of finance for delivery of the utilities
- the equity interest in the utilities
- the ability of the Owner to influence and control end-user rates
- the flexibility and expenses of the Owner in terminating the arrangement.

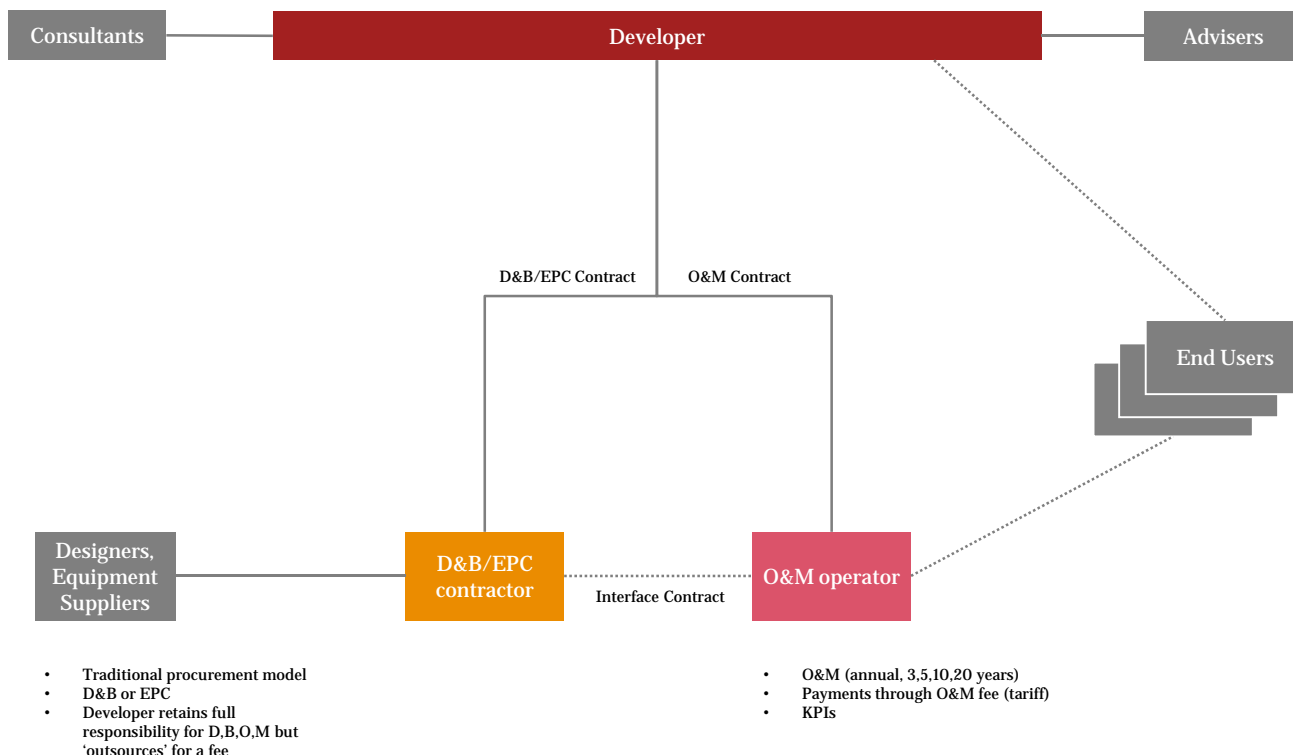
BOT/Concession/PPP (with private finance)



DBO/JV: Turnkey Solution (no private finance)



EPC & O&M: Build, Separate Operator



A further option is to combine the concession and DBO approaches, by granting a simple form of concession to a SPV, which would then contract for the provision of the utilities on a DBO basis.

2.2 Differences in approach

Concession agreements and DBO agreements have very similar risk profiles. In both cases, a SPV is formed by the party delivering the project, and that SPV is given the overall responsibility for designing, constructing and operating the utility. Both approaches give incentive for innovation and good design as the party building the facility is the party operating the facility.

The fundamental difference in approach is that when a DBO is used, no private sector funding is necessary, as the DBO Contractor is paid for the asset on completion, or as progress payments through construction, and is then paid an indexed service charge for the operation of the facility.

When utilities are financed at the SPV level through the use of a concession, Financiers will not finance 100% of the required capital. Therefore, the SPV must provide the shortfall in the form of equity typically in the region of 20 – 30%. This shortfall gives the SPV an equity stake in the utility, on which a concessionaire will expect a return. The presence of SPV equity and finance leads to a difference in how an SPV recovers its costs, and how an SPV makes a profit.

In the case of a concession, the SPV is given the right to charge a tariff, and the tariff is the only compensation the SPV receives. The tariff is calculated by reference to a financial model. The inputs into the financial model are the costs associated with constructing the utility, operating and maintaining the utility, and the required return on investment on the invested equity in the project. Use of a tariff therefore spreads the cost of the initial capital expenditure across the entire concession period, for example, 20 years, meaning that the SPV needs to recover not only the capital costs, but also the finance charges associated with being indebted for a long period of time.

In the case of a DBO, the SPV is paid for its capital expenditure on completion of the asset, or as progress payments throughout construction, and then paid a service charge to operate and maintain the facility. As there is no debt involved, these amounts can be on a fixed fee or a cost plus basis. This results in a lower cost

(however, in comparing costs between the two, the source of, and costs associated with, the finance used at the grantor level in the DBO scenario must be taken into account).

In the case of a combined approach, the Developer maintains an equity stake in the utilities through its Ownership of the SPV. The SPV then passes on its obligations to the DBO Contractor (with the financing in place). This results in a situation where the profile is very similar to that of the DBO scenario outlined above.

2.3 Advantages of a DBO approach

If minimising end-user utility rates is an objective, and the Owner that is letting the DBO contract has access to cheaper finance than would be available through project financing (such as sovereign rates of finance) or has access to financial reserves to pay on-balance sheet for the capital cost of the utility, then an on-balance sheet DBO approach is preferable. This is due to the fact that the lower finance cost means that the Owner can pass through its lower financing costs to end-users in the form of lower rates and can also discount the rate of return on its equity contribution to further reduce end-user rates. Financiers would incorporate a risk premium into the interest payable by an SPV in a concession model. Also, the SPV in a concession would charge a higher rate of return on contributed equity.

Having no Financiers (other than on-balance sheet Lenders) involved means that project negotiation is relatively quicker.

In a DBO approach the Owner is also in a better position to achieve lower end-user rates by avoiding the monetisation of the particular utility service (refer to Section 1 “Options for a Developer to Participate and Monetise”). Since it is generally taking more risk than a DBO Contractor, a concession company will want to monetise any opportunities to achieve a higher rate of return on its contributed equity. Monetising utilities opportunities often results in higher end-user rates since some (but not all) monetisation techniques involve setting higher end-user rates. In a DBO approach, the DBO Contractor generally has less risk and is not contributing equity, and so has less leverage to implement such monetisation. As a result, in a DBO contract situation, whether to monetise or not should be entirely decision of the Developer.

A DBO contract should offer the Owner more flexibility in connection with contract termination. For example, since the DBO Contractor is not contributing equity, termination by the Owner (perhaps to implement a cheaper utility approach) should be less expensive and simpler.

2.4 Advantages of a concession approach

Concessions have an almost identical risk profile to DBOs, with all of the risk passed down to the SPV level. Concessions are preferable when the party granting the concession does not have access to cheap finance, or prefers to allocate the capital required to build the utility to another use.

A concession approach generally involves a more complete transfer of risk than a DBO approach (in which there is no equity at risk and the limits of liability may be lower to reflect what is frequently a fixed fee payment structure).

2.5 Advantages of a combined approach

A combined approach has the same advantages as using a DBO; however, due to the use of the SPV, it has the following further advantages:

- access to non-recourse project finance at the SPV level
- insulating the Developer from a direct contractual relationship with the DBO Contractor.

2.6 Integrated solution

There are often synergies between different utilities that can result in lower costs and greater efficiencies if the utilities are combined. An example of this would be an integrated solution between sewerage treatment, potable water and district cooling. The utilities deal primarily with water, and the sewerage treatment facility can be used to produce polished water for use by the district cooling facilities.

When utilities are combined, staffing costs, and other operating costs, can be shared between the utilities resulting in lower overall costs. Integration of utilities also serves to lower the interface risk between the utilities.

2.7 Expansion

One of the critical risks in developing utilities (including district cooling) for master planned communities is managing the take up and potential expansion of the project facilities and related distribution networks. This is particularly the case where a community is being developed in phases and/or the rate of take up of certain building lots is uncertain.

To ensure that capital expenditure is limited to building to a capacity that meets the actual needs of the master planned community at a point in time, the Developer will look to defer the construction of any permanent additional capacity to the project facilities, and capital costs associated with such permanent additional capacity. Typically, a demand curve will be created at the beginning of the project to estimate the initial (or base) capacity and the timing for the need for any additional capacity based on the expected rate of development and population growth. Depending on the size and rate of growth of the development, this demand curve is usually on an annual basis taking into account growth and sales trends. This may result in adjustments to the timing and capacity requirements for each phase (including resulting changes to the tariff).

If possible, one of the first options is to require the utility provider to utilise temporary facilities to the extent possible. This limits unnecessary capital expenditure but the parties must ensure that the services are capable of being provided efficiently and safely. Where the Developer determines that projected demand is expected to result in consistent utilisation of such additional capacity, it has the option of requiring the utility provider to provide details for any required expansion including capital expenditure, contracting arrangements (such as the preferred D&C and O&M Contractors who would typically be the same as those for the base project facilities, subject to benchmarking or otherwise a competitive tender process) and related financing arrangements. If the parties agree on the new arrangements, the Developer may instruct the utility provider to proceed with the design and construction of the additional project facilities (including the network) to meet the agreed additional capacity.

Depending on the tariff structure, the Developer may bear capacity risk in relation to base and additional capacity (ie in the form of an availability payment). However, hybrid models may be adopted where the risk is shared, or otherwise wholly borne by the utility provider. This will depend on the nature of the market, the reputation of the Developer and the related capacity of the utility provider to obtain finance at reasonable rates.

The project expansion works are usually provided under the key terms of the existing concession agreement, in the form of a concession agreement supplement (including any additional direct agreements with Financiers and Contractors in the same form as those executed for the base project facilities).

The Developer may always elect not to proceed with the expansion of a project facility, however this may result in relief from certain KPIs to the extent demand exceeds the design capacity. The obligation of the utility provider to provide services from existing or temporary facilities under these circumstances is limited to its ability to provide the services in accordance with laws (eg environmental requirements etc.) and good utility practice.

An example of a phased expansion clause for a district cooling project under a concession agreement (with an underlying DBO Contractor) is attached at Appendix 1.

2.8 Conclusion

If the Developer has access to the capital required to pay for the utilities itself, or alternatively, has access to cheaper finance than available in the project finance market generally, and has made the business decision to allocate its capital to constructing the utilities, then the Developer should consider applying a DBO approach to the utilities solution. This may:

- offer a cheaper cost, resulting in either a lower price to end-users, or a profit to the Developer, or a combination of the two, however, this should be examined on a case by case basis

- result in a shorter negotiation time in tendering the utilities as the input of the Financiers is removed, however, this benefit is lessened once one or two projects have been banked, ie received credit committee approval and reached financial close
- provide the Developer with more flexibility to terminate the arrangement at a future time for a lower cost and to control alternatives such as monetisation, which if implemented, could increase end-user rates.

By comparison, a concession approach would likely shift more project risk and cost (including financing cost) off balance of the Developer and onto the concession company.

The chosen approach for the development of utilities should be examined on a company-wide basis and not just a project-wide basis.

3 Benchmarking and international best practice

We have benchmarked district cooling projects internationally and, in summary, international best practice can predominantly be seen in the Middle East, with ~3.4 million Refrigeration Tons (RT) of existing district cooling capacity and hundreds of individual cooling plant facilities (predominantly managed by dedicated utilities). There is a strong tendency to use concession BOO/BOOT/contracting models.

Note: We have also examined district cooling projects in Asia (particularly Malaysia, with ~200,000 RT of installed capacity), and to a lesser extent Europe (which primarily operates publically-owned district heating utilities). The results are set out below.

3.1 Middle East

(a) District cooling market landscape

The extreme climate conditions in the Middle East necessitate a significant level of air conditioning, accounting for ~50.0% of annual electricity consumption in 2012, and ~70.0% of peak demand. Furthermore, peak cooling demand in the GCC is expected to nearly triple from 2010 to 2030, rising to ~100.0 million RTs.

The UAE, in particular, has successfully developed a substantial volume of district cooling (~2.4 million RT) (see below). According to Strategy&, the potential market for district cooling through to 2030 in the Middle East is ~32.5 million RT.

The predominant form of contracting model for district cooling facilities is through commission/BOO/BOOT agreements, with specialised district cooling utilities assuming operational responsibility for upwards of 20 years. Examples include:

- **Empower:** Emirates Central Cooling Systems Corporation (Empower) was established in 2003 as a joint venture between the Dubai Electricity and Water Authority and TECOM Investments (a member of Dubai Holdings and a Government Backed Entity). Following the acquisition of Palm Utilities and Palm District Cooling (the Owner and Operator of district cooling systems/concessions such as Palm Jumeirah, Ibn Battuta Mall) in January 2014 at a cost of US\$500 million, Empower holds approximately 70.0% of the UAE's district cooling market, with over 45,000 customers. Empower is the largest district cooling utility in the world, with upwards of 1.0 million RT of cooling capacity.
- **Emicool:** Emirates District Cooling (Emicool) was formed as a joint venture between Dubai Investments and Union Properties, and currently operates upwards of 8 plants through a predominantly BOO business model.
- **Tabreed:** The National Central Cooling Company PSJC (Tabreed) was established in 1998 as a publically listed entity. Tabreed has interests in a total of 67 district cooling plants in the UAE, 52 of which are wholly owned and operated, and 8 of which are operated through affiliates established as Joint Ventures. An additional 6 plants are owned and operated through regional affiliates (in particular Qatar Cool and Saudi Tabreed).

(b) Examples of district cooling contracting models

Location	Development	Contracting model
Dubai	<p>BOO: Numerous projects including Investments Park; Dubai Design District; Palazzo Versace Dubai Hotel, Condominiums, and D1 Tower; Dubai Sports City; Dubai Motor City, Zayed Military City</p> <p>BOOT/Concession: Numerous projects including Dubai Metro; Dubai International Finance Centre; Discovery Gardens; Jumeriah Group Properties, Al Maryah Island, Saadiyat Island</p>	
	Dubai Parks and Resorts, Jebel Ali	<p>Concession: Tabreed signed a long term concession agreement with Meeras Leisure and Entertainment to provide 45,600 RT of cooling. The contract for design, procurement, construction and commissioning services for facility was awarded to SNC-Lavalin Gulf Contractors, at a value of C\$37.0 million.</p>
	Dubai Design District	<p>BOO: Empower, a subsidiary of the Developer (TECOM Investments) secured a contract to provide up to 120,000 RT of capacity to the project, boosting the company's portfolio by ~12.0%. The facility is to be funded from Empower's own balance sheet.</p>
Qatar	Lusail city Marina District DCP ¹²	<p>EPC (turnkey) contract: Marafeq Qatar, a subsidiary of Qatari Diar, designed, managed and supervised the project.</p> <p>The BUTEC/ADC Joint Venture was selected for the design, procurement, construction and plant commissioning of the project. Drake & Scull Engineering won a \$29.9m contract for the design and build of the plant.</p>
Kingdom of Saudi Arabia	Jabal Omar development (Holy City of Mecca) ³	<p>BOOT: Central District Cooling Company (CDCC), a special purpose vehicle owned by Saudi Tabreed (60%) and the Jabal Omar Development Company (40%), entered into a 20 year BOOT agreement for the construction of a 55,000 RT project in 2011. The expected cost of the project was SAR 500 million.</p> <p>SNC-Lavalin was contracted by CDCC for the design, procurement, construction and commissioning of the facility.⁴</p>

1 <http://www.snclavalin.com/en/snc-lavalin-awarded-district-cooling-contract-in-dubai>

2 <http://www.qatarconstructionguide.com/index/index.php?id=3&art=208&lang=en>

3 <https://www.tabreed.ae/en-GB/press-releases/12/2/2013/tabreeds-affiliate-to-develop-aed-549-million-district-cooling-project-in-saudi-arabia.aspx>

4 <http://www.constructionweekonline.com/article-17973-snc-lavalin-wins-makkah-district-cooling-contract/>

Location	Development	Contracting model
	Saudi Aramco office complex development, Dhahran	BOOT/Concession: Saudi Tabreed was contracted to design, construct, finance, own, operate and maintain the District Cooling Network with 27,000 RT cooling capacity (expandable to 32,000 RT). The project was the first of its kind in Saudi Arabia, structured as a 25 year concession agreement on a limited recourse project-finance basis. Banque Saudi Fransi was the financier
Bahrain	Bahrain Bay, Manama	BOT: Bahrain Bay Development (a JV between Delkia Utilities and Arcapita) entered into a 50 year Build-Operate-Transfer agreement with Bahrain Bay Development for the delivery of a 45,000 RT seawater cooling facility.

Case study 1 – District cooling developed on a concession basis: Saadiyat Island, United Arab Emirates

Saadiyat Island is a mixed-use development with a total built-up area of over 1.6 million m². The precinct is being developed as a cultural and touristic destination for the Abu Dhabi emirate, including a cultural district, numerous luxury hotels, and a large range of residential and hospitality centric developments. The overall capacity of the district cooling facility is 47,500 TR.

The master Developer of the project is the Tourism Development & Investment Company (TDIC), an entity of the Abu Dhabi Government. District cooling of the development is governed by a 29 year concession agreement between the TDIC and a Joint Venture led by Dalkia Utilities (a subsidiary of EDF & Veolia) as operating company and minority equity investor. Arcapita, an alternative asset manager, is the majority equity investor.

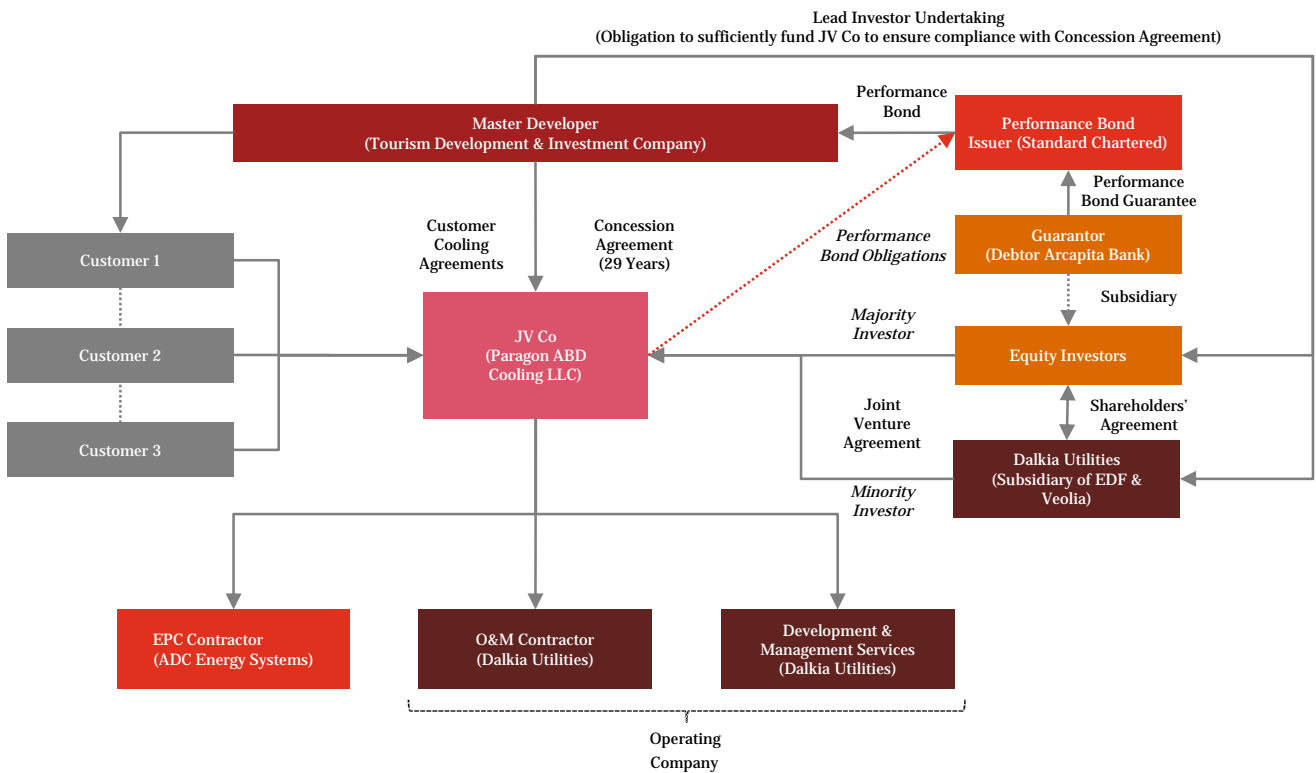
Additionally, TDIC required protection in the form of a \$10.0 million performance bond, guaranteed by Arcapita and issued by Standard Chartered. This bond assured the performance of the obligations of the JV during the period of the concession agreement.

As the operating company, Dalkia directly assumed responsibility for the appointment of the EPC Contractor, ADC Energy Systems (ADC), following a competitive tender.

According to their external publications, the *“Use of the BOOT structure created key synergies through the project:*

- *Project risk was effectively transferred downstream from TDIC to expert district cooling providers. This single point of contact substantially reduced the complexity from the master Developer’s perspective. Furthermore, as customers directly contract for services with the JV, price risk was fully shifted (allowing for more precise budgeting by TDIC).*
- *Furthermore, appropriate mechanisms were put in place to correctly incentivise the District Cooling Provider through equity and long-term concessions, and properly protect the Developer against defaults in financing arrangements and performance.*
- *As operating company with both a contractual and equity interest in the effective operation of the plant, Dalkia was encouraged to collaborate closely with ADC in the construction of the project. This was achieved by continuous and dynamic coordination, and allowed for a smoother transition from the construction phase to the operation phase.”*

Contract Structure – Saadiyat Islands District Cooling Plants (BOOT Structure)



Case study 2 – The acquisition of a district cooling concession by an infrastructure/state owned fund and an industry participant (in this case an Operator): Tabreed and Mubadala Infrastructure Partners, United Arab Emirates

A consortium comprising National Central Cooling Company PJSC (“Tabreed”), the leading Abu Dhabi-based district cooling utility company, and Mubadala Infrastructure Partners (“MIP”), an infrastructure focused fund investing in the Middle East, North Africa and Turkey, with institutional investors from the GCC region and Asia, announced in June 2014 that it has acquired a 30-year concession to be the exclusive provider of district cooling services to the developments on the southern part of Al Maryah Island, Abu Dhabi.

The transaction, which is valued at approximately US\$285 million, involves the acquisition of the existing district cooling provider to Al Maryah Island (Al Wajeez Development Company PJSC) and will be funded through a combination of equity and a 20-year long-term non-recourse senior loan provided by First Gulf Bank.

The 30-year concession represents an installed capacity of up to 80,000 refrigerated tons (RT) for Abu Dhabi’s new Central Business District and luxury lifestyle destination on Al Maryah Island. Al Maryah Island Phase I developments encompass 450,000m2 of office, retail and hotel developments designed to form the commercial and financial hub of the Emirate of Abu Dhabi. Key developments on the Island include Cleveland Clinic Abu Dhabi, Four Seasons Hotel, Rosewood Hotel, Sowwah Square Towers, Galleria Mall, Al Hilal bank and Abu Dhabi Exchange Building. The acquisition of the Al Maryah Island plant brings the total number of district cooling plants owned and operated by Tabreed in the GCC to 67, and increases its connected capacity to over 900,000 RT.

Note also the abovementioned recent acquisition by Empower of Palm Utilities for US\$500 million.

3.2 Asia

(a) Capacity for more development

There has been an array of new end-users like airports, religious site, sports complexes and religious facilities deploying district cooling technology. It is estimated that US\$11bn of investment in end-use efficiency is needed by South-East Asian countries by 2020 to meet their national targets for energy efficiency and greenhouse gas emission reductions.

For example, according to a recent report by Asia Development Bank (2013) based on the technical structures, Malaysia has the potential to triple the scale of its district cooling industry to a built-up capacity of 575,000 tonnes of refrigerants from the current approximates of about 200,000-tonne capacity. The Asian Development Bank currently invests more than US\$2.3bil (RM7.29bil) per year in clean energy projects across Asia. However, the awareness of district cooling technology is still low level in most of the urbanised Asian countries.⁵

Examples of district cooling contracting models

Location	Development	Contracting model
Malaysia	Various options are used for procuring district cooling in Malaysia, but the predominant form is the conventional EPC and O&M model. However new approaches such as BOT and BOOT contracts are also used. ⁶	<p>EPC/O&M: UKM Loop 1; Kompleks Kerajaan; UNITEN Putrajaya; Putrajaya Development; MMU Cyberjaya; Nuklear Malaysia Dengkil; S&T Complex UiTM; Mutiara Damansara; Hospital Serdang; MBSA Shah Alam</p> <p>BOT: KLIA Sepang; IJN</p> <p>BOO: Megajana DCS Cyberjaya; Pantai DCS Bangsar; KLCC Development; Putrajaya Development; KL Sentral</p>
Hong Kong	Kai Tak airport site redevelopment ⁷	<p>DBO: awarded by Hong Kong government, to a joint venture comprising Dalkia Asia Pte Ltd, Hip Hing Engineering Co Ltd and Young's Engineering Co Ltd.</p> <p>Note: BOT was initially considered but rejected due to the global economic climate and uncertainty in DCP development – The development was the first of its kind in Hong Kong. The project was Sponsored by the Hong Kong government.</p>
Singapore	Marina Bay	<p>Concession: Singapore Power and Dalkia conducted feasibility studies and advocated the implementation of a district cooling system for the new business district. They were granted the concession of a pilot district cooling system. Singapore District Cooling (SDC) was incorporated as a joint-venture in 2000 to implement the pilot system.</p> <p>Funding: commercial JV without public funding. Initial plant funded by shareholder equities. Subsequent expansion funded by bank loans secured through project financing scheme from a leading Singapore bank.</p> <p>Regulation: <i>District Cooling Act</i> mandates subscription for new commercial developments, in order to mitigate start-up</p>

5 <http://adb-seaee.com/wp-content/uploads/2013/10/Malaysia-District-Cooling-Seminar-Concept-Note-and-Agenda-4oct13.pdf>

6 http://www.academia.edu/4167047/A_Review_Of_Value_Creation_From_Procurement_Contracts_And_Business_Models_For_District_Cooling_Systems_In_Malaysia

7 <http://www.cospp.com/articles/print/volume-12/issue-4/features/district-cooling-reaches-hong-kong.html>

Location	Development	Contracting model
		demand risk. Framework administered by Energy Market Authority of Singapore. Over time the district cooling Operator is allowed to earn a baseline return based on its invested assets. When the Operator has recovered start-up losses, any efficiency gain above baseline returns is shared between Operator and customers.
Singapore	JTC Multi-Utility Hub at Mediapolis ⁸	DBOO: Keppel DHCS, an indirect wholly-owned subsidiary of Keppel Infrastructure Holdings Pte Ltd, was awarded the tender by JTC Corporation to design, build, own and operate a new DCS plant at JTC's Multi-Utility Hub at Mediapolis, and secured a contract to provide DCS services to MediaCorp's new campus at Mediapolis@one-north.

3.3 Europe

Developments in the district heating and cooling sector are driven to a large extent by European legislation.

Europe is less relevant, since it mainly uses district heating and most district cooling plants are public-owned.

Location	Development	Contracting model
France	Paris	Concession: CLIMESPACE is a concession company for the City of Paris since 1991, and produces and distributes district cooling.
UK (London)	OLYMPIC PARK	Concession: Elyo UK won a 40-year contract for the building, financing and operation of urban heating and air conditioning networks (€1,500 M).
UK	Bazainville	EPC/O&M: Tractebel Engineering was chosen as Owner's engineer on the turnkey contract for the new interconnection station in Bazainville.

4 Billing and collection regime

4.1 Introduction

As discussed in section 5 below, district cooling is currently not specifically regulated in Australia. This means that providers are free to determine their own billing and collections model through contracts with their suppliers and with building Owners/end users.

Discussion Point: The billing and collections model for district cooling may be impacted by other regulatory frameworks (eg water, gas and electricity) if a multi-utility embedded network model is chosen. Refer to Section 5 (Regulatory Issues).

Typically a billing and collections model will be made up of the following elements – Metering and data services, pricing and billing/collection.

Despite the advent of modular plant and equipment, district cooling networks are particularly front loaded investments. Therefore, the success of any billing and collections regime requires co-ordinated development,

⁸ http://www.keppeldhcs.com/news_item.aspx?sid=3970

accurate estimation of cost (both capital costs and operating costs) and accurate estimation of network load over the life of the development.

4.2 Metering and data services

Many early providers of district cooling (particularly in the Middle East) relied on bulk metering only. Providers would meter multi-dwelling usage at a building level only and then it would be up to building Owner to develop its own allocation model across residential, retail and commercial tenancies. This has led to inequitable cost allocation and significant customer dissatisfaction.

More recent developments provide a combination of bulk metering, tenancy metering and more granular sub-metering which provide much richer information. This together with more sophisticated data collection systems which often include integration to back-end billing and customer management systems has improved allocation models significantly.

The EU, United Kingdom and Hong Kong are all in the process of introducing regulation which mandates tenancy level metering for district cooling at new developments and at substantial renovations (where technically possible and cost-effective in the long term).⁹

Providers commonly subcontract their metering and data services to one or more metering services provider. The scope of these arrangements involve meter supply, meter installation, meter operation and maintenance and data services.

4.3 Pricing models

Although district cooling is rarely regulated, pricing models typically consist of the following elements:

- (a) **A connection charge:** For connection to the network (this typically covers meter supply, installation and connection services)
- (b) **A capacity charge:** For the estimated maximum cooling capacity of the building (this typically covers an allocation of the providers capital costs of the district cooling network)
- (c) **Consumption charges:** For the actual consumption of district cooling services used by occupiers/tenants district.

There is also sometimes a specific capacity overrun charge if the actual consumption exceeds the estimated building capacity.

Given the length of district cooling concessions or DBO arrangements, it is critical that whatever pricing model is chosen, that pricing model is subject to clear periodic adjustment mechanisms which allow the provider to vary the charges to take account of changes to input costs such as water, power, labour, inflation and finance costs and the consequences of changes to law.

4.4 Billing and collection risk

Collection risk is a key issue in district cooling projects. Therefore even with the advent of tenancy level metering, typically district cooling providers will not wish to invoice end-users/tenants directly but will prefer to invoice the Developer or building Owner who will pass the costs through the end-users through a service charge or management fee.

In considering whether to accept payment by the Developer/building Owner, the district cooling provider will need to satisfy itself as to the ability of the Developer/building Owner to pay the district cooling charges and, if necessary, seek some form of security such as a parent company guarantee or letter of credit.

⁹ Section 4 of The Heat Network (Metering and Billing) Regulations 2014 (UK); Articles 9-11 of the European Energy Directive (EU); and District Cooling Services Bill 2014 (Hong Kong SAR)

If the district cooling provider takes the risk of collecting charges from the end-users, it will need to build in safeguards to ensure that it is able to do so. This may involve appointing a facilities manager to assist with collection, in which case the latter may be incentivised to collect the payments by having all or a portion of its payment being dependent on the collection of the district cooling charges from end-users.

The district cooling provider will also want to ensure that the end-user agreements contain rigorous succession obligations so that subsequent purchasers are required to enter into an agreement with the district cooling provider for district cooling and/or to take an assignment of the original end-user agreement. The district cooling provider may also, if it is permitted by local laws, look to include rights to cut off the supply of district cooling for non-payment.

5 Regulatory issues

Unlike some other jurisdictions, where district energy comprises a sizeable portion of the total energy load, there is no direct regulation of district cooling/heating plant or commercial arrangements in Australia. At most, these arrangements are governed by local or State planning and environmental requirements and other relevant general legislation, such as the Competition Consumer Act (particularly relevant if commercial structures involve vertical constraints on retail pricing) and Australian Consumer Law.

However, to the extent that any district cooling solution forms part of an integrated utility offering, there are a range of regulatory considerations and challenges that are both complex and differ by State. While a comprehensive overview is beyond the scope of this paper, some of the relevant Australian regulatory considerations across energy (electricity and gas), water (potable and waste) and telecommunications infrastructure/services are set out below.

5.1 Energy – Electricity and gas

Any integrated utility proposal needs to address energy regulatory requirements across each of the following:

Issue	Description
Metering and billing	<ul style="list-style-type: none"> • Metering is addressed in the National Electricity Market (in those jurisdictions with contestability) through a Metrology Procedure. Complex rules, but require gate meter to be registered as parent in the market settlement system by the retailer. • In those jurisdictions where contestability is available (Victoria, New South Wales and South Australia) – Where a network service provider exemption is in place, metering requirements will typically be covered by a condition to the relevant NSP exemption (see below). • Note – Pro rata or shadow pricing of DUOS and NUOS charges is permitted, but network charges for private infrastructure need to be recovered through lease or other payments (eg fit out charges) – Not explicitly through energy pricing.
Retailing	<ul style="list-style-type: none"> • Retailing of energy in Australia is principally governed by the National Energy Retail Law and National Energy Retail Rules. The NER prohibits the retail sale of energy unless the seller is authorised, or has obtained a relevant exemption. Exemptions are granted on both an individual and class basis by the regulator, the Australian Energy Regulator (AER) • Obligations apply both to selling and on-selling of energy • Where contestability has been introduced individual tenants need to retain an ability to acquire supply directly from retailers.

Issue	Description
<p>Network infrastructure ownership/embedded networks</p>	<ul style="list-style-type: none"> • Under this model, the Developer owns the embedded network after it becomes operational and takes supply from the relevant distribution network Operator through a gate meter and pays a cost reflective network tariff • The Developer may be able to obtain an exemption from the obligation to be registered as a network service provider. Any exemption is subject to conditions, typically relating to pricing, metering and distribution loss factors • Pricing and tariff structures for DNSPs vary (and can be subject to jurisdictional specific pricing obligations) and so while the overarching regulatory framework is common, the price structures and regulatory arrangements can differ markedly between States • There are currently a number of DNSP tariff resets underway.

5.2 Water – Potable and wastewater

Australia currently suffers from a patchwork of State-based regimes for water regulation, and generally has an under-developed model for contestability in the supply of private water infrastructure. The draft report of the current Harper Review has flagged reform of the water sectors as an area of ‘unfinished business’ in terms of Australian competition policy reform.

As a consequence, the key regulatory issues vary substantially by State, for example:

- **New South Wales:** The most advanced of the jurisdictions, there is scope to obtain both a retailer and network services licence (note: amendments are currently being considered to the legislative regime that will mean entities, rather than individual schemes, become subject to licensing).
- **Queensland:** There is some scope in Queensland for private entities to be licensed as water service providers – For both potable and sewerage services. However, to date, the provision of these services has been by government-owned entities. Pricing is set by the State competition authority (Queensland Competition Authority). Registration obligations are also less onerous in relation to recycled water suppliers.
- **Victoria:** Private involvement in the water sector has been limited by law to the supply of services to government-owned utilities (this is enshrined in the Victorian Constitution). There is some scope for involvement of the private sector through sub-contracting structures. Melbourne metropolitan services are supplied by 3 government-owned utilities.
- **South Australia:** A licensing regime has been recently introduced (2013) for licensing of “water retail services” (covering both water and sewerage), overseen by the State competition authority (ESCOSA).

Australia’s approach to regulation of private participation in the water sector contrasts with a number of other jurisdictions, internationally, which have successfully privatised or otherwise facilitated private involvement, including France (which has a long history of private sector involvement) and the United Kingdom.

5.3 Telecommunications

The regulatory environment for the development of telecommunications infrastructure in new developments remains in a state of flux, caused by an overhaul of regulatory requirements as part of the Commonwealth National Broadband Network (NBN) deployment.

There are a number of private Operators that compete for the provision of (mostly fibre) infrastructure in new residential estates.

The Coalition Government has published for consultation a modified “new developments policy” aimed at improving the contestability of fibre deployment to new developments – And ensuring competitive neutrality with NBN Co (based principally on a set of published connection and development charges). Minimum network standards will be imposed via licence condition, and will broadly match NBN Co’s requirements. Where a carrier does not provide NBN-comparable services, there is a risk of overbuild by NBN Co. Currently, any new

Operator of a “superfast” network that supplies services predominantly to residential or small business customers, must do so on an open access and non-discriminatory basis.

As the above summary demonstrates, a single or “boilerplate” approach to regulatory approvals across integrated utility projects is unlikely to be feasible, at this time, with regulatory issues needing to be differently addressed in each case. Each project regulatory strategy will need to take into account the features of the project and individual State differences and requirements – With the supply of water infrastructure services (in most States) and any proposed supply of bundled retail fibre-based telecommunications services to residential developments raising particular challenges.

Discussion Point: To be considered on a case by case basis but also on a whole of project and business unit basis when considering an integrated utility solution.

Appendix 1 Glossary

- 1 **BOO/BOOT:** Build, Own, Operate or Build, Own, Operate and Transfer. These terms and concessions and DBOO can be used interchangeably.
- 2 **Concession:** An agreement whereby a concession to design, build, own and operate a facility is granted by a concessionaire to the concession company (commonly referred to as an SPV or a Project Company)
- 3 **DBO:** Design, Build, Operate. This model does not include Ownership or the corresponding off – balance sheet project financing.
- 4 **DBOO:** Design, Build, Own and Operate. Note above comment on BOO/BOOT and concessions.
- 5 **ECA:** Export Credit Agency
- 6 **EPC:** Engineering, Procurement and Construction. A construction contract which then links into the O&M Contract. If they were combined they would be a DBO contract.
- 7 **PwC:** PricewaterhouseCoopers
- 8 **O&M:** Operation and Maintenance. An operating and maintenance contract which links into back to the EPC Contract. If they were combined they would be a DBO contract.
- 9 **SPV:** Special Purpose Vehicle. Alternatively known as the Project Company in a project financing.

Appendix 2 Example expansion/project phasing clause

Refer to Section 2.7 for an analysis of potential expansion of the district cooling facility through increased take-up. This clause is an extract from the PwC Standard Concession Agreement illustrating how a Developer could deal with this critical risk.

8 Project phasing

8.1 Implementation of Project Phases

The Concession Company acknowledges and agrees that:

- (a) *the Development is being implemented by the Owner in stages*
- (b) *it is a primary objective of the Owner to defer the construction of permanent additional capacity to the Project Facilities, and capital costs associated with such permanent additional capacity, to the extent reasonably practicable consistent with Good Utility Practice. Accordingly, in connection with the consideration of the Demand Curve and expansion of the capacity of each of the Project Facilities, the Concession Company must, unless it is otherwise directed in writing by the Owner, utilise Temporary Facilities to the maximum extent reasonably practicable consistent with Good Utility Practice in order to defer the construction of additional permanent capacity and the capital costs associated with such permanent additional capacity until such time that projected demand is expected to result in consistent utilisation of such additional capacity*
- (c) *subject to clause 7.7 and execution of the relevant Concession Agreement Supplement, the Concession Company must provide the Design and Construction Works for each Project Facility Phase in accordance with the requirements of this agreement and any Concession Agreement Supplement*
- (d) *with respect to each Project Facility Phase, the Owner shall have the same substantive and procedural rights it has with respect to the Design and Construction Works for the Base Project Facilities, as set out in clause 9.*

8.2 Adjustments to demand curve

- (a) *On each anniversary of the Signing Date until the date that the ultimate Guaranteed Capacity of each Project Facility has been reached, and at such other times as may be agreed by the parties, the Owner must provide the Concession Company the Demand Curve as revised by the Owner based on information reasonably available to the Owner regarding population trends and other matters that affect the assumptions upon which the Demand Curve is calculated, including information provided by the Concession Company in Monthly Performance Reports regarding utilization of the Project Facilities (the "Demand Curve Notice").*
- (b) *The Owner and the Concession Company must meet promptly following the receipt by the Concession Company of the Demand Curve Notice to discuss the Demand Curve Notice. The Owner must provide the Concession Company such additional information regarding the Demand Curve Notice and the Demand Curve as the Concession Company reasonably requests.*
- (c) *As soon as reasonably practicable following receipt by the Concession Company of the Demand Curve Notice and any additional information referred to in clause 1.2 (b), the Concession Company must notify the Owner regarding:*
 - (i) *the then current capacity of the Wastewater Treatment Plant and the Polishing Plant*

- (ii) *the additional capacity which will reasonably be required by the Wastewater Treatment Plant and the Polishing Plant as a result of the Demand Curve*
- (iii) *any required changes to Schedule 7 to provide such additional capacity*
- (iv) *any changes necessary to the Development Network as a result of the Demand Curve and such additional capacity*
- (v) *the estimated Capital Requirements for providing such additional capacity, and any changes to the Prevailing Financial Model to reflect such requirement*
- (vi) *whether the additional capacity provided by each Project Facility Phase, as the case may be, of each Project Facility should be increased or decreased as a result of the Demand Curve*
- (vii) *whether the Scheduled Commercial Operations Date for each Project Facility Phase should be postponed or brought forward as a result of the Demand Curve, and, if so, by how much*
- (viii) *the estimated increase in operating costs of the Project Facilities as a result of such additional capacity, and any changes to the Prevailing Financial Model to reflect such increase*
- (ix) *the estimated effect on the Tariff calculated in accordance with Schedule 27, and any changes to the Prevailing Financial Model to reflect such effect*
- (x) *the estimated schedule for expanding the capacity of the Wastewater Treatment Plant and the Polishing Plant, as applicable, and any changes to the Prevailing Financial Model to reflect such expansion*
- (xi) *the plan of the Concession Company for designing, constructing and financing such additional capacity, including the plan for issuing Concession Company Debt and contributing Equity*
- (xii) *the estimated cost and schedule for providing a commitment from one or more financial institutions for financing the amount of the Capital Requirements for the applicable Project Facility Phase*
- (xiii) *the information described in items (v), (viii), (ix) and (xi), assuming that the required additional capacity identified in such notice from the Concession Company is provided through Temporary Facilities.*

(the Demand Curve Notice Response).

- (d) *The Concession Company must provide to the Owner as soon as reasonably practicable such additional information regarding the Demand Curve Notice Response as the Owner reasonably requests and meet with the Owner at its request to discuss the Demand Curve Notice Response. Estimated and other information provided by the Concession Company in the Demand Curve Notice Response must be based on information reasonably available to the Concession Company, but the Concession Company is not obliged to undertake any formal solicitation of bids from potential SubContractors or any similar process in order to obtain such information.*
- (e) *Within the later of 60 Days of receipt of the Demand Curve Notice Response and 10 Days after provision of any additional information reasonably requested by the Owner pursuant to clause 1.2(d), the Owner must notify the Concession Company that the Owner has made one of the following determinations, or a combination of them, as applicable:*
 - (i) *proceed with the Project Facility Phase and the additional capacity it requires for the Project Facility Phase*
 - (ii) *not proceed with the Project Facility Phase at such time and directs the Concession Company to use Temporary Facilities*

- (iii) *not proceed with the Project Facility Phase at such time and directs the Concession Company to use existing capacity of the applicable Project Facility.*
- (f) *If the Owner elects not to proceed with the Project Facility Phase at such time*

 - (i) *directs the Concession Company to use Temporary Facilities, then the Concession Company must subject to clause 7.7(g)(iii) provide Temporary Facilities as set out in clause 12.19, and the Concession Payment must be adjusted as provided in Schedule 13 and Schedule 27*
 - (ii) *directs the Concession Company to use the existing capacity of the applicable Project Facility, then the Concession Company must maximise the usage of the capacity of the applicable Project Facility to Treat Wastewater and Septage and to Polish TSE, as the case may be, in excess of the Guaranteed Capacity of the then-existing Project Facilities to the extent that such usage is consistent with applicable Law and Good Utility Practice, and the Concession Payment must be adjusted as provided in Schedule 13 and Schedule 27; provided, however, that at such time that the Concession Company reasonably determines that usage of the capacity of the applicable Project Facility in excess of the Guaranteed Capacity is not consistent with applicable Law or Good Utility Practice, the Concession Company must notify the Owner in writing as to the basis for such determination in reasonable detail, and provide the Owner with information it reasonably requests relating to such determination. If the parties are unable to resolve any dispute regarding such determination, either party may refer the matter to the Independent Expert pursuant to clause 39. If the parties agree or it is determined by the Independent Expert that the usage of the capacity of the applicable Project Facility in excess of the Guaranteed Capacity is not consistent with applicable Law or Good Utility Practice, then the Owner must, subject to clause 39, direct the Concession Company (A) to implement a Project Phase; or (B) subject to clause 7.58(g)(iii), to install Temporary Facilities; or (C) to utilise such other methods consistent with Good Utility Practice and applicable Law as are approved by the Owner, including applicable methods described in clause 7.8(g)(ii)*
- (g) *If the Owner elects to proceed with the Project Facility Phase, then the Phase Contractor for the applicable Project Facility Phase will be selected, the Project Facility Phase will be implemented and the Concession Payment will be adjusted as provided in this clause 8 and Schedule 27.*

8.3 Selection of phase Contractor

- (a) *If the Concession Company proposes to have the Initial DBO Contractor undertake the Design and Construction Works for the Project Facility Phase, then, within 60 Days of receipt of the notice from the Owner pursuant to clause 1.2(e), the Concession Company must provide the Owner with a proposal which includes:*

 - (i) *the notice provided in clause 41(b) and (d), such notice to include current information with regard to the Initial DBO Contractor*
 - (ii) *the design specification, scheduling and other relevant information for the Design and Construction Works for the applicable Project Facility Phase*
 - (iii) *a binding guaranteed maximum price from the Initial DBO Contractor for the Design and Construction Works together with a certificate from the Independent Engineer certifying that such price is fair and reasonable and consistent with applicable market conditions (which shall be final and binding on the parties)*
 - (iv) *the DBO Contract for the Base Project Facilities marked to show any changes necessary for the Design and Construction Works for the applicable Project Facility Phase*
 - (v) *the terms of the Concession Company Debt or Equity to be issued or provided by the Concession Company to pay for the Capital Requirements of the Design and Construction Works for the applicable Project Facility Phase pursuant to the obligations of the Concession Company under clause 7.8*

- (b) *The Concession Company must provide the Owner such additional information regarding such proposal as the Owner reasonably requests and meet with the Owner at its request to discuss such proposal, including providing the Owner with the detailed breakdown on an "open book" basis of the costs of the Initial DBO Contractor for undertaking the Design and Construction Works.*
- (c) *If the terms of such proposal for such Design and Construction Works are fair and reasonable and consistent with applicable market conditions for similar projects, the Project Facilities Phase utilises the technology described in Schedule 7 and is otherwise consistent with Schedule 7 or otherwise approved by the Owner, and does not impose obligations on the Owner that are different or greater than the obligations in this agreement (unless such obligations are approved by the Owner acting reasonably), then the Concession Company may have the Initial DBO Contractor undertake the Design and Construction Works for the applicable Project Phase.*
- (d) *If the parties cannot agree regarding the matters identified in clause 1.3(c) within 30 Days after receiving such proposal and the additional information referred to in clause 1.3(b), then either party may refer the matter to the Independent Expert. The determination of the Independent Expert shall be final and binding on the parties.*
- (e) *If the Independent Expert determines that the terms of the Initial DBO Contractor's proposal for such Design and Construction Works is not fair and reasonable or is not consistent with applicable market conditions for similar projects, the Project Facilities Phase does not utilise the technology described in Schedule 7 or is not otherwise consistent with Schedule 7 or imposes obligations on the Owner that are different or greater than the obligations in this agreement, then the competitive tender process described below must be used to procure an EPC Contractor for the Design and Construction Works.*
- (f) *The parties acknowledge their preference for continuing the Initial O&M Contractor with respect to the provision of Operation and Maintenance Services for each Project Facilities Phase but that there may be circumstances in which retendering the provision of all Operation and Maintenance Services may be advantageous. Accordingly, and subject to clause 1.3(h), the Concession Company may implement the competitive tender process described in the following provisions of this clause 8.3 for the provision of both Design and Construction Works with respect to a Project Facilities Phase and all Operation and Maintenance Services for all Project Facilities where it is able to demonstrate to the Owner's satisfaction (acting reasonably) that the Owner will not be materially and adversely affected by the retendering of those services.*
- (g) *In no event may the procurement of a new DBO Contractor in connection with the implementation of a Project Facility Phase:*
 - (i) *relieve, affect or diminish any obligation of the Concession Company under this agreement*
 - (ii) *adversely affect the provision of the Operation and Maintenance Services under this agreement*
 - (iii) *increase the Owner's payment obligations for the Operation and Maintenance Services beyond those provided at the time of the proposed procurement of a new DBO Contractor (as included in the Fixed Operating Costs Charge and the Variable Operating Costs Charge components of the Concession Payment in effect at such time) by an amount greater than the amount determined in accordance with section (A)4 of the Adjustment Principles. For the avoidance of doubt, the Concession Company may not engage a new DBO Contractor in connection with the implementation of a Project Facility Phase if the Fixed Operating Costs Charge plus the Variable Operating Costs Charge will as a result be greater than the sum of the then-existing Fixed Operating Costs Charge and Variable Operation Costs Charge plus any increased operating costs relating to the applicable Project Facilities Phase as determined in accordance with section (A)4 of the Adjustment Principles, without the prior written consent of the Owner.*
- (h) *Except as otherwise agreed by the Owner in its sole discretion, the Initial O&M Contractor must be used by the Concession Company for the provision of the Operation and Maintenance Services for the Residual Waste Treatment Plant for a period of at least 5 Years from the Commercial Operation Date of the Residual Waste Treatment Plant.*

- (i) *If a competitive tender process is used, the Concession Company must prepare bid documents for prospective Phase Contractors, including a Phase Contract and other necessary Project Agreements.*
- (j) *If a competitive tender process is used, the Concession Company must obtain bids as follows:*
 - (i) *unless a lesser number is agreed by the Owner, the Concession Company must send to no fewer than 3 prospective Phase Contractors, a request for proposals from the prospective Phase Contractor for the Project Phase (the "RFP"). Following approval by the Owner of the financial condition of such Phase Contractors to design and construct the Project Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operate the Project, and based on the criteria set out below and such other criteria as may be set out in such RFPs (the "Selection Criteria"), the Concession Company will select one or more of such prospective Phase Contractors for negotiation of the price, and the other terms and conditions, for designing and constructing the Project Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operating the Project*
 - (ii) *the criteria for selecting the Phase Contractor include:*
 - (A) *the Selection Criteria*
 - (B) *the price of designing and constructing the Project Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operating the Project*
 - (C) *the terms and conditions of the Phase Contract for designing and constructing the Project Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operating the Project*
 - (iii) *the Selection Criteria must include the following criteria and any other criteria set out in the RFPs:*
 - (A) *ability to perform the specified design, construction and operation services in accordance with a demonstrated high-level quality of service and performance*
 - (B) *ability to provide the specified design and construction services in connection with the timetable set out by the Concession Company and the Owner, and in accordance with the Design and Technical Specifications for the Project Facility Phase*
 - (C) *ability to perform the specified design, construction and operation services in accordance with a price competitive with other bidders*
 - (D) *experience in designing and constructing other similar projects*
 - (E) *experience in operating other similar projects*
 - (F) *financial condition and ability to provide required performance and payment bonds for the Project Phase*
 - (G) *take account of the matters referred to in clause 1.3(a)*
 - (iv) *the Concession Company must provide the Owner with the RFPs no less than 10 Days before it is sent to prospective Phase Contractors for review and comment by the Owner. The RFPs must be reasonably acceptable to the Owner prior to issue. Following receipt of responses to the RFPs, the Concession Company must prepare a report which analyses and ranks such responses, and lists not less than 2 prospective Phase Contractors with which the Concession Company will negotiate a price, and other terms and conditions, for the Project Phase. The Concession Company must provide the Owner with a copy of that report for the Owner's review and comment before any of the prospective Phase Contractors is notified of a determination by the Concession Company. The report must be reasonably acceptable to the Owner; provided, however, that it is recognised and agreed by the Owner that, subject to clause 8.3(g) selection of prospective Phase Contractors for negotiation of price will be made by the Concession Company*

- (v) *the Concession Company must, at the request of the Owner, provide the Owner with a copy of all information received by the Concession Company from the prospective Phase Contractors submitting responses to the RFPs, including information regarding price proposals. The Concession Company must answer questions from the Owner relating to the process of selecting the Phase Contractor and its status and must, at the Owner's request, meet the Owner to brief the Owner on matters relating to such selection process, including negotiations regarding price and other terms and conditions for designing and constructing the Project Facility Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operating the Project.*
- (k) *As soon as practicable after the Concession Company has received indicative offers for the Phase Contract for the Project Phase, it must provide the Owner with:*

 - (i) *all relevant information in relation to those offers including copies of the draft documents on which those offers are based*
 - (ii) *a draft Concession Agreement Supplement setting out the proposed amendments to this agreement to address each of the following matters with respect to the facilities covered by the Concession Agreement Supplement*

 - (A) *Design and Construction Works*
 - (B) *Design and Technical Specifications*
 - (C) *Completion Tests*
 - (D) *Scheduled Commercial Operation Date*
 - (E) *Milestone Schedule and Milestones*
 - (F) *Guaranteed Availability and Guaranteed Capacity*
 - (G) *Operation and Maintenance Services (if applicable)*
 - (iii) *a Model Variation Event Report in accordance with Schedule 27, including a calculation of the Concession Payment showing the financing of the Capital Requirements for the Project Phase and the change of the operating costs of the Concession Company pursuant to sections (A) 5 and (A) 6 of the Adjustment Principles.*
- (l) *Unless the parties agree otherwise:*

 - (i) *the draft Concession Agreement Supplement must not propose any amendments to this agreement other than those which are necessary in order to address each of the matters referred to in clause 1.3(k); and*
 - (ii) *the Design and Technical Specifications for the facilities covered by the draft Concession Agreement Supplement must be the same (other than with respect to capacity) as those for similar facilities making up the existing Project Facilities.*
- (m) *If the parties cannot agree on the terms and conditions on which to proceed with the Project Phase within 30 Days of the Owner receiving the information, documents and the draft Concession Agreement supplement referred to in clause 8.3(k), then either party may refer the matter to the Independent Expert; provided, however, that the Independent Expert may not make any determination related to any matter set out in clause 8.3(g), all of which matters are to be determined by the Owner in its reasonable discretion. The Independent Expert must take into account whether the draft Concession Agreement Supplement complies with clause 8.3(k)*
- (n) *Notwithstanding anything in this agreement to the contrary, the Concession Company must not enter into a Phase Contract until and unless the Concession Company has provided the Owner for its review and comment a copy of each draft Phase Contract no less than 15 Days prior to delivery of the draft Phase Contract to the prospective Phase Contractor with which the Concession Company is negotiating,*

including a copy of the substantially final draft of the Phase Contract. The Phase Contract must be reasonably acceptable to the Owner and must provide, among other things, that the Phase Contractor must perform all the obligations of the Concession Company set out in this agreement relating to the design and construction of the Project Phase and if applicable (and subject to clause 8.3(g) and 1.3(h)) operation of the Project. The Phase Contract submitted by the Concession Company to the Owner will be deemed approved by the Owner if the Owner has not provided notice to the contrary in writing to the Concession Company within 15 Days of submission by the Concession Company. The Concession Company is solely responsible for the obligations of the Phase Contractor set out in the Phase Contract and the Owner will have no responsibility or liability therefore. Each Phase Contract is deemed to constitute a Subcontract and must comply with all requirements for a Subcontract.

Concession agreement supplement

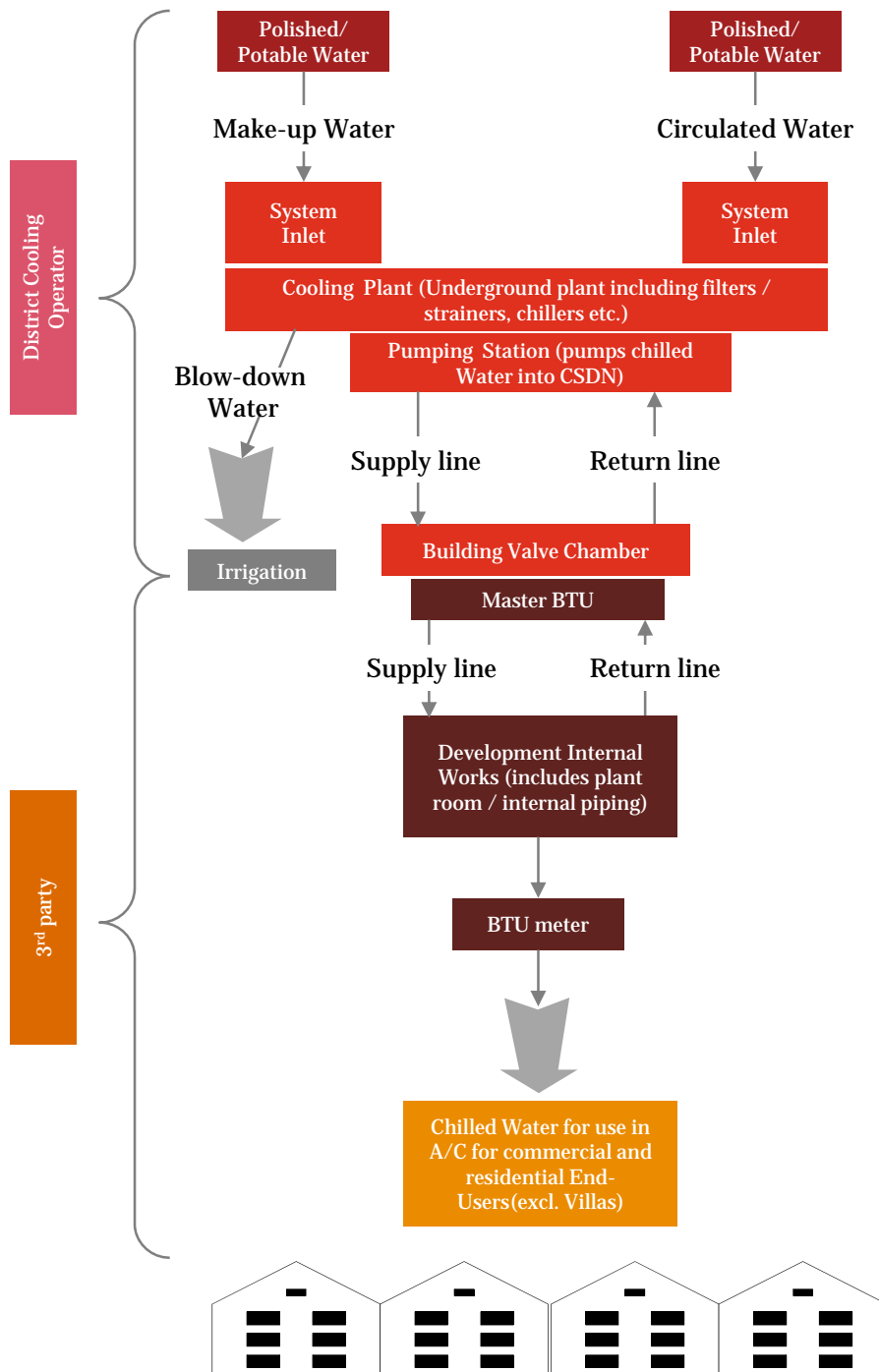
- (a) *Simultaneously with the execution of the Phase Contract, the Concession Company and the Owner will execute the Concession Agreement Supplement agreed or determined in accordance with this clause 8.3.*
- (b) *Without limiting the generality of the provisions of clauses 7.4 and 7.5, the Concession Company must, on or before the date of execution of the Concession Agreement Supplement:*
 - (i) *enter into the relevant Project Agreements and any other agreements necessary to be entered into by the Concession Company to enable it to undertake the Project Phase and to otherwise exercise its rights and fulfil its obligations under this agreement, and provide the Owner with certified copies of these agreements as soon as practicable after their execution; and*
 - (ii) *obtain all Authorisations necessary for it to undertake the Project Phase and to otherwise exercise its rights and perform its obligations under this agreement and the other Project Agreements.*

Direct agreements

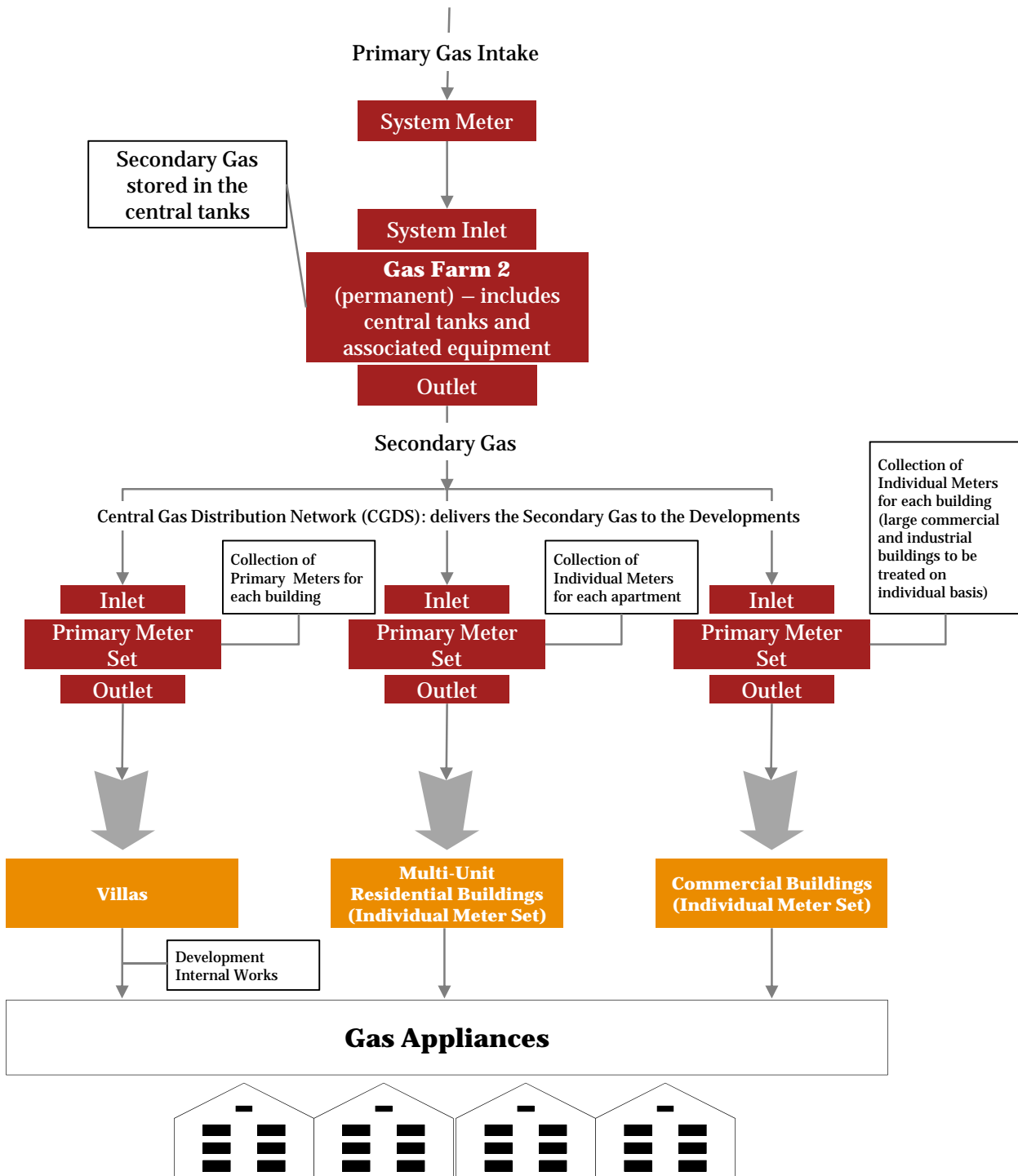
If any Financing Documents are entered into after the Signing Date in accordance with this agreement, the Owner agrees, at the Concession Company's request, to enter into any direct agreements in substantially the same form as Schedule 19.

Appendix 3 Example stand alone and integrated utility solutions from international projects

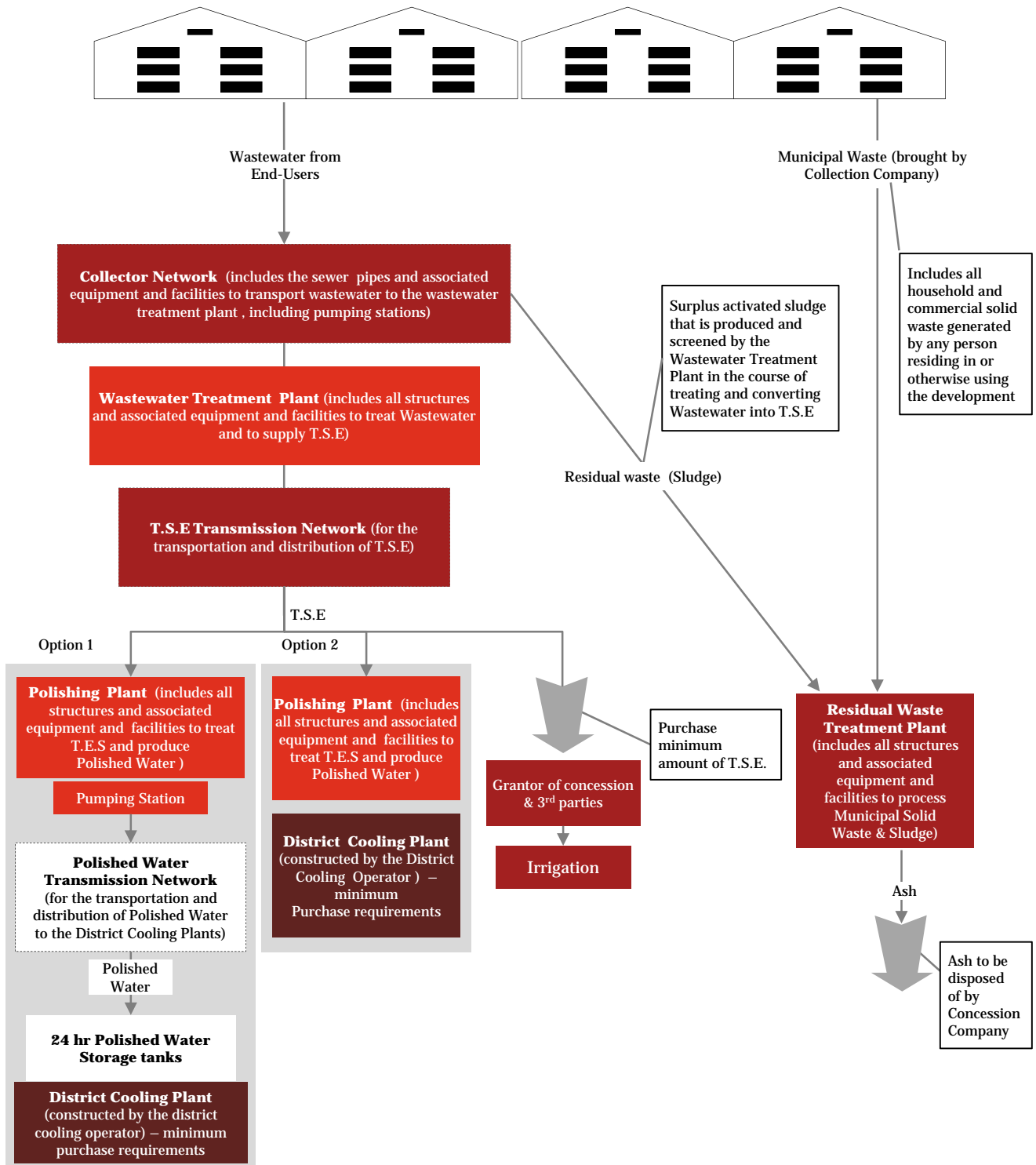
District Cooling Concession Agreement – Project Facilities



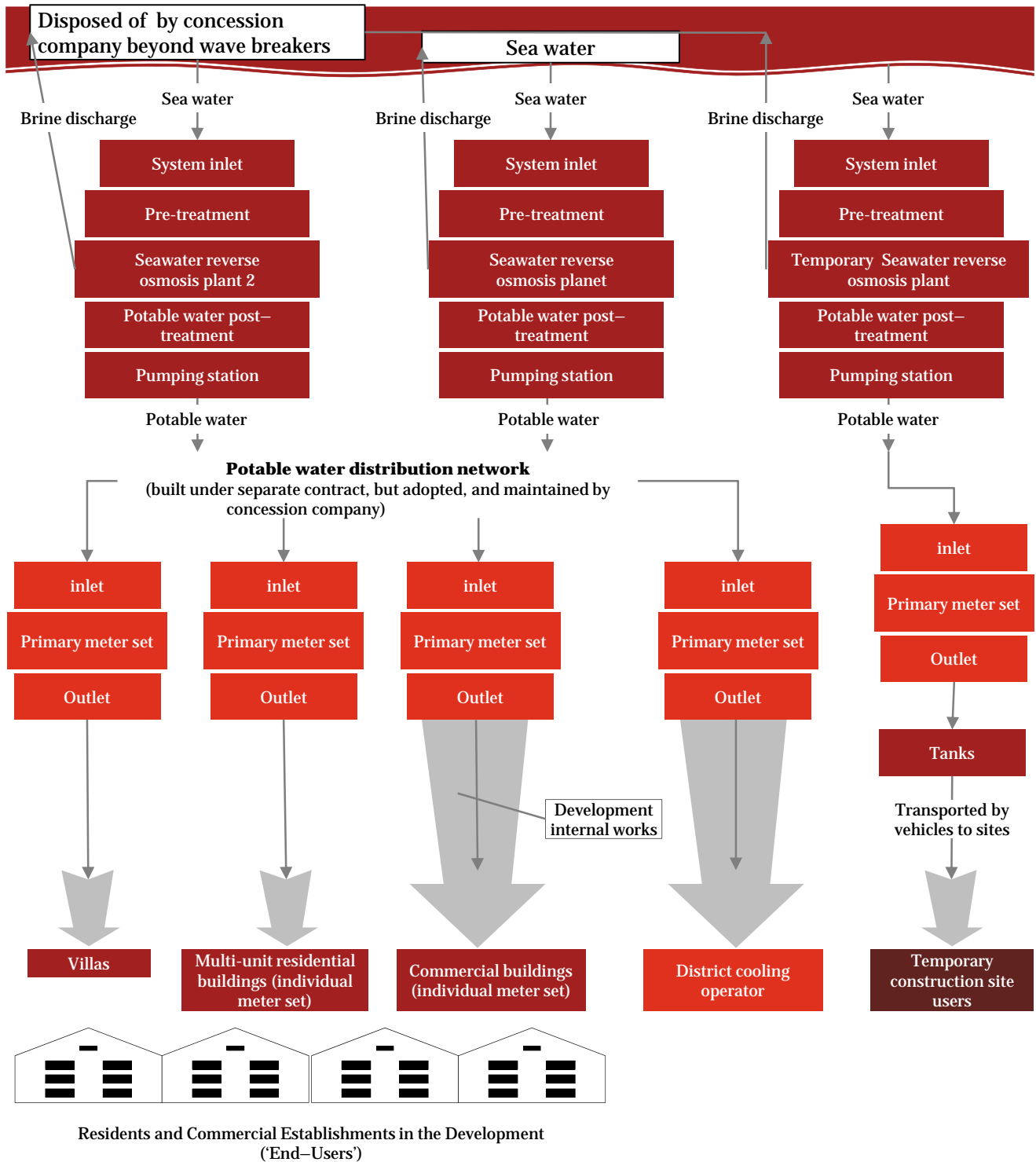
Gas System Concession Agreement – Project Facilities



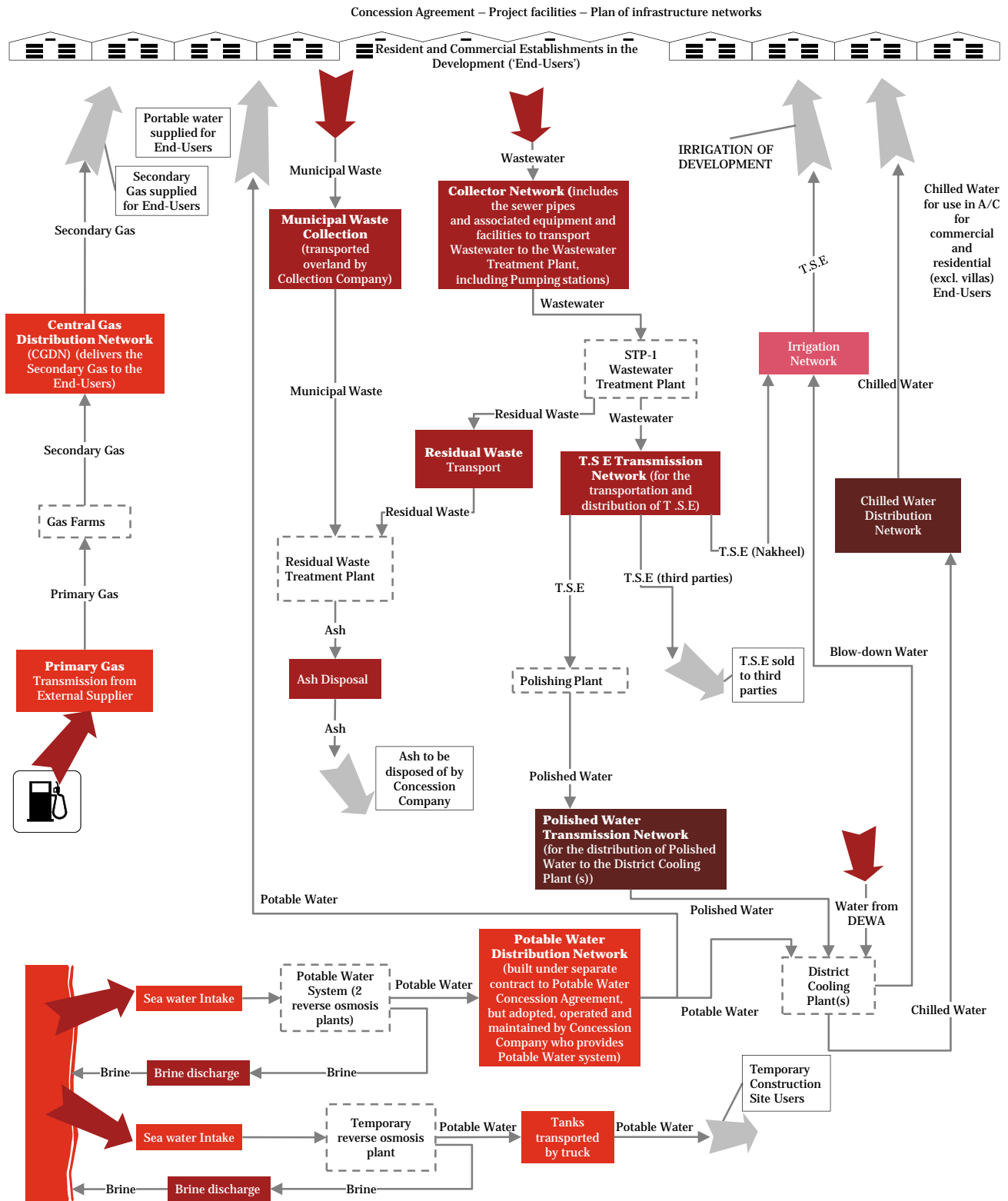
Wastewater Treatment Concession Agreement – Project Facilities



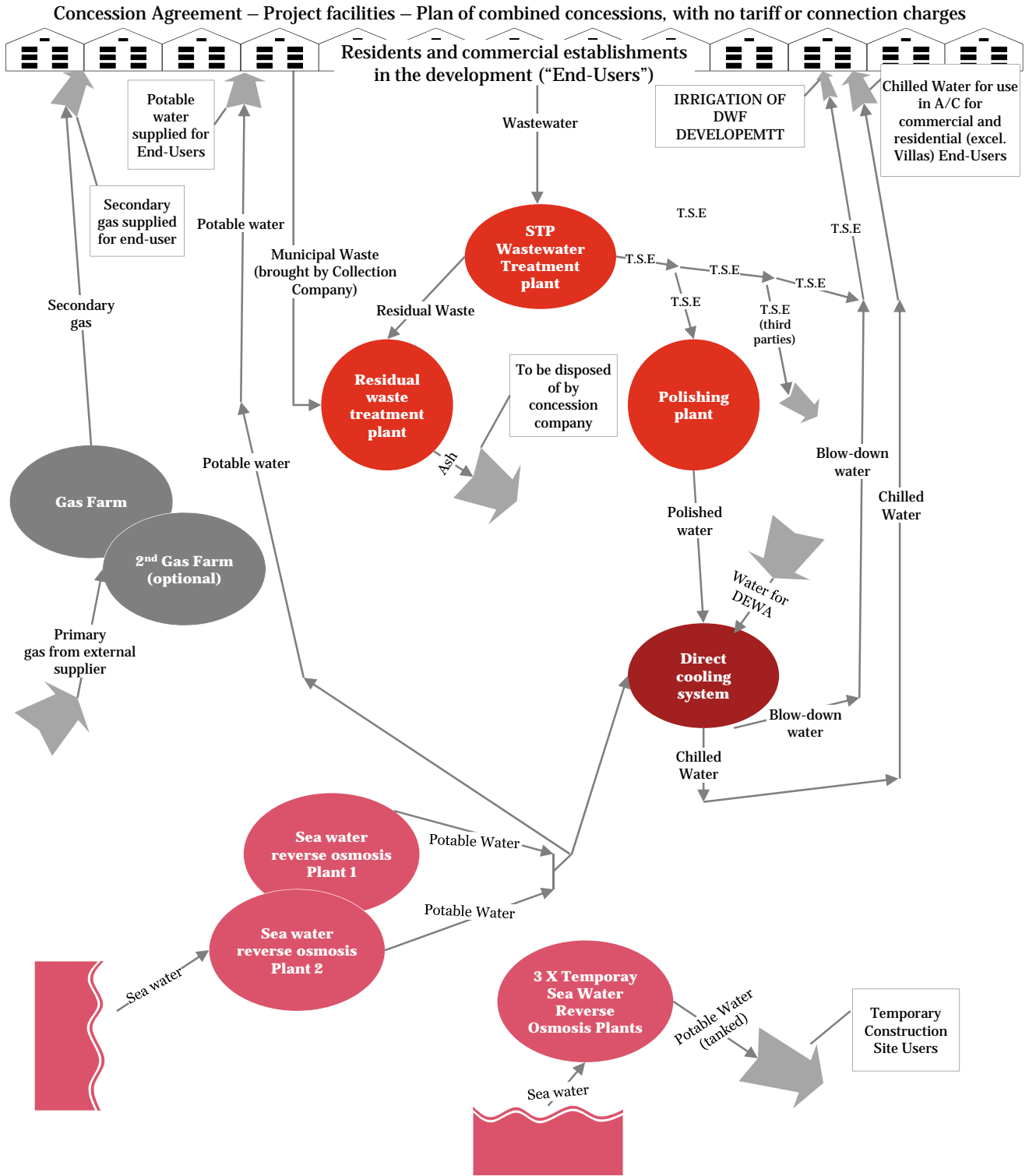
Potable water concession agreement – Project facilities



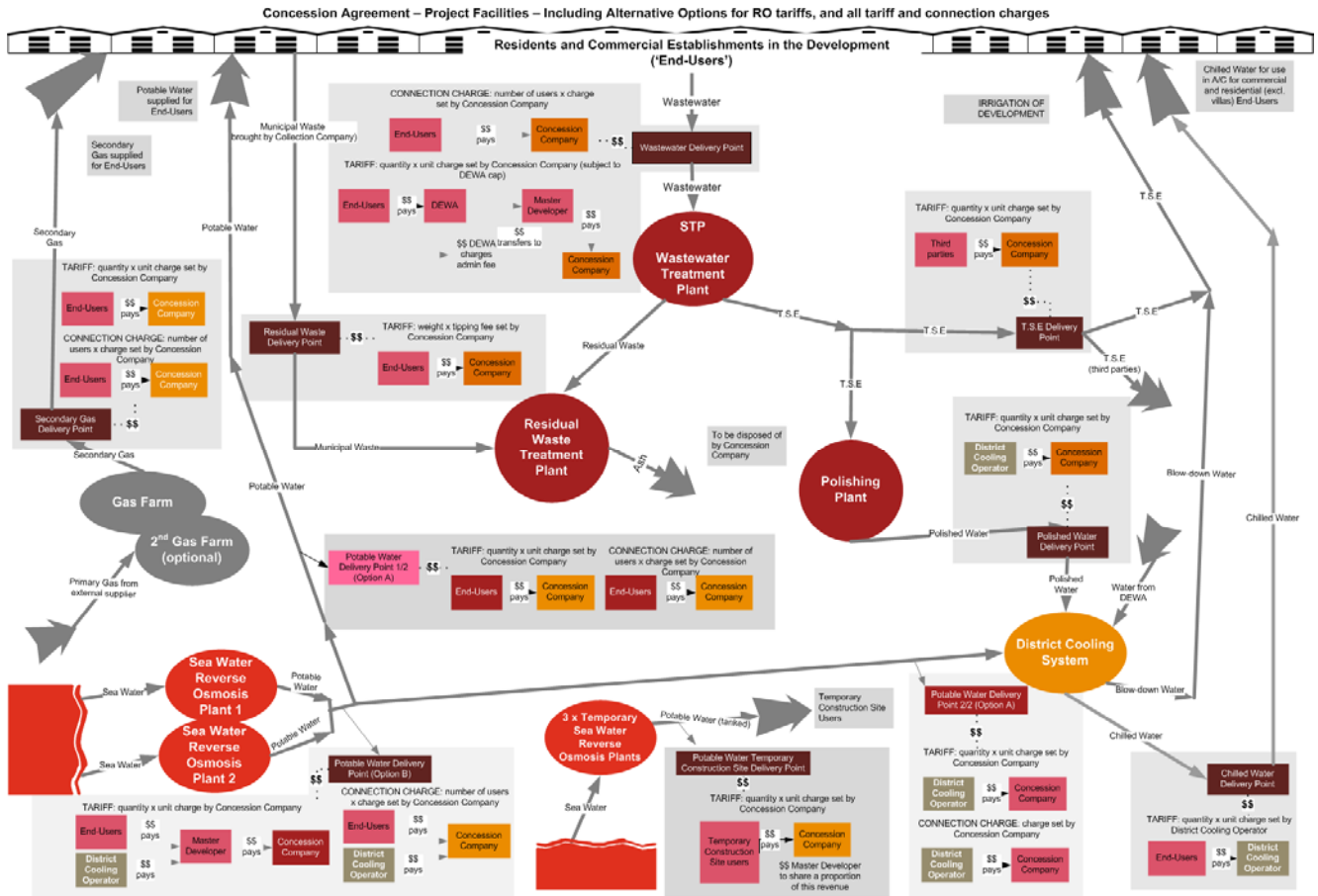
Example stand alone and integrated utility solutions from international projects



Example stand alone and integrated utility solutions from international projects



Example stand alone and integrated utility solutions from international projects



PPPs and Concessions

18 Comparative analysis of key project issues in Australian PPPs

Introduction

This paper compares the treatment of key issues under a number of recent project-financed concessions in Australia. This document incorporates a number of different social and economic concessions including roads and hospitals.

This paper is in the following three parts:

- Part 1 compares the treatment of key issues under a number of recent project-financed concessions in Australia. This document incorporates a number of different social and economic concessions including roads and hospitals.
- Part 2 compares the treatment of key issues under the Australian National PPP Guidelines against the treatment under the UK PFI Guidance. This comparison is significant in light of the fact that the National PPP Guidelines were developed out of the UK PFI Guidance. Both of these documents are heavily consulted by government entities in the drafting and negotiation of Australian concessions to ensure value for money through the optimisation of risk allocation.
- Part 3 summarises termination compensation regimes in a sample of eight benchmarked projects. None of these projects contemplate compensation payments in the event of termination before commencement under a conditions precedent regime.

1. Key issues under recent Australian project-Financed concessions

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
Extension Of Time (EOT)	There is an EOT regime entitling Project Co to extensions to the date for completion.	Project Co is entitled to an EOT to the completion date for a number of causes, including: <ul style="list-style-type: none"> State breach of a project agreement act or omission of the State delay by utility provider in providing infrastructure works, or breach by utility provider of infrastructure works agreement industry wide industrial action State directed modification suspension required by law or court order latent ground conditions contamination change in policy or change in law <i>force majeure</i> (see below) failure by the Government to carry out works or provide services necessary for the 	Project Co is entitled to an EOT to the completion date for the following events: <ul style="list-style-type: none"> a <i>Force Majeure</i> Event (see below) State breach of a project agreement reckless, unlawful or malicious act or omission by the State a Heritage or Native Title Claim Project-specific industrial action fire, flood or explosion (which is not caused by a <i>Force Majeure</i> Event, Project Co or any other Project Co Associate) failure by a Governmental Agency (other than the State) to carry out works or provide services necessary for the implementation of the Project, unless that Governmental Agency, in failing to carry out the relevant works or services, is acting in accordance with or pursuant to its statutory powers, duties, discretions or 	Project Co is entitled to an EOT to the completion date for the following events: <ul style="list-style-type: none"> a <i>Force Majeure</i> Event (see below) State breach of a project agreement certain acts or omissions by the State a Heritage or Native Title Claim Project-specific industrial action a Change in Mandatory Requirements State Modification or Equipment Modification legal proceedings challenging the validity of a state authorisation to the Project fire, flood or explosion (which is not caused by a <i>Force Majeure</i> Event) failure by a Governmental Agency (other than the State) to carry out works or provide services necessary for the implementation of the Project, unless 	Project Co is entitled to an EOT for the completion date for a number of causes, including: <ul style="list-style-type: none"> wrongful act or omission of the State a Government-directed modification <i>force majeure</i> (see below) State breach of a project agreement a discriminatory change in law (see below) a relevant change in law (see below) suspension due to discovery of artefacts or human remains native title application or native title being found to exist uninsurable <i>force majeure</i> event a key approval event (essentially, legal action being taken in respect of a key approval or a 	Project Co is generally entitled to an extension of the date for completion but must notify the State of any delay and comply with a corrective action plan.	There is an EOT regime entitling Project Co to extensions to the date for completion. <p>A condition precedent to the EOT is that the delay was beyond the reasonable control of Project Co and its Associates.</p>

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		<p>Project</p> <ul style="list-style-type: none"> events, not caused by either party, which prevents access to the Site, other than third party access rights or industrial action 	<p>obligations</p> <ul style="list-style-type: none"> blockade or embargo that directly affects the Site; or any event or occurrence outside the control of either party or their Associates, which causes lack of possession at, or access to, the Site, other than industrial action or an event or occurrence arising from third party rights to use or access the Site. <p>Project Co's entitlement is subject to the following conditions precedent:</p> <ul style="list-style-type: none"> Project Co submitting a Change Notice the cause of the delay being beyond the reasonable control of the Project Co Project Co demonstrating to the Independent Reviewer's reasonable satisfaction that it has or will be delayed, and the critical path for the works delayed by an Extension Event Project Co not being instructed to 	<p>that Governmental Agency, in failing to carry out the relevant works or services, is acting in accordance with or pursuant to its statutory powers, duties, discretions or obligations</p> <ul style="list-style-type: none"> blockade or embargo that directly affects the Site; or any event or occurrence outside the control of either party which causes lack of possession at, or access to, the Site, other than industrial action or an event or occurrence arising from third party rights to use or access the Site. Project Co's entitlement is subject to the following conditions precedent: Project Co submitting a Change Notice the cause of the delay being beyond the reasonable control of the Project Co Project Co demonstrating to the Independent Reviewer's 	<p>key approval being changed or revoked, except to the extent caused or contributed to by Project Co)</p> <ul style="list-style-type: none"> a final court decision rendering it impossible for Project Co to undertake all, or substantially all, of the Project termination or unenforceability of the statutory instrument authorising Project Co to enter and carry out works on the construction site. 		

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
			accelerate the works • Project Co otherwise complying with the Programming Requirements	reasonable satisfaction that it has or will be delayed, and the critical path for the works delayed by an Extension Event • Project Co not being instructed to accelerate the works • Project Co otherwise complying with the Programming Requirements			
Delay Liquidated Damages	Liquidated damages payable for late completion of Stage 1 and late completion of Stage 2	Liquidated damages are payable from each day after the original date for commercial acceptance until the date of commercial acceptance.	The Quarterly Service Payments may be abated pursuant to the Abatement Regime if the Project Co fails to provide the services in accordance with the Project deed for the Operating Term	The Quarterly Service Payments may be abated pursuant to the Abatement Regime if the Project Co fails to provide the services in accordance with the Project deed for the Operating Term	The State does not impose delay LDs.	The State does not impose delay LDs. The State does, though, have the right to terminate if Project Co fails to diligently and expeditiously progress construction. To the extent Project Co failed to do so, the State would have both a contractual right, and the benefit of an indemnity, to recover its loss. It is unclear on what basis delay LDs were not imposed under the agreement. The points above may have been a relevant consideration, as may have been difficulties in determining a genuine pre-estimate of loss likely to be suffered by the State for the delay (bearing in mind that amounts which are not a genuine pre-estimate of loss would constitute a penalty and be unenforceable).	The Quarterly Service Payments may be abated if Project Activities do not fully meet or exceed the KPIs or the freeway is not fully available.

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
State-Proposed Variations	<p>The State may at any time issue a Modification Price Request. Modification may also be required by the State in certain circumstances, including where there is a Change in Law or Change in Policy, a change to the type of utility services or medical gases, to remediate contamination or other reasons listed in clause.</p> <p>The modification regime is structured such that:</p> <ul style="list-style-type: none"> the State first notifies Project Co of its proposed modification and issues a price request Project Co must provide a quote for preparing a proposal the State may accept or reject this quote. If it is rejected, the State may suggest an alternative price, require Project Co to resubmit a quote, decide not to proceed or refer the issue to accelerated dispute resolution 	<p>The State may at any time issue a Modification Price Request. Modifications due to Changes in Mandatory Requirements are excluded from Modifications (see notes below).</p> <p>Project Co must propose a quote for the preparation of a Change Notice responding to the Modification Price Request.</p> <p>The State may:</p> <ul style="list-style-type: none"> agree to the proposal, in which case Project Co prepares a Change Notice require Project Co to submit a further price inform Project Co that it does not wish to proceed with the Modification; or direct Project Co to proceed with the preparation of the proposal and either party may refer the determination of the price to an Independent 	<p>The State may at any time issue a Modification Price Request.</p> <p>Project Co must propose a quote for the preparation of a Change Notice responding to the Modification Price Request.</p> <p>The State may:</p> <ul style="list-style-type: none"> agree to the proposal, in which case Project Co prepares a Change Notice require Project Co to submit a further price inform Project Co that it does not wish to proceed with the Modification; or direct Project Co to proceed with the preparation of the proposal and either party may refer the determination of the price to an Independent Expert. <p>If Project Co submits a Change Notice, the State may issue a notice to Project Co to proceed with the Modification or inform Project Co that it does not wish to proceed.</p>	<p>The State may at any time issue a Modification Price Request.</p> <p>Project Co must propose a quote for the preparation of a Change Notice responding to the Modification Price Request.</p> <p>The State may:</p> <ul style="list-style-type: none"> agree to the proposal, in which case Project Co prepares a Change Notice require Project Co to submit a further price inform Project Co that it does not wish to proceed with the Modification; or direct Project Co to proceed with the preparation of the proposal and either party may refer the determination of the price to an Independent Expert. <p>If Project Co submits a Change Notice, the State may issue a notice to Project Co to proceed with the Modification or inform Project Co that it does not wish to proceed.</p>	<p>Broadly similar to North South Bypass Tunnel, but no qualification regarding effect of modification on facility use.</p>	<p>The State may require a modification to the D&C or O&M activities, provided it does not adversely affect the use, patronage or capacity of the toll road, or Project Co's ability to levy tolls.</p> <p>The modification regime is structured such that:</p> <ul style="list-style-type: none"> the State first notifies Project Co of its proposed modification Project Co must provide a proposal setting out various details, including estimates of costs or savings, the basis on which it would be prepared to fund the cost, the impact on the D&C programme (if pre-completion) or the time within which it will be implemented (if after completion) and the effect on Project Co's ability to comply with its other contractual obligations Project Co must price the proposed modification on an open book basis the State may require a tender process for the modification where it is being carried 	<p>The State may issue a Modification Proposal.</p> <p>Project Co must provide a Modification Notice setting out its effect on the project (including cost, timing, funding etc). If accepted, Project Co must carry out the modification. Failing agreement, the terms for carrying out the modification will be determined by dispute resolution.</p> <p>If the State requests a modification after the construction is complete, the State may require Project Co to conduct a tender in relation to the modification requested.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<ul style="list-style-type: none"> if the State has accepted or conditionally accepted Project Co's quote, Project Co must provide a detailed plan for carrying out the State-proposed modification. <p>Where a modification is being imposed on Project Co, it is to be funded by the State (unless otherwise agreed).</p> <p>Project Co may also request modifications.</p>	<p>Expert.</p> <p>If Project Co submits a Change Notice, the State may issue a notice to Project Co to proceed with the Modification or inform Project Co that it does not wish to proceed.</p>				<p>out after completion</p> <ul style="list-style-type: none"> the State may accept Project Co's offer to carry out the modification, or it may withdraw the modification proposal, or it may reject Project Co's offer and have the disputed matters resolved through the dispute resolution process. <p>The State may also direct a modification at any time, in which case it will make a determination of the cost etc (acting reasonably and subject to Project Co's right to refer issues for dispute resolution).</p> <p>Where a modification is being imposed on Project Co, it is to be funded by the State (unless otherwise agreed).</p> <p>Relevant modification costs which may be claimed comprise:</p> <ul style="list-style-type: none"> direct costs resulting from the modification (including increased construction, operating, maintenance and debt finance costs) a reasonable amount on account of 	

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
						<p>overheads and margin for the D&C or O&M Contractor</p> <ul style="list-style-type: none"> • a reasonable equity return component where the modification is funded wholly or partly by new equity • the base case equity return for the period of any delay beyond the scheduled date for completion. <p>If the terms of a modification are agreed, the State will pay the agreed modification costs as follows:</p> <ul style="list-style-type: none"> • where funded by the State – progressively on a monthly basis • where funded by Project Co – as per Project Co's modification proposal. <p>If the terms of a modification are not agreed, the State will pay the modification costs as it reasonably determines, pending determination by the dispute resolution process and subsequent adjustment. These payments will be made progressively on a monthly basis.</p>	

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
Force Majeure	<p>Events</p> <p>A limited (exclusive) list of events:</p> <ul style="list-style-type: none"> lightning, hurricane, cyclone, earthquake, landslide, tsunami, high sea inundation, drought declared as a State of emergency or mudslide act of a public enemy, war (declared or undeclared), riot, insurrection, civil commotion, civil rebellion, revolution, militarily usurped power or other like hostilities, terrorism or act of sabotage fire, explosion or flood not caused or contributed to by Project Co and where all reasonable preventative measures were taken ionising radiation, contamination by radioactivity, nuclear, chemical or biological contamination. <p>The definition</p>	<p>Events</p> <p>A limited (exclusive) list of events which are beyond Project Co's control and comprising:</p> <ul style="list-style-type: none"> lightning, hurricane, cyclones, earthquakes, natural disasters, tsunamis or mudslides civil riot, civil rebellion, terrorism, insurrections military usurped power, act of sabotage or act of public enemy and war (declared or undeclared) or other like hostilities emergency declared as an emergency under the Emergency Management Act 2004 (SA) or public health emergency declared under the Public Environmental Health Act 1987 (SA) ionising radiation or contamination by radioactivity, 	<p>Events</p> <p>A limited (exclusive) list of events which are beyond Project Co's control and comprising:</p> <ul style="list-style-type: none"> lightning, hurricane, cyclones, earthquakes, natural disasters, landslides, tsunamis or mudslides civil riot, civil rebellion, revolution, terrorism, insurrections military usurped power, act of sabotage or act of public enemy and war (declared or undeclared) or other like hostilities ionising radiation or contamination by radioactivity, nuclear, chemical or biological contamination not caused or contributed to by Project Co fire, flood at or transgressing onto the Site (or in the immediate vicinity of the Site which prevents, delays or disrupts access to the Site) or explosion where caused by those events in the above first two dot points, 	<p>Events</p> <p>A limited (exclusive) list of events which are beyond Project Co's control and comprising:</p> <p>lightning, hurricane, cyclones, earthquakes, natural disasters, landslides, tsunamis or mudslides;</p> <ul style="list-style-type: none"> civil riot, civil rebellion, revolution, terrorism, insurrections military usurped power, act of sabotage or act of public enemy and war (declared or undeclared) or other like hostilities ionising radiation or contamination by radioactivity, nuclear, chemical or biological contamination not caused or contributed to by Project Co fire, flood at or transgressing onto the Site (or in the immediate vicinity of the Site which prevents, delays or disrupts access to the Site) or explosion where caused by those events in the above first two dot points, 	<p>Events</p> <p>A limited list of events which are beyond Project Co's control and comprising:</p> <ul style="list-style-type: none"> lightning, cyclones, earthquakes, natural disasters, landslides, tsunamis and mudslides civil riots, rebellions, revolutions, terrorism, insurrections and military and usurped power, act of sabotage, act of public enemy and war (declared or undeclared) fire, flood or explosion caused by the events above ionising radiation, contamination by radioactivity, nuclear, chemical or biological contamination. <p>Relief</p> <ul style="list-style-type: none"> Project Co's obligations are suspended to the extent 	<p>Events</p> <p>A limited (exclusive) list of events before completion which are beyond Project Co's reasonable control and comprising:</p> <ul style="list-style-type: none"> lightening, earthquakes, cyclone, natural disaster, landslide and mudslide explosion, malicious damage, sabotage, riots or terrorist acts once in 50 year floods war, rebellion etc and confiscation by any authority toxic chemical contamination ionising radiation, contamination by radioactivity, nuclear, chemical or biological contamination. <p>After completion, it includes any other material risk not otherwise specifically allocated in the agreement.</p> <p>Relief</p> <ul style="list-style-type: none"> Project Co's obligations are suspended to the extent affected by the <i>force majeure</i>. No financial relief 	<p>Events</p> <p>A limited (exclusive) list of events beyond the reasonable control of Project Co or its associates:</p> <ul style="list-style-type: none"> earthquake, cyclone, natural disaster, landslide, seismic activity and mudslide explosion, malicious damage, sabotage, riots or "terrorist act" a flood expected to occur less frequently than once in every 100 years war, invasion, act of a foreign enemy, hostilities between nations (whether war is declared or not), civil war, rebellion, revolution or military or usurped power, martial law or confiscation by order of any Authority toxic, chemical or biological contamination ionising radiation or contamination by radioactivity from any nuclear waste or from combustion of

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>specifically excludes all forms of industrial action and wet or inclement weather.</p> <p>Relief</p> <ul style="list-style-type: none"> The parties' obligations are suspended to the extent affected by the <i>force majeure</i> event. If the services provided by Project Co are wholly or partially unavailable due to a <i>force majeure</i> event, the State will abate its payment to Project Co in relation to these services. Termination for prolonged <i>force majeure</i> Both parties have rights to terminate for prolonged <i>force majeure</i> (period exceeding 6 months). 	<p>nuclear, chemical or biological contamination not caused or contributed to by Project Co</p> <ul style="list-style-type: none"> fire, flood at or transgressing onto the Site or explosion at the Site caused by any of the above events, not caused or contributed to by Project Co and where all reasonable preventative measures were taken. <p>Relief</p> <ul style="list-style-type: none"> Project Co's obligations are suspended to the extent affected by the FM. Quarterly Services Payment and State Loan Payment payable by the State will be reduced. Termination for prolonged <i>force majeure</i> State can terminate where a <i>Force Majeure</i> event subsists for greater than 180 days. 	<p>and where the Project Co has taken preventative measures to ensure the works can withstand severe weather</p> <ul style="list-style-type: none"> during the Operating Term, Utility Interruption upstream from a Connection Point epidemics or pandemics to the extent that Project Co cannot, in compliance with Law, enter such part of the Site necessary to perform the Works or the Services an emergency declared as a disaster under the Disaster Management Act 2003 (Qld) or a public health emergency declared under the Public Health Act 2005 (Qld) that occurs during the Operating Term, but only to the extent performance of the Services is unlawful, <p>which (either separately or together) directly causes the State or Project Co to be unable to perform all or a material part of its</p>	<p>and where the Project Co has taken preventative measures to ensure the works can withstand severe weather</p> <ul style="list-style-type: none"> Utility Interruption upstream from a Connection Point epidemics or pandemics to the extent that Project Co cannot, in compliance with Law, enter such part of the Site necessary to perform the Works or the Services an emergency declared as a disaster under the Emergency Management Act 1986 (Vic) or a public health emergency declared under the Public Health and Wellbeing Act 2008 (Vic) that occurs during the Operating Term, but only to the extent performance of the Services is unlawful, <p>which (either separately or together) directly causes the State or Project Co to be unable to perform all or a material part of its obligations (other than</p>	<p>affected by the <i>force majeure</i>.</p> <ul style="list-style-type: none"> No financial relief provided by the State. However, there are minimum debt service protection provisions where an uninsurable <i>force majeure</i> event has occurred. <p>Termination for prolonged <i>force majeure</i></p> <p>Both parties have rights to terminate for prolonged <i>force majeure</i> (12 months). Project Co's right is qualified where it is able to recover under relevant insurance.</p> <p>Uninsurable <i>force majeure</i></p> <p>The State may terminate for an uninsurable <i>force majeure</i> event.</p>	<p>provided by the State (including by way of extension of the concession period).</p> <p>Termination for prolonged <i>force majeure</i></p> <p>None.</p> <p>Uninsurable <i>force majeure</i></p> <p>The State (only) may terminate if an uninsurable <i>force majeure</i> event occurs.</p>	<p>nuclear fuel.</p> <p>Relief</p> <ul style="list-style-type: none"> Project Co's obligations are suspended to the extent affected by the <i>force majeure</i> event. State will continue to pay the Quarterly Service Payment and an amount calculated in accordance with the Change Compensation Principles. Termination Payment if agreement is terminated for prolonged <i>force majeure</i>. Termination for prolonged <i>force majeure</i> Both parties have rights to terminate for prolonged <i>force majeure</i> (period exceeding 6 months). Project Co cannot terminate for prolonged <i>force majeure</i> events which are insured. In limited circumstances, Project Co may be entitled to compensation for Project Debt for

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
			<p>obligations (other than an obligation to pay money), where the event or its consequences could not have been prevented or its consequences were not otherwise caused or contributed to by the failure by Project Co to comply with the Quality Standards or other obligations.</p> <p>Relief</p> <ul style="list-style-type: none"> Parties obligations are suspended to the extent affected by the FM. Quarterly Services Payment will be abated in accordance with the Abatement regime, but any application of this regime will be ignored for the purpose of assessing an Event of Default so long as the Project Co complies with its obligations regarding actions to be taken in an FM event Project Co may apply for payment under certain circumstances for minimum amounts necessary to pay scheduled principal repayments and interest on debt; and Quarterly Services 	<p>an obligation to pay money), where the event or its consequences could not have been prevented by the exercise of a standard of care and diligence consistent with that of a prudent person undertaking the obligations under this Agreement to comply with the Quality Standards or its other obligations.</p> <p>Relief</p> <ul style="list-style-type: none"> Parties obligations are suspended to the extent affected by the FM. Quarterly Services Payment will be abated in accordance with the Abatement regime, but any application of this regime will be ignored for the purpose of assessing an Event of Default so long as the Project Co complies with its obligations regarding actions to be taken in an FM event. Project Co may apply for payment under certain circumstances for minimum amounts necessary to pay scheduled principal repayments and 			<p>uninsurable <i>force majeure</i>.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
			<p>Payments for unaffected services which the Project Co continues to deliver.</p> <ul style="list-style-type: none"> Termination for prolonged <i>force majeure</i> by either party 	<p>interest on debt, fixed costs incurred by the FM subContractor; Quarterly Services Payments for unaffected services; and costs incurred by Project Co in delivering an alternative method or work around</p> <ul style="list-style-type: none"> Termination for prolonged <i>force majeure</i> by either party 			
Change In Law	<p>Project Co entitled to compensation for a Change in Law or a Change in Policy determined by offsetting adverse financial effects (which increase the costs of Project Co) with the beneficial financial effects (which decrease the cost of Project Co).</p> <p>If a Change in Law or Policy specifically affects the project:</p> <ul style="list-style-type: none"> the State will compensate Project Co for 100% of the net adverse financial effect the State will be entitled to 100% of the net beneficial financial effect. <p>If a change in law or policy does NOT</p>	<p>Project Co is entitled to compensation of its net costs, and must pay to the State any net savings, for Changes in Law and Changes in Policy.</p> <p>A Change in Law is a change in an existing law, making of a new law or change in the way a law is applied or interpreted, which has a material effect on any of the works, services or other obligations of Project Co.</p> <p>A Change in Policy means a new health policy or quality standard or change in health policy or quality standard, which has a material effect on any of the works, services or</p>	<p>Project Co is entitled to compensation of its net costs, and must pay to the State any net savings, for a Change in Mandatory Requirements.</p> <p>It is a condition precedent to Project Co's entitlement to claim compensation that it has notified the State Delegate within 5 business days of becoming aware of any actual or impending change.</p> <p>A Change in Mandatory Requirement is defined to mean the following events:</p> <ul style="list-style-type: none"> Change in Law: change in or repeal of existing law; enactment or making of a new law; or change in the way 	<p>Project Co is entitled to compensation of its net costs, and must pay to the State any net savings, for a Change in Mandatory Requirements.</p> <p>It is a condition precedent to Project Co's entitlement to claim compensation that it has notified the State Delegate within 5 business days of becoming aware of any actual or impending change.</p> <p>A Change in Mandatory Requirement is defined to mean the following events:</p> <ul style="list-style-type: none"> Change in Law: change in or repeal of existing law; enactment or making of a new law; or change in 	<p>Project Co is entitled to compensation for discriminatory changes in State law and for 'Relevant Changes in Law'.</p> <p>A discriminatory change in law is a change in law which:</p> <ul style="list-style-type: none"> is Victorian law specifically and only affects: <ul style="list-style-type: none"> the project the project together with other desalination plants in Victoria Project Co, but only in its capacity as the entity contracting to 	<p>Generally, the State is liable for the consequences of, and has no claim against the Authority in respect of, changes in law.</p> <p>There is an exception for a discriminatory change in Queensland law ie a change that specifically and only affects the project or has a direct effect on the project together with other privately owned and operated toll roads in Queensland. In these circumstances, the material adverse effect regime applies – the parties must negotiate to agree on a method of redress (see below).</p>	<p>Project Co entitled to financial relief for a general change in law or a project specific change in law which increases the costs of performing the O&M Activities.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>specifically affect the project:</p> <ul style="list-style-type: none"> the State will compensate Project Co for 95% of the net adverse financial effect the State will be entitled to 95% of the net beneficial financial effect. 	<p>other obligations of Project Co.</p>	<p>a law is applied as a result of precedent</p> <ul style="list-style-type: none"> Change in Policy: generally, a new policy or quality standard with which the Project Co is legally obliged to comply and which has/would have a material effect on the works and performance of obligations of the Project Co <p>General Change in Law</p> <p>A general change in law is</p> <ul style="list-style-type: none"> where there is a change in policy after the date of the project deed where there is a change in law after the date of commercial acceptance of the first of the stages which results in capital costs or savings where there is a change in law after the date of the deed which results in operational costs or savings <p>The Project Co is entitled to compensation of its net costs and must pay the State any net saving, in accordance with</p>	<p>the way a law is applied as a result of precedent</p> <ul style="list-style-type: none"> Change in Policy: generally, a new policy or quality standard with which the Project Co is legally obliged to comply and which has/would have a material effect on the works and performance of obligations of the Project Co <p>General Change in Law</p> <p>A general change in law is</p> <ul style="list-style-type: none"> where there is a change in policy after the date of the project deed where there is a change in law after the date of commercial acceptance of the first of the stages which results in capital costs or savings where there is a change in law after the date of the deed which results in operational costs or savings <p>The Project Co is entitled to compensation of its net costs and must pay the</p>	<p>implement the project; or</p> <ul style="list-style-type: none"> the Project together with any other PPP projects in Victoria. <p>The definition of a Relevant Change in Law is broader and incorporates any changes in State or Commonwealth law, other than certain specific exclusions and other than changes published in a gazette prior to contract signing in substantially the same form as the change is made after contract signing. The term includes changes resulting from a change in carbon emissions or renewable energy laws (other than by the implementation of a scheme substantially as contained in the Carbon Pollution Reduction Scheme Bills introduced into Parliament in July 2009).</p> <p>The State bears an undisclosed share of the cost of a discriminatory</p>		

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
			<p>certain thresholds: 0% for aggregate capital amount of up to \$750,000 and aggregate operating amount of up to \$100,000; 50% where those amounts are between \$750,000-\$2 million and \$100,000-\$250,000 respectively; and 100% where those amounts are over \$2 million and \$250,000 respectively.</p> <p>Project Specific Change in Law</p> <p>A Project Specific Change in Law expressly and exclusively relates to the project, facility, works, site, or the Project Co in its capacity as the entity undertaking the works, and the Project Co and other entities undertaking projects under the Queensland Government's PPP and Value for Money Framework or the National PPP Guidelines</p> <p>The Project Co is entitled to compensation of 100% of its net costs and must pay the State 100% of the net savings arising, where both are as a consequence of the Project Specific Change in Law</p>	<p>State any net saving, in accordance with certain thresholds: 0% for aggregate capital amount of up to \$200,000 and aggregate operating amount of up to \$50,000; 50% where those amounts are between \$200,000-\$500,000 and \$50,000-\$100,000 respectively; and 100% where those amounts are over \$500,000 and \$100,000 respectively.</p> <p>Project Specific Change in Law</p> <p>A Project Specific Change in Law expressly and exclusively relates to the project, facility, works, site, or the Project Co in its capacity as the entity undertaking the works, and the Project Co and other entities undertaking projects under the Partnerships Victoria</p> <p>The Project Co is entitled to compensation of 100% of its net costs and must pay the State 100% of the net savings arising, where both are as a consequence of the Project Specific Change in Law</p>	<p>change in law.</p> <p>The State bears an undisclosed share of the cost of a relevant change in law.</p>		

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
Material Adverse Effect (MAE) Regime	<p>MAE defined to mean a material adverse effect on:</p> <ul style="list-style-type: none"> the ability of Project Co to perform and observe its obligations under any project document the rights of the State under any Project Document or the ability or capacity of the State to exercise its rights or perform its obligations under a project document; or the performance of, or the cost of delivering, the works. <p>Project Co represents and warrants that there are no proceedings or agreements binding on Project Co or its assets which would have a MAE.</p>	<p>Project Co is entitled to compensation and performance relief for compensable intervening events, which include:</p> <ul style="list-style-type: none"> State breach loss to Project Co caused by reckless acts of the State suspension or variation required by Law or court order in respect of heritage or native title claim project specific industrial action industry wide industrial action outage to the ICT Network for a minimum of 2 hours 3 or more outages of the ICT Network of more than 5 minutes over a 24 hour period. 	<p>MAE is defined to mean events which a material adverse effect on:</p> <ul style="list-style-type: none"> the ability of Project Co to perform and observe its obligations under any Project Document the rights of the State or any State Associate under any Project Document, or the ability or capacity of the State or a State Associate to exercise its rights or perform its obligations under a Project Document; or the performance of, or the cost of undertaking, any Functions. <p>Project Co represents and warrants that there are no proceedings or agreements binding on Project Co or its assets which would have a MAE</p>	<p>MAE is defined to mean events which a material adverse effect on:</p> <ul style="list-style-type: none"> the ability of a Project Entity to perform and observe its future obligations under any Project Document the rights of the State or any State Associate under any Project Document, or the ability or capacity of the State or a State Associate to exercise its rights or perform its obligations under a Project Document; or the performance of, or the cost of undertaking, any Functions. <p>Project Co represents and warrants that there are no proceedings or agreements binding on Project Co or its assets which would have a MAE</p>	<p>Project Co is entitled to compensation and performance relief for intervening events, which include:</p> <ul style="list-style-type: none"> State breach discriminatory change in law relevant change in law uninsurable <i>force majeure</i> events key approval events (see above). 	<p>Events which have a material adverse effect on:</p> <ul style="list-style-type: none"> Project Co's ability to repay the Financiers substantially in accordance with the financing documents; or the equity return which Project Co is expected to generate during the concession, <p>entitle Project Co to enter negotiations with the State with a view to enabling Project Co to:</p> <ul style="list-style-type: none"> repay the Financiers interest and principal amortisation payments in accordance with the financing documents give equity investors a return equal to the lower of the return they would have earned had the MAE event not occurred and the base case equity return. <p>MAE events include:</p> <ul style="list-style-type: none"> the closure of principal road connections a competing tunnel the grant of the 	<p>MAE is not defined. However Project Co represents and warrants to the benefit of the State that there are no current, pending or threatened proceedings of any kind which would have a MAE on Project Co's business assets or financial condition.</p> <p>If:</p> <ul style="list-style-type: none"> Project Co fails to commence or expeditiously progress the construction of the project this failure has a material adverse effect on Project Co's ability to achieve completion Project Co fails to comply with the remedy program for this default, <p>the State may terminate the agreement by giving a 20 day notice.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
						<p>relevant leases (following completion) on terms materially different to those in the schedule</p> <ul style="list-style-type: none"> discriminatory changes in law the issue of a court order for work to stop because of a native title claim or challenge to planning approval uninsurable <i>force majeure</i> events. <p>State contribution is a last resort. Methods to address the MAE event include varying the project agreement or concession period, varying financial contributions or varying the toll.</p>	
<p>Step Change In Technology</p>	<p>During the D&C phase, the State (acting reasonably) may an alternative item of plant or equipment if:</p> <ul style="list-style-type: none"> an alternative item would deliver a substantially lower Whole of Life Cost an alternative item will substantially reduce the Operator's operating costs, the volume or energy consumption or 	<p>Project Co must delay the timing for the final selection of items marked as having 'high technical obsolescence risk' to a time as late as reasonably possible (without delaying Completion) to ensure that Project Co has procured the most technically up to date items.</p> <p>During the operational phase, if Project Co is required</p>	<p>During the Operating Term the Project Co must identify ways in which it can reduce costs as a result of, among other things, improved technology.</p> <p>If the Project Co seeks to implement improved technology, it must proposed a Project Co Modification to the State.</p> <p>The State may reject the Project Co Modification request, consent to the request and issue a</p>	<p>During the Operating Term the Project Co must identify ways in which it can reduce costs as a result of, among other things, improved technology.</p> <p>If the Project Co seeks to implement improved technology, it must proposed a Project Co Modification to the State.</p> <p>The State may reject the Project Co Modification request, consent to the request and issue a</p>	<p>The State may direct the implementation of technological improvements (ie advancements or improvements beyond those required pursuant to Project Co's obligation to comply with best O&M practice).</p> <p>Cost savings (including anticipated profit margins) resulting from certain types of technological</p>	<p>100% of cost savings are passed through to the State.</p> <p>During the D&C phase, the savings can be set-off against any modification costs payable by the State, or paid progressively on a monthly basis. During the O&M phase, the payment regime is as agreed or, failing agreement, as determined by arbitration or expert determination.</p>	<p>During the O&M phase, Project Co is required to promptly implement and respond to advancements in technology before infrastructure must be replaced.</p>

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>greenhouse gas emissions</p> <ul style="list-style-type: none"> the procurement and installation of the alternative item will not delay or adversely affect the project and the alternative item is fit for purpose. <p>Project Co must install this item within 10 days of the request and cannot make any claim against the State for this change.</p> <p>Any cost savings will be shared between Project Co and the State.</p>	<p>to replace an item of equipment, it must use the same or higher level of quality which is as technically up to date as that which would be used in accordance the Best Operational Practices.</p>	<p>Modification Order, or request further information.</p> <p>If the State consents to a Project Co Modification the Project Co must carry out the works at its own cost and is not entitled to make any Claim in respect of that work.</p>	<p>Modification Order, or request further information.</p> <p>If the State consents to a Project Co Modification the Project Co must carry out the works at its own cost and is not entitled to make any Claim in respect of that work.</p>	<p>improvements are shared on a sliding scale.</p>		
Liability And Indemnities	<p>Project Co indemnifies the State from all claims and liabilities (excluding indirect and consequential loss) in respect of third party liability and breach of the Project Documents.</p> <p>Project Co will not be required to indemnify the State in relation to third party liability or breaches of the project agreement by Project Co if they result from:</p> <ul style="list-style-type: none"> a fraudulent, negligent, unlawful or wilful act or omission of the State a breach of a Project Document 	<p>Project Co indemnifies the State against any claim, liability or loss from Project Co's breach of any project document.</p> <p>Project Co indemnifies the State against any claim, liability or loss arising from specific events, including:</p> <ul style="list-style-type: none"> contamination caused by Project Co damage to external infrastructure; or any personal death or injury or damage to third 	<p>Project Co indemnifies the State against any claim, liability or loss arising from:</p> <ul style="list-style-type: none"> Project Co's breach of any project document, or any negligent unlawful act or omission, or wilful misconduct of the Project Co or its affiliates non-compliance with Work Health and Safety legislation failure of the Project Co to satisfy the Conditions precedent reliance by the Project Co on Information 	<p>Project Co indemnifies the State against any claim, liability or loss arising from:</p> <ul style="list-style-type: none"> Project Co's breach or unlawful repudiation of any project document reliance by the Project Co on Information Documents contamination caused by Project Co loss, injury, damage suffered by any User after the Site Handover Date suffered in connection with contamination damage to external 	<p>Project Co indemnifies the State against any liability or loss arising from Project Co breaching any project document (except to the extent that the breach is due to wilful default by the State).</p> <p>Project Co also indemnifies the State against any liability or loss arising from:</p> <ul style="list-style-type: none"> any property damage any personal injury or death third party 	<p>Project Co indemnifies the State against any liability or loss arising from:</p> <ul style="list-style-type: none"> breach of a project agreement property damage personal injury or death third party economic loss (other than that arising from the State's decision to proceed with the project and the location or existence of the toll road) third party intellectual property claims 	<p>Project Co indemnifies the State against any liability or loss arising from any breach of the project deed caused by Project Co.</p> <p>Project Co indemnifies the State against any claim or loss (including indirect and consequential loss) arising from:</p> <ul style="list-style-type: none"> damage, loss or destruction of property personal injury, disease or death third party's pure economic loss.

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>by the State</p> <ul style="list-style-type: none"> • a <i>force majeure</i> event, compensable extension event or intervening event • contamination for which Project Co is not responsible. 	<p>party property.</p> <p>Project Co's liability under the indemnities is excluded or reduced if the events were contributed to by fraud of the State, breach of any State Agreement by the State or direction by a State delegate.</p>	<p>Documents</p> <ul style="list-style-type: none"> • claims by third parties in IP • contamination caused by Project Co • damage to external infrastructure • Project Co's failure to pay subContractors monies due and payable • any personal death or injury or damage to third party property. <p>Project Co's liability under the indemnities is excluded or reduced if the events were contributed to by fraud of the State; <i>Force Majeure</i> Events; Extension Events; contamination not caused by Project Co; and breach of any State Agreement by the State or direction by a State delegate</p> <p>Except where the State elects to terminate as a result of a Default Termination Event, the Project Co's liability is capped at \$40 million dollars</p>	<p>infrastructure</p> <ul style="list-style-type: none"> • Project Co's failure to pay subContractors monies due and payable • any personal death or injury or damage to third party property. <p>Project Co's liability under the indemnities is excluded or reduced if the events were contributed to by fraud of the State; <i>Force Majeure</i> Events; Extension Events; contamination which the Project Co is not required to remediate or not caused by Project Co; and breach of any State Agreement by the State or direction by a State delegate</p>	<p>economic loss</p> <ul style="list-style-type: none"> • the provision or use of or reliance on information disclosed by the State • acts or omissions of Project Co's subContractors • the exercise of the State's step-in rights, except to the extent it acts in a reckless or grossly negligent way or in bad faith. <p>Broadly, Project Co's liability under the indemnities will be reduced to the extent that the liability or loss is attributable to the State or compliance with the project documents.</p> <p>There is a reciprocal exclusion of liability for consequential loss, other than that arising from:</p> <ul style="list-style-type: none"> • death or personal injury • criminal or fraudulent acts by Project Co • wilful misconduct by Project Co 	<ul style="list-style-type: none"> • provision or use of or reliance on information disclosed by the State. <p>Broadly, Project Co's liability under the indemnities will be reduced to the extent that the liability or loss is attributable to the State's wrongful acts or omissions.</p> <p>Project Co's liability for consequential loss is not limited or excluded.</p>	

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
					<ul style="list-style-type: none"> third party claims in respect of water quality matters which cannot be excluded by law. <p>Project Co provides the State with a broad release of liability.</p>		
Security	<p>Project Co must provide a \$5 million Conditions Precedent Bond (CPB) on the date of the Agreement.</p> <p>If Financial Close occurs on or before the Conditions Precedent Deadline, the State will return the CPB on Financial Close, subject to any entitlement to make a demand under the CPB, eg if Project Co breaches a condition of the Agreement which takes immediate effect or seeks to make an amendment to the Project Documents where were not specifically identified in writing and agreed to by the State by the date of the Agreement, or fails to satisfy its Conditions Precedent by the deadline.</p>	<p>Project Co must provide a:</p> <ul style="list-style-type: none"> construction bond for the period commencing no later than Financial Close and in place until at least 3 months after the original date for commercial acceptance post completion bond for the period expiring no earlier than 12 months after the date of commercial acceptance. <p>The Construction Bond must be returned once Project Co has procured the post completion bond, and the post completion bond must be returned 12 months after the Date of Commercial</p>	<p>Project Co must provide a:</p> <ul style="list-style-type: none"> construction bond of not less than 5% of the Contract Price for each Stage, commencing no later than Financial Close and in place until at least 3 months after the original date for commercial acceptance of that Stage defects liability bond of not less than 2.5% of the Contract Price for the period expiring no earlier than 12 months after the date of commercial acceptance. <p>The Construction Bond must be returned once Project Co has procured the defects liability bond</p>	<p>Project Co must provide a construction bond for the following amounts at the following stages:</p> <ul style="list-style-type: none"> prior to Commercial Acceptance, up to an amount no greater than 5% of the Stage 1 Construction Contract Price or the Stage 2 Construction Contract Price for the 12 month period commencing on the Date of Stage 1 Commercial Acceptance, up to an amount no greater than 2.5% of the Stage 1 Construction Contract Price for the 12 month period commencing on the Date of Stage 2 Commercial Acceptance, up to an amount no greater than 2.5% of the Stage 2 Construction Contract Price. 	<p>Project Co may provide bonds to secure its obligations with respect to handover and final abatement payments (as an alternative to instead setting aside amounts covering those obligations).</p> <p>Project Co does not provide direct D&C or O&M bonds to the State. The State, however, may require direct agreements with the counterparties to material contracts (eg the D&C and O&M Contractors).</p>	<p>Project Co must provide a \$5m bond for the D&C phase of the project.</p> <p>The State may require performance bonds of up to \$20m if Project Co does not satisfactorily operate the tunnel.</p> <p>In respect to handover of the toll road, Project Co may either provide a handover bond (to be returned within 12 months after handover) having a face value equal to the estimated cost of the works, or progressively deposit into an escrow account revenue (after expenses) from the last 3 years of the concession period until the amount deposited equals the estimated cost of the works. The State may make a demand under a bond at any time, and use the proceeds to reimburse it for any loss, and in payment of any other moneys owing by</p>	<p>Project Co must provide to the State:</p> <ul style="list-style-type: none"> a condition precedent bond before financial close a handover bond which is equal to the total estimate of the works. <p>Condition precedent bond (CPB)</p> <p>The State will return the CPB to Project Co within 20 days of financial close, subject to the State's right to make a demand if Project Co fails to satisfy a condition precedent or seeks to make an amendment to the project deed which is not agreed to by the State.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		<p>Acceptance or if the defects liability period has been extended, 3 months after the extended defects liability period expires.</p>				Project Co.	
<p>Change Of Control And Assignment</p>	<p>Assignment/ Transfer</p> <p>Project Co must obtain the prior approval of the State before it can assign or transfer any of its rights, title or interest under the project documents. The State cannot unreasonably withhold its consent and Project Co cannot assign parts of its rights, title or interest.</p> <p>Prior approval of Project Co is required to any dealing by the State with its interest unless the assignee is an agent of the Crown in the right of Victoria.</p> <p>Change in control</p> <p>The State's prior consent is required to any change in control of Project Co. However, the State must not unreasonably withhold its consent. The State may withhold its consent if:</p> <ul style="list-style-type: none"> the change in control occurs within 2 years of 	<p>Assignment/ Transfer</p> <p>Project Co may not assign or transfer any rights or interest under any Project Document without the prior written consent of the State. The State cannot unreasonably withhold its consent if Project Co demonstrates certain criteria, including:</p> <ul style="list-style-type: none"> the assignee or transferee has the financial and technical capacity the assignment or transfer is not against the public interest, the assignment or transfer will not have material adverse effect on the rights of the State the assignment adversely affect the State's rights under the Project Documents. 	<p>Assignment/ Transfer</p> <p>The State may assign or transfer or otherwise dispose of any of its rights, title or interest in or under any Project Document without the consent of Project Co.</p> <p>Project Co may not assign or transfer any rights or interest under any Project Document without the prior written consent of the State. The State cannot unreasonably withhold its consent if Project Co demonstrates certain criteria, including:</p> <ul style="list-style-type: none"> the assignee or transferee has the financial and technical capacity the assignment or transfer is not against the public interest, the assignment or transfer will not have material adverse effect on the rights of the State the assignment adversely affect the 	<p>Assignment/ Transfer</p> <p>Project Co may not assign or transfer any rights or interest under any Project Document without the prior written consent of the State. The State cannot unreasonably withhold its consent if Project Co demonstrates certain criteria, including:</p> <ul style="list-style-type: none"> the assignee is solvent and reputable and will not be appointed prior to the second anniversary of the Operational Commencement Date the Change in Control is to take effect prior to the second anniversary of the Operational Commencement date there is no conflict between the State's and the assignee's interests the assignee or transferee has the financial and 	<p>Assignment/ Transfer</p> <p>As for the National PPP Guidelines where Project Co wishes to deal with its rights or interest.</p> <p>Prior approval of Project Co is required to any dealing by the State, except for any assignment of rights to receive revenue.</p> <p>Change in control</p> <p>There is a prohibition on changes in control of Project Co and upstream parties without the State's prior consent, with carve-outs for certain matters.</p>	<p>Assignment/ Transfer</p> <p>Except as provided in the financier's direct agreement and State deed of charge, the State's prior approval is required to any dealing by Project Co with its interest or obligations under the project agreement. State approval must not be unreasonably withheld.</p> <p>Prior approval of Project Co is required to any dealing by the State with its interest, except for any assignment of rights to receive revenue.</p> <p>Change in control</p> <p>A change in control of Project Co (or any holding company) is deemed to be an assignment. There is a limited carve-out where the change in control results from a stock exchange listing.</p>	<p>Assignment/ Transfer</p> <p>Except as provided in the financier's direct agreement and State deed of charge, the State's prior approval is required to any dealing by Project Co with its interest or obligations, including change in control.</p> <p>However, the State may only withhold its consent if the acquirer is not solvent or reputable, has a conflict of interest with the State or the change would be contrary to public interest or have adverse impacts.</p> <p>Prior approval of Project Co is required to any dealing by the State with its interest.</p>

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>the commencement date</p> <ul style="list-style-type: none"> the acquirer is not solvent or reputable the acquirer has a conflict of interest with the State the change would increase the level of risk or liabilities to the State; or the change would be contrary to public interest or have adverse impacts. 	<p>Change in control</p> <p>The State's consent is required for a change of control, and may only be withheld if:</p> <ul style="list-style-type: none"> the State has not been provided all required information the State is of the reasonable opinion that the transferee is not of sufficient financial standing the State does not consider it appropriate to enter into commercial relations with the transferee it will create a conflict of interest the proposed change is against public interest the transferee does not have sufficient financial, managerial and technical capacity it will lead to a material adverse effect; or it will increase the level of risk or liabilities of 	<p>State's rights under the Project Documents.</p> <p>Change in control</p> <p>The State's consent is required for a change of control, but it will only be reasonable for the State to withhold consent if the State has not been provided all required information, and the State is of the reasonable opinion that:</p> <ul style="list-style-type: none"> the controller is not solvent or reputable the Change in Control is to take effect prior to the second anniversary of the Operational Commencement date there is a conflict between the State's and the Controller's interests the Controller does not have the level of financial, managerial and technical capacity of the person or Entity it is replacing or from whom it is taking Control or otherwise to deliver the Project; or the proposed change is against public interest, could lead to the occurrence of a Probity Event, 	<p>technical capacity</p> <ul style="list-style-type: none"> the assignment or transfer is not against the public interest, the proposed assignment could not lead to the occurrence of a Probity Event, or would have a Material Adverse Effect or would increase the level of risk or liabilities of the State the assignment or transfer will not have material adverse effect on the rights of the State the assignment adversely affect the State's rights under the Project Documents. <p>Change in control</p> <p>The State's consent is required for a change of control, but it will only be reasonable for the State to withhold consent if the State has not been provided all required information, and the State is of the reasonable opinion that:</p> <ul style="list-style-type: none"> the controller is not solvent or reputable the Change in Control is to take effect prior to the second anniversary 			

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		the State.	would have a Material Adverse Effect or would increase the level of risk or liabilities of the State	of the Operational Commencement date <ul style="list-style-type: none"> there is a conflict between the State's and the Controller's interests the Controller does not have the level of financial, managerial and technical capacity of the person or Entity it is replacing or from whom it is taking Control or otherwise to deliver the Project; or the proposed change is against public interest, could lead to the occurrence of a Probity Event, would have a Material Adverse Effect or would increase the level of risk or liabilities of the State 			
Refinancing	State consent is required for a refinancing, not to be unreasonably withheld where certain conditions are satisfied, such as the refinancing does not adversely affect the State position or it is not in accordance with market practice.	State consent is required for refinancing. The State may only withhold consent where the refinancing increases or adversely changes the liabilities or risk profile of the State, or the refinancing as a whole is materially more onerous or disadvantageous to	State consent is required for refinancing. The State may only withhold consent where the refinancing increases or adversely changes the liabilities or risk profile of the State, or the refinancing as a whole is materially more onerous or disadvantageous to Project Co. The State is entitled to 50% of any gains from	State consent is required for refinancing. The State may only withhold consent where the refinancing increases or adversely changes the liabilities or risk profile of the State, or the refinancing as a whole is materially more onerous or disadvantageous to Project Co. The State is entitled to 50% of any gains from	Similar to National PPP Guidelines. The State is entitled to an undisclosed share of any refinancing gain.	State consent is required for a refinancing, not to be unreasonably withheld where it does not adversely affect the State's position). The State and Project Co will use reasonable endeavours to agree the 'refinancing gain' and manner and timing of paying Council's share. If the parties fail to agree, the matter may be	State consent is required for refinancing. Approval not to be unreasonably withheld, including where the refinancing does not adversely affect the State position or it is on arm's length commercial terms in accordance with market practice. The State and Project

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		Project Co. The State is entitled to an undisclosed percentage of any gains from refinancing.	refinancing.	refinancing.		submitted for dispute resolution under the project deed. The parties must require any expert or arbitrator to make his or her determination on the basis that the State is to receive 50% of any refinancing gain. The State is not entitled to share in any refinancing gains in respect of 'assumed refinancing' (refinancing that is specifically taken into account in the base case financial model and which complies with the 'refinancing assumptions').	Co will share any refinancing gains and must negotiate in good faith to agree on the basis and method of calculating the refinancing gains as well as the manner and timing of paying State's share. If no agreement is reached, either party may refer the matter to expert determination.
Events Of Default And Termination	Project Co events of default include: <ul style="list-style-type: none"> breach by Project Co of its obligations under the project agreement abandonment or intention to abandon the project assignment or change in control without State's prior consent failure to achieve completion of the project insolvency; or determination of Project Co which is a unit trust and 	Project Co events of Major Default include: <ul style="list-style-type: none"> insolvency or change in control of related company other than Project Co fraudulent financial audit report of Project Co untrue representations or warranties by Project Co failure to commence construction within 3 months of the specified commencement 	Project Co events of Major Default include: <ul style="list-style-type: none"> insolvency or change in control of related company other than Project Co fraudulent financial audit report discloses fraudulent or negligent reporting of Project Co untrue representations or warranties by Project Co technical completion and commercial acceptance are not achieved by the required dates breach or vitiation of 	Project Co events of Major Default include: <ul style="list-style-type: none"> insolvency or change in control of related company other than Project Co fraudulent financial audit report discloses fraudulent or negligent reporting of Project Co untrue representations or warranties by Project Co technical completion and commercial acceptance are not achieved by the 	Broadly similar to the National PPP Guidelines. State's other termination rights The State can terminate for prolonged <i>force majeure</i> and an uninsurable <i>force majeure</i> event. The State also has the right to terminate for convenience.	Project Co events of default and termination regime are similar to the National PPP Guidelines. Termination rights are subject to the Financiers' direct agreement. State's other termination rights The State can also terminate for uninsurable <i>force majeure</i> or where Project Co is prevented from carrying out the project for more than 6 months by law or State direction in relation to a native title application or claim. No termination for	Project Co events of default include: <ul style="list-style-type: none"> failure to commence or expeditiously and diligently progress the works abandonment or intention to abandon the project failure to operate or maintain, repair or insure the facility in a material respect fraud, collusion, misleading or deceptive conduct or representation assignment or change in control

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>loss of the right of full indemnity against the assets of the trust.</p> <p>Projects Co events of default also includes unremedied major defaults such as:</p> <ul style="list-style-type: none"> insolvency of a subContractor fraud, collusion, misleading or deceptive conduct or representation cessation or threat to cease providing services failure to comply with obligations in relation to change in control, assignment, insurance, refinancing. <p>There is a regime for Project Co to provide a remedy program and comply with that remedy plan for defaults capable of being remedied. The State may agree to extend the remedy period where Project Co is complying and continues to comply with the remedy program and an extension of time is required.</p> <p>State's other termination rights</p>	<p>date</p> <ul style="list-style-type: none"> technical completion and commercial acceptance are not achieved by the required dates vitiation of Project Documents breach of insurance obligations by Project Co any defaults that have not been cured by Project Co within the cure period. <p>Project Co Default Termination Events of Project Co include:</p> <ul style="list-style-type: none"> insolvency of Project Co change in control or assignment of Project Co without consent of the State abandonment of works or services by Project Co uncured Major Default commercial acceptance is not achieved by the Sunset Date; or damage and destruction to the Facility that is 	<p>Project Documents</p> <ul style="list-style-type: none"> there is a Services Failure and the Project Co accumulates certain Failure Abatements any defaults that have not been cured by Project Co within the cure period. <p>Default Termination Events of Project Co include:</p> <ul style="list-style-type: none"> insolvency of Project Co change in control or assignment of Project Co without consent of the State abandonment of works or services by Project Co three Major Default Service Failures in any rolling three year period late completion Major Default that is incapable of cure damage and destruction to the Facility that is deemed a Default Termination Event. <p>There is a regime for Project Co to provide a remedy program and comply with that remedy program for defaults capable of being remedied. The State may agree to extend the</p>	<p>required dates</p> <ul style="list-style-type: none"> a material breach by the Project Co of its insurance obligations or repair or rebuilding obligations an event that restricts or cancels a Project Entity's ability to obtain or continue to have all available funding under the finance documents a failure by the Project Co to obtain prior consent before refinancing any default which has not been cured within 20 business days of receipt of a default notice a breach of any project document other than the project deed which as a material adverse effect five or more defaults in any 12 month period or a persistent or repeated failure to comply with obligations in the opinion of the State there is a Services Failure and the Project Co accumulates certain Failure Abatements; 		<p>convenience right.</p>	<p>without State's prior consent</p> <ul style="list-style-type: none"> material default failure to achieve completion of the project insolvency (including of material subContractors); or cancellation of finance or draw down rights. <p>There is a regime for Project Co to provide a remedy program and comply with that remedy program for defaults capable of being remedied. The State may agree to extend the remedy period where Project Co is complying with the remedy program and as long as the remedy period does not exceed 9 months.</p> <p>State's other termination rights</p> <p>The State can also terminate for convenience and prolonged <i>force majeure</i>.</p>

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>The State can also terminate for convenience and prolonged <i>force majeure</i>.</p>	<p>deemed a Default Termination Event.</p> <p>There is a regime for Project Co to provide a remedy program and comply with that remedy program for defaults capable of being remedied. The State may agree to extend the remedy period where Project is complying with the remedy program and an extension of time is required.</p> <p>State's other termination rights</p> <p>State may terminate for convenience and prolonged <i>Force Majeure</i>.</p>	<p>remedy period where Project is complying with the remedy program and an extension of time is required.</p> <p>State's other termination rights</p> <p>State may terminate for convenience and prolonged <i>Force Majeure</i>.</p>	<p>or</p> <ul style="list-style-type: none"> • vitiating of Project Documents <p>Default Termination Events of Project Co include:</p> <ul style="list-style-type: none"> • insolvency of Project Co • change in control or assignment of Project Co without consent of the State • abandonment of works or services by Project Co • three Major Default Service Failures in any rolling three year period • late completion • Probity failures • damage and destruction to the Facility that is deemed a Default Termination Event. <p>There is a regime for Project Co to provide a remedy program and comply with that remedy program for defaults capable of being remedied. The State may agree to extend the remedy period where Project is complying with the remedy program and an extension of time is required.</p> <p>State's other</p>			

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
				<p>termination rights</p> <p>State may terminate for convenience and prolonged <i>Force Majeure</i>.</p>			
<p>State Step-In Rights</p>	<p>The State may step in and assume management and control where:</p> <ul style="list-style-type: none"> there is a serious risk to the structure of the facility, public or users or a serious risk of material damage to property Project Co abandons the project or becomes insolvent. an assignment by or a change in control of Project Co has occurred without State's prior consent Project Co has breached its obligations under the project agreement and has failed to remedy its breaches (if they are capable of being remedied) Project Co ceases to be a unit trust and ceases to be indemnified against the assets of the trust 	<p>The State may step in and assume total or partial management and control after the occurrence of either a Major Default or Default Termination Event, except if:</p> <ul style="list-style-type: none"> Project Co is remedying the Major Default; or the Major Default is incapable of being remedied. 	<p>The State may step in and assume total or partial management and control after the occurrence of either a Major Default or Default Termination Event (see above), except if:</p> <ul style="list-style-type: none"> Project Co is remedying the Major Default; or the Major Default is incapable of being remedied. <p>The State may also step in to any Subcontract in the event of an Emergency</p>	<p>The State may step in and assume total or partial management and control after the occurrence of either a Major Default or Default Termination Event (see above), except if:</p> <ul style="list-style-type: none"> Project Co is remedying the Major Default; or the Major Default is incapable of being remedied. <p>The State may also step in to any Subcontract in the event of an Emergency</p>	<p>The State may step in and assume total or partial management and control where:</p> <ul style="list-style-type: none"> Project Co is in breach and the State reasonably believes there is a material risk to health and safety, the environment or the works the D&C or O&M Contractor has issued a State cure notice to the State advising that the Contractor has the right to terminate under the D&C or O&M contract (as the case may be). <p>The State's liability in exercising its step-in rights appears similar to the position under the National PPP Guidelines.</p>	<p>The State may step in where Project Co is in breach of the project agreement and has not remedied the breach within a reasonable time.</p> <p>The State will have no liability to Project Co in connection with the exercise of its step-in rights.</p>	<p>The State may step in and assume total or partial management and control where:</p> <ul style="list-style-type: none"> there is a serious risk to the structure of the facility, public or users or a serious risk of material damage to property it is necessary to discharge a statutory duty suspension of activities due to <i>force majeure</i>; or Project Co abandons the project or becomes insolvent. <p>The State is only liable for exercising its step-in rights if it has been fraudulent, has acted in bad faith or has been grossly negligent (only in limited circumstances).</p> <p>If State steps in as a result of prolonged <i>force majeure</i> or Project Co's insolvency, Project Co will be relieved from its obligations but must</p>

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<ul style="list-style-type: none"> Project Co fails to achieve completion of the project. <p>If the State exercises its step-in rights, the rights and obligations of Project Co are suspended and Project Co must pay all costs and expenses reasonably incurred by the State to the extent of the State's step in.</p>						pay all costs and expenses reasonably incurred by the State to the extent of the State's step in.
Termination Payments	<p>Project Co Default</p> <p>If Project Co complies with its handover obligations, it will be entitled to receive a 'default termination payment'.</p> <p>The details of the calculation of this payment are not disclosed.</p>	<p>Project Co Default</p> <p>If the State elects to conduct a Tender, the State must pay Project Co the highest compliance tender price, <i>plus</i>:</p> <ul style="list-style-type: none"> any amounts owing by the State to Project Co, <p>less:</p> <ul style="list-style-type: none"> the tender costs any amounts owing by Project Co to the State any additional costs reasonably incurred by the State value of all post termination service amounts any net gains that have accrued to Project Co as a result of 	<p>Project Co Default</p> <p>If the State elects to conduct a Tender, the State must pay Project Co the highest compliance tender price, <i>plus</i>:</p> <ul style="list-style-type: none"> any amounts owing by the State to Project Co, <p>less:</p> <ul style="list-style-type: none"> the tender costs any amounts owing by Project Co to the State any additional costs reasonably incurred by the State value of all post termination service amounts any net gains that have accrued to Project Co as a result of termination insurance proceeds the aggregate of the 	<p>Project Co Default</p> <p>If the State elects to conduct a Tender, the State must pay Project Co the highest compliance tender price, <i>plus</i>:</p> <ul style="list-style-type: none"> any amounts owing by the State to Project Co, <p>less:</p> <ul style="list-style-type: none"> the tender costs any amounts owing by Project Co to the State any additional costs reasonably incurred by the State value of all post termination service amounts any net gains that have accrued to Project Co as a result of termination insurance proceeds 	<p>Project Co Default</p> <p>No termination payment where Project Co default consists of abandonment of the project.</p> <p>In the event of termination for other Project Co defaults, the State will pay the default termination amount determined as follows:</p> <p><i>If the contract is re-tendered by the State:</i></p> <p>Highest compliant tender price <i>less</i>:</p> <ul style="list-style-type: none"> tender costs amounts owing to State State's direct termination costs 	<p>Project Co Default</p> <p>No termination payment.</p>	<p>Project Co Default</p> <p>State can recover from Project Co any loss (including indirect and consequential loss) suffered as a result of termination.</p> <p>This amount is calculated as follows:</p> <p>Project debt <i>plus</i>:</p> <ul style="list-style-type: none"> amounts owing to Project Co by the State, <p>less various other amounts such as:</p> <ul style="list-style-type: none"> highest compliant tender price tender costs amounts owing to the State by Project Co various costs incurred by the State arising from the early termination gains resulting

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		termination <ul style="list-style-type: none"> insurance proceeds the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement. If the State does not elect to conduct a Tender, the State must pay Project Co the estimated fair value of the project, <i>plus</i> : <ul style="list-style-type: none"> any amounts owing by the State to Project Co, less: <ul style="list-style-type: none"> costs incurred in electing not to tender any amounts owing by Project Co to the State any additional costs reasonably incurred by the State value of all post termination service amounts any net gains that have accrued to Project Co as a result of termination insurance 	receivables refund payment and outstanding moneys under the State Loan Agreement. If the State does not elect to conduct a Tender, the State must pay Project Co the estimated fair value of the project, <i>plus</i> : <ul style="list-style-type: none"> any amounts owing by the State to Project Co, less: <ul style="list-style-type: none"> costs incurred in electing not to tender any amounts owing by Project Co to the State any additional costs reasonably incurred by the State value of all post termination service amounts any net gains that have accrued to Project Co as a result of termination insurance proceeds the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement. 	<ul style="list-style-type: none"> the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement. If the State does not elect to conduct a Tender, the State must pay Project Co the estimated fair value of the project, <i>plus</i> : <ul style="list-style-type: none"> any amounts owing by the State to Project Co, less: <ul style="list-style-type: none"> costs incurred in electing not to tender any amounts owing by Project Co to the State any reasonable forecast internal and external tendering costs value of all post termination service amounts any net gains that have accrued to Project Co as a result of termination insurance proceeds an amount equal to the outstanding amount of the Receivables Refund Payment. 	<ul style="list-style-type: none"> gains and insurance proceeds to Project Co monthly service payments post-termination, <i>plus</i> any other amounts owing to Project Co. If the contract is not re-tendered: Fair market value of the project assuming full concession period, as determined by the independent expert, and with similar additions and deductions as for a re-tender (above).		from termination of finance or project documents <ul style="list-style-type: none"> post termination service amounts insurance proceeds.

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		<p>proceeds</p> <ul style="list-style-type: none"> the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement. 					
	<p>State Default</p> <p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>	<p>State Default</p> <p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>	<p>State Default</p> <p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>	<p>State Default</p> <p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>	<p>State Default</p> <p>Project Co does not have the right to terminate for Authority default and, accordingly, there is no termination payment for such an event.</p> <p>Note that State default under the UK PFI and National PPP Guidelines is treated in the same manner as termination for convenience. The termination for convenience payment under the desalination project includes debt plus forecast return for the balance of the concession (see below).</p>	<p>State Default</p> <p>Project debt <i>plus</i> projected nominal after tax IRR over the concession period based on:</p> <ul style="list-style-type: none"> the distributions in the base case financial model – if the projection is being made in the first 5 years of tolling a reasonable forecast of distributions based on historical performance and current projected growth – if the projection is being made after the first 5 years of tolling. <p>The equity return amount must take into account:</p> <ul style="list-style-type: none"> amounts received by or paid to Project Co amounts which Project Co must pay as a consequence of termination distributions made or accrued. 	<p>State Default</p> <p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
	<p>Termination for Convenience</p> <p>If Project Co complies with its handover obligations, it will be entitled to receive a 'termination for convenience payment'. The details of the calculation of the termination for convenience payment are not disclosed.</p>	<p>Termination for Convenience</p> <p>State must pay Project Co the Project debt, <i>plus</i>:</p> <ul style="list-style-type: none"> costs arising from terminating or reversing the derivative position under finance documents fair market value of the equity as assessed by an independent expert any redundancy payments for employees of Project Co amounts incurred by Project Co payable to builders and subContractors costs incurred (or less gains realised) by Project Co as a direct result of terminating the finance documents <p><i>less</i>:</p> <ul style="list-style-type: none"> amounts owing by Project Co to the State the aggregate of the receivables refund 	<p>Termination for Convenience</p> <p>State must pay Project Co the higher of:</p> <p>(A) project debt <i>plus</i>:</p> <ul style="list-style-type: none"> fair market value of the equity as assessed by an independent expert any redundancy payments for employees of Project Co amounts incurred by Project Co payable to builders and subContractors costs incurred (or less gains realised) by Project Co as a direct result of terminating the finance documents amounts owing by the State to Project Co <p><i>less</i>:</p> <ul style="list-style-type: none"> amounts owing by Project Co to the State credit balances held for the benefit of Project Co sums due and payable to Project Co from the Financiers any insurance proceeds the aggregate of the receivables refund 	<p>Termination for Convenience</p> <p>State must pay Project Co the higher of:</p> <p>(A) project debt <i>plus</i>:</p> <ul style="list-style-type: none"> fair market value of the equity as assessed by an independent expert any redundancy payments for employees of Project Co amounts incurred by Project Co payable to builders and subContractors costs incurred (or less gains realised) by Project Co as a direct result of terminating the finance documents amounts owing by the State to Project Co <p><i>less</i>:</p> <ul style="list-style-type: none"> amounts owing by Project Co to the State credit balances held for the benefit of Project Co sums due and payable to Project Co from the Financiers any insurance proceeds the aggregate of the 	<p>Termination for Convenience</p> <p>The higher of:</p> <p>(A) project debt <i>plus</i>:</p> <ul style="list-style-type: none"> NPV of forecast equity cash flows from termination date to end of concession period [27 years] determined using the discount rate equal to the lower of the prevailing market rate of return to equity for projects with similar risk profile and equity returns assumed in the base case financial model various costs arising from the early termination, including employee redundancy payments, D&C or O&M termination costs and finance break costs amounts owing by the State, 	<p>Termination for Convenience</p> <p>Not applicable, as the State does not have the right to terminate for convenience.</p>	<p>Termination for Convenience</p> <p>If Project Co complies with its handover obligations, it will be entitled to receive a 'termination for convenience payment'. This amount is calculated as follows:</p> <p>Project debt <i>plus</i>:</p> <ul style="list-style-type: none"> an amount which gives an equity return calculated for the period between the termination date and the expiry date being the greater of: <ul style="list-style-type: none"> the Blended Equity Return the fair market value of the equity as reasonably assessed by the Independent Expert various costs arising from the early termination, including employee redundancy payments, D&C or O&M termination costs and finance break costs amounts owing to Project Co by the State,

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		<ul style="list-style-type: none"> credit balances held for the benefit of Project Co sums due and payable to Project Co from the Financiers any insurance proceeds the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement. 	payment and outstanding moneys under the State Loan Agreement.	receivables refund payment and outstanding moneys under the State Loan Agreement.	<i>less</i> various other amounts such as: <ul style="list-style-type: none"> gains resulting from termination of finance or project documents amounts owing to the State insurance proceeds; and (B) project debt <i>plus</i>: finance break costs amounts owing by the State. 		<i>less</i> various other amounts such as: <ul style="list-style-type: none"> amounts owing to the State by Project Co gains resulting from termination of finance or project documents insurance proceeds all sums due and payable to Project Co by Financiers as a result of pre-payment of debt security refund repayment.
	<p>Prolonged Force Majeure/Uninsurable Force Majeure Event</p> <p>If Project Co complies with its handover obligations, it will be entitled to receive a 'force majeure termination payment'.</p> <p>The details of the calculation of the termination for convenience payment are not disclosed.</p>	<p>Prolonged Force Majeure</p> <p>State must pay Project Co the Project debt, <i>plus</i></p> <ul style="list-style-type: none"> amounts owing by the State to Project Co, <p><i>less</i>:</p> <ul style="list-style-type: none"> gains realised (or add costs incurred) from terminating or reversing derivative position under finance documents any amounts owing by Project Co to the State insurance 	<p>Prolonged Force Majeure</p> <p>If the State or Project Co terminates due to a Force Majeure Event, the Termination Payment is the greater of a Default Termination Payment was due (as calculated above where the state elects not to re-tender) and the following calculation:</p> <p>Project debt, <i>plus</i></p> <ul style="list-style-type: none"> amounts owing by the State to Project Co, <p><i>less</i>:</p> <ul style="list-style-type: none"> gains realised (or add costs incurred) from terminating or reversing derivative position under 	<p>Prolonged Force Majeure</p> <p>If the State or Project Co terminates due to a Force Majeure Event, the Termination Payment is the greater of a Default Termination Payment was due (as calculated above where the state elects not to re-tender) and the following calculation:</p> <p>Project debt, <i>plus</i></p> <ul style="list-style-type: none"> amounts owing by the State to Project Co, <p><i>less</i>:</p> <ul style="list-style-type: none"> gains realised (or add costs incurred) from terminating or reversing derivative position under 	<p>Prolonged Force Majeure/Uninsurable Force Majeure Event</p> <p>The higher of the amount payable on termination for Project Co default (as above) and the following:</p> <p>Project debt <i>plus</i>:</p> <ul style="list-style-type: none"> costs arising from terminating or reversing derivative position under finance documents amounts owing by the State various costs arising from 	<p>Uninsurable Force Majeure Event</p> <p>As for State Default above.</p>	<p>Prolonged Force Majeure/Uninsurable Force Majeure Event</p> <p>If Project Co complies with its handover obligations, it will be entitled to receive a 'general termination payment'.</p> <p>This amount is calculated as follows:</p> <p>Project debt <i>plus</i>:</p> <ul style="list-style-type: none"> various costs arising from the early termination, including employee redundancy payments, D&C/O&M termination costs and finance break

Comparative analysis of key project issues in Australian PPPS

Issue	Hospital Project A	Hospital Project B	Hospital Project C	Hospital Project D	Desalination Project	Tunnel Project	Toll Road Project D
		<p>proceeds</p> <ul style="list-style-type: none"> all sums due to Project Co from the Financiers credit balances held for the benefit of Project Co the aggregate of the receivables refund payment and outstanding moneys under the State Loan Agreement, 	<p>finance documents</p> <ul style="list-style-type: none"> any amounts owing by Project Co to the State insurance proceeds all sums due to Project Co from the Financiers credit balances held for the benefit of Project Co an amount equal to the outstanding amount of the Receivables Refund Payment. 	<p>finance documents</p> <ul style="list-style-type: none"> any amounts owing by Project Co to the State insurance proceeds all sums due to Project Co from the Financiers credit balances held for the benefit of Project Co an amount equal to the outstanding amount of the Receivables Refund Payment. 	<p>termination, including D&C and O&M termination costs,</p> <ul style="list-style-type: none"> equity invested (without return) (this payment obligation continues only while the State provides financial support and for a maximum of 7 years from financial close), <p><i>less</i> various other amounts such as:</p> <ul style="list-style-type: none"> amounts owing to the State gains from terminating or reversing derivative position under finance documents insurance proceeds. 		<p>costs</p> <ul style="list-style-type: none"> amounts owing to Project Co by the State, <p><i>less</i> various other amounts such as:</p> <ul style="list-style-type: none"> amounts owing to the State by Project Co gains resulting from termination of finance or project documents insurance proceeds all sums due and payable to Project Co by Financiers as a result of pre-payment of debt security refund repayment.

Project frameworks and guidance

National PPP Guidelines – Commercial Principles For Economic Infrastructure

Infrastructure Australia, a national government body, was formed to develop the standardisation of the tender processes and contract documentation between the Australian Commonwealth and State jurisdictions for PPP and other relevant procurement options. In February 2011, it produced the *Commercial Principles for Economic Infrastructure*.

UK SOPF2 – Standardisation of PF2 Contracts (Draft version to replace UK SOPC4 – Standardisation of PFI Contracts, Version 4)

These comprise guidelines issued by the UK Treasury in March 2007 for standardisation of project financed initiatives (PFIs).

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
Extension Of Time (EOT)	<p>The principles do not consider EOTs because delay liquidated damages (LDs) are not usually imposed because of value for money reasons.</p> <p>Where the Government elects to impose delay LDs, then an EOT may be appropriate.</p> <p>See discussion on delay LDs below.</p>	<p>The date for commencement of project services can be extended for delays but not indefinitely ie there should be a long-stop date after which the Government can terminate the contract. Extensions should be permitted for delays caused by compensation events, relief events and <i>force majeure</i>).</p>
Delay Liquidated Damages	<p>Government will consider delay LDs where they represent value for money.</p> <p>Considerations include the potential for higher project costs, other remedies available to the Government (such as indemnities) and erosion of the operating term. The reduction in the revenue-earning period due to completion delay may be sufficient commercial incentive to ensure that Project Co achieves timely completion.</p> <p>Where payable, LDs will represent the Government's sole and exclusive remedy for delay. However, they do not limit the Government's rights in relation to aspects or consequences of an event other than delay costs.</p> <p>Where payable, the Government generally requires Project Co to provide security for delay LDs through bonds or guarantees</p>	<p>The contract must protect the Government against late delivery in a way which provides value for money. Delay LDs may be appropriate, but are not typically imposed by the Government. However, they may prove value for money where the costs which the Government incurs as a result of the delay are so great as to justify the increased project expense.</p> <p>Delay LDs for delayed service commencement should be an ascertained payment representing a genuine pre-estimate of the losses or damage the Government will suffer if Project Co fails to fulfil its obligation to commence Service delivery on time.</p> <p>If the Government will not suffer any losses in excess of the payment of the unitary charge, liquidated damages are not appropriate or recoverable.</p> <p>Service commencement should not generally be allowed to be delayed indefinitely due to Project Co default. The Government may impose a long stop date, after which the contract can be terminated by the Government if the service has not yet</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<p>issued either by the private party or its subContractors.</p>	<p>been commenced. The long stop date should be extended to the extent of any delay caused by any compensation event, relief event or <i>force majeure</i> event.</p>
<p>State-Proposed Variations</p>	<p>The Government generally has the right to request modifications (ie variations to the works, facility or project activities) at any time and will compensate Project Co for the cost of carrying out the modifications.</p> <p>In some jurisdictions, the Government may not request a modification that adversely affects the use, patronage or capacity of the facility or Project Co's ability to earn revenue. However, the Government may request a modification resulting from public policy decisions where such modification does impact on the use or patronage of the facility or Project Co's ability to earn revenue. The Government's modification should not, however, result in Project Co being in a worse (or better) position than prior to the policy change.</p> <p>The Government may require Project Co to conduct a tender where the modification is being carried out after construction is complete. The Principles broadly provide for Project Co to provide a response to the Government's modification request, setting out details of the effect of the modification in terms of cost, timing, funding etc. Disputed matters are resolved through the dispute resolution process under the contract.</p> <p>Compensation will include agreed margins and on-costs that Project Co or its major subContractors may apply to the cost of the modification, as well as an equity return component where the modification is funded wholly or partly by new equity. It also includes direct costs and associated on-site overheads. Where the modification delays completion beyond the date for completion, compensation will also include an amount to provide equity investors with a return equal to their base case equity return for the period of delay.</p> <p>In calculating the compensation, any cost savings are to be</p>	<p>The State should generally have an unfettered right to require changes during the O&M phase but a more restricted right during the D&C phase.</p> <p>Project Co should generally be given limited rights to refuse or object to a change, such as where it would imperil the project economics or make it impossible for Project Co to meet its contractual obligations or adversely affect its risk profile.</p> <p>The Government should generally be liable for the cost of changes which it proposes or requires. It should generally be assumed that payment for capital costs works will be made by milestone payments or on completion through a lump sum payment and that payment for service changes will be made through an adjustment to the service charges. Project Co should be obliged to use reasonable endeavours to seek necessary additional finance, if required.</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<p>deducted.</p> <p>The Government may pay for the modification progressively after the relevant work is undertaken or as agreed, depending on which party is funding the work.</p> <p>Where Project Co is required to fund an amount upfront above a certain threshold, it must use commercial endeavours to obtain competitive financing. If it is unable to obtain financing acceptable to the Government (or the funding has a material adverse effect on Project Co), the Government may choose to pay the costs by way of a lump sum payment.</p>	
<p>Force Majeure</p>	<p>Events</p> <p>A limited list of events of exceptional severity beyond either party's control and where neither is in a better position to manage the consequences including:</p> <ul style="list-style-type: none"> • lightning, cyclones, earthquakes, natural disasters, landslides, tsunamis and mudslides • civil riots, rebellions, revolutions, terrorism, insurrections and military and usurped power, act of sabotage, act of public enemy and war (declared or undeclared) • ionising radiation, contamination by radioactivity, nuclear, chemical or biological contamination unless caused by Project Co or sub-Contractors (and excluding the risk of pollution and contamination otherwise allocated to Project Co in the contract) • fire, flood or explosion caused by events referred to in the first two paragraphs above. <p>Relief</p> <p>Project Co's obligations are suspended to the extent affected by the FM.</p> <p>No financial relief provided by the Government (including by way of extension of the concession period).</p>	<p>Events</p> <p>A limited (exclusive) list of events including: war, civil war, armed conflict or terrorism; or nuclear, chemical or biological contamination (unless the source or cause of the contamination is the result of the actions of or breach by Project Co or its subContractors); or pressure waves caused by devices travelling at supersonic speeds, which directly cause either party to be unable to comply with all or a material part of its obligations under the contract.</p> <p>Relief</p> <p>Project Co's obligations are suspended to the extent affected by the <i>force majeure</i>.</p> <p>Termination for prolonged <i>force majeure</i></p> <p>Both parties have rights to terminate for prolonged <i>force majeure</i> (typically 6 months).</p> <p>Financial relief is provided through the termination mechanism where the agreement is terminated for prolonged <i>force majeure</i>.</p> <p>Uninsurable force majeure</p> <p>The Government may terminate on the occurrence of an uninsurable <i>force majeure</i> event.</p> <p>Note also that SOPF2 has a separate regime for "relief events" which allow</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<p>Termination for prolonged <i>force majeure</i> The Government (only) has the right to terminate for prolonged <i>force majeure</i> (relevant threshold period to be agreed).</p> <p>Uninsurable <i>force majeure</i> The Government (only) may terminate if an uninsurable <i>force majeure</i> event occurs.</p>	<p>performance and time relief (but not compensation). Relief events include fire, explosions, lightening, storms, flood, earthquakes, riots, failure or shortage of power, transport or fuel, embargo and strikes generally affecting the industry or a significant sector of it.</p>
<p>Change In Law</p>	<p>Compensation only for project specific changes in law. A project specific change in law is a change in law by the relevant jurisdiction which specifically and only affects the project or has a direct effect on the project together with other similar privately owned and operated facilities. It does not include a change which, as at the signing date, was published or notified publicly or which an experienced and competent Contractor carrying out similar works to Project Co would have reasonably foreseen. A change in law will not be project specific:</p> <ul style="list-style-type: none"> solely on the basis that its effect on Project Co is greater than its effect on other entities if it is a change in taxes (including GST). <p>If the project specific change in law has a material adverse effect on the ability of Project Co to pay the debt Financiers the amounts due in accordance with the financing agreements or pay the equity investors their projected equity return, it will be entitled to relief. The parties must negotiate in good faith to agree on a method of redress that achieves the objective of enabling Project Co to repay the debt Financiers the appropriate interest and principal payments owing when due and to pay the equity investors a return (eg lower of base case and the return they would have earned had the event not occurred). This may occur by varying the project agreements, varying the contract term, varying the financial or other contributions of the parties (a last resort), requesting the debt Financiers to restructure the financing agreements or varying the revenue calculation</p>	<p>Discriminatory change in law risks should be allocated to the Government. A discriminatory change in law means a change in law, the terms of which apply expressly to:</p> <ul style="list-style-type: none"> the Project and not to similar projects procured under the PFI Project Co and not to other persons; or PFI Contractors and not to other persons. <p>Specific change in law risks should be allocated to the Government. A specific change in law means any change in law which specifically refers to the provision of services the same as or similar to the service or to the holding of shares in companies whose main business is providing services the same as or similar to the service. General changes in law will generally be at Project Co's risk but it may be appropriate to share them where they:</p> <ul style="list-style-type: none"> require capital expenditure take effect during the O&M phase were not reasonably foreseeable on contract signing. <p>Risk sharing in this case could be by a sliding scale, with the Government taking the risk where the capital costs exceed a certain threshold. Project Co's general liability should be capped at between 2-5% of the initial capital cost of the project.</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
<p>Material Adverse Effect (Mae) Regime</p>	<p>schedule.</p> <p>In addition, if the project specific change in law adversely affects the ability of Project Co to perform any of its project obligations and causes Project Co to incur additional costs (including delay costs if Project Co is prevented from achieving on time completion), it will be entitled to claim its reasonable incremental costs and expenses as a direct result of the change.</p> <p>The guidelines provide a regime for "possible key risk events" and a forum for negotiations to redress the occurrence of key risk events. Project Co will be entitled to relief for possible key risk events that have a material adverse effect on the ability of Project Co to either:</p> <ul style="list-style-type: none"> • pay the debt Financiers the amounts due in accordance with the financing agreements; or • pay the equity investors their projected equity return. <p>Events (non-exclusive and optional) include:</p> <ul style="list-style-type: none"> • a project specific change in law • Project Co is ordered by a court to cease (or change the method of) carrying out the D&C activities due to a challenge to the Government obtained planning approval (other than for Project Co breach) • Project Co is directed or required to cease or change its O&M activities because of a native title application or claim • an uninsurable <i>force majeure</i> event • an identical directly competing facility is opened during the concession period. <p>No relief will be provided where the event is caused by or is otherwise within the control of Project Co or any sub-Contractor or related party.</p> <p>Methods to consider include:</p> <ul style="list-style-type: none"> • varying the project contracts 	<p>SOPF2 provides for compensation events which are at the Government's risk and which result in a delay to the O&M commencement or increased costs to Project Co. Compensation can be extended to the O&M phase).</p> <p>Events included:</p> <ul style="list-style-type: none"> • breach by the Government of an obligation (including third party breaches for which the Government is responsible) • modifications by the Government • discriminatory or specific changes in law. <p>If the event requires capital expenditure (whether before or during the O&M phase) in most cases it will be more practicable to deal with the cost by way of lump sum reimbursement (with a possibility of staged payments).</p> <p>If the event requires a change in operating costs, an alteration in the service charge is the appropriate means of payment.</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<ul style="list-style-type: none"> • varying the contract term • varying the financial or other contributions of the parties • requesting the debt Financiers restructure the financing agreements • varying the service charges. <p>Contribution by the Government is a last resort.</p> <p><i>Compensation events</i></p> <p>There is a separate regime providing compensation for costs incurred as a direct result of certain events.</p> <p>Events (non-exclusive and optional) include:</p> <ul style="list-style-type: none"> • a breach by the Government of any project contracts • modification, withdrawal, revocation or replacement of the Government obtained planning approval (other than where it is caused by Project Co) • Project Co is ordered by a court to cease (or change the method of) carrying out the D&C activities due to a challenge to the Government obtained planning approval (other than for Project Co breach) • the Government makes a direction in relation to artefacts (other than for Project Co breach). <p>Compensation will only be given for events which:</p> <ul style="list-style-type: none"> • adversely affect the ability of Project Co to perform any of its obligations under the project agreement • cause Project Co to incur additional costs (including delay costs to the extent that Project Co is or will be prevented from achieving Completion by the completion date). <p>Compensation will be assessed as Project Co's reasonable incremental costs and expenses incurred as a direct result of the event, as reasonably determined by the Government.</p>	

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
Step Change In Technology	No specific provisions. Where the project agreement requires modifications in order to incorporate technological advancements, cost savings will be shared with the Government under an agreed mechanism.	No specific provisions. Typically dealt with on a case by case basis.
Liability And Indemnities	<p>Project Co indemnifies the Government for any liability or loss arising from:</p> <ul style="list-style-type: none"> • design, construction, operation or maintenance of the facility • the provision or use of or reliance on information disclosed by the Government • acts or omissions of Project Co and its subContractors • breach of any project agreement • negligence • unlawful acts or omissions • wilful misconduct • breach of warranty. <p>In some cases, the indemnity may be limited to liability or loss arising from death or personal injury, property damage and third party claims.</p> <p>The Government will not generally cap Project Co's liability under the indemnity but may do so (where it provides value for money) in respect of third party claims (other than death or personal injury), damage to Government property and Government economic loss.</p> <p>Project Co will not be liable under the indemnity to the extent the liability or loss arises from the Government's fraudulent or wrongful acts or omissions or breach of any project agreement.</p> <p>Project Co releases the Government from any liability or claim arising from the matters the subject of the indemnity.</p> <p>Project Co's liability for consequential loss is not limited or excluded.</p>	<p>Broadly, there are four heads of liability that the Government will be concerned to be indemnified against if the liability arises as a result of Project Co's operations:</p> <ul style="list-style-type: none"> • (a) death and personal injury • (b) property damage • (c) breach of statutory duty (d) third party claims. <p>Liability caps are not generally appropriate but can be considered on a value for money basis.</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
<p>Security</p>	<p>The Government will typically require a performance bond for the D&C phase for 5% to 10% of the construction cost to cover late or inadequate completion. The Government may accept the provision of this bond from Project Co's D&C Contractor (issued in favour of Project Co).</p> <p>The Government may require a direct bond from Project Co for the O&M phase. It may accept:</p> <ul style="list-style-type: none"> • a bond being provided by the O&M Contractor to Project Co • a smaller initial amount with an ability to increase this if there is a repeated or severe breach • no bond, with an ability to require one if there is a repeated or severe breach. <p>The Government may seek parent company guarantees from Project Co's ultimate holding company or from material subContractors, where this represents value for money.</p>	<p>It is not normally appropriate in PFI agreements for the Government to expect to obtain parent company guarantees from the parent companies and/or sub-Contractors to support Project Co's obligation to deliver the service.</p> <p>It is normal for there to be parent company guarantees of the sub-Contractor's obligations to Project Co and sometimes of its payment obligations to the Lenders, but these are not an issue for the Government.</p> <p>Performance bonds are not required under the standard form between the Government and Project Co.</p> <p>More generally, standard practice assumes that the Government should be satisfied with direct agreements from the immediate sub-Contractors to Project Co and collateral warranties from consultants and sub-subContractors. The sub-subContractors giving collateral warranties to the Government are usually limited to construction sub-subContractors.</p>
<p>Change Of Control And Assignment</p>	<p>Assignment/Transfers etc</p> <p>Subject to the financier's direct agreement and agreed security interests, Project Co must not dispose of any rights or interest under the project agreement without the Government's prior consent. Government approval may be provided in its discretion.</p> <p>Change in control</p> <p>With the exception of transfers to related parties and of listed shares, Project Co must obtain the Government's prior consent to a change in control (not to be unreasonably withheld). Consent may be withheld in certain circumstances eg the change occurs within 2 years of completion construction or the proposed transferee does not have the financial or technical capability.</p> <p>The Government may also require certain shareholders of Project Co to maintain their equity for a minimum period (eg 2 years from completion).</p>	<p>Assignment/Transfers etc</p> <p>The agreement should not allow Project Co to assign, novate or transfer its rights except as part of its senior Lenders' security package.</p> <p>A PFI agreement should generally not allow the Government to assign or transfer its rights or obligations under the agreement without the consent of Project Co, except where such transfer either takes place under statute or is required to facilitate a public sector reorganisation. It should also be permitted where the new authority has a similar financial standing to the outgoing authority or the outgoing authority provides a guarantee.</p> <p>Change in control</p> <p>As a general rule, it should not be necessary for the agreement to contain restrictions on the transferability of equity, other than a need to inform the Government, except where the Government would object to a particular class of shareholder being involved in the project for particular reasons.</p> <p>In practice, the Government will generally only have a discretion over the change of control of Project Co for a fixed period, usually up to the end of the defect</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
Refinancing	<p>Essentially, all refinancing other than those contemplated at financial close will require Government consent.</p> <p>Under normal market conditions, refinancing gains are shared 50:50 provided the equity return at the time of refinancing is above that reflected in the original base case financial model.</p> <p>In difficult market conditions, the Government may require different gain sharing proportions.</p>	<p>liability period, after which time the authority will not be able to prevent occurrence of a change of control.</p> <p>The Government should be entitled to a 50% share of any refinancing gain only where the projected performance of the project is above that included in the original financial close base case financial model.</p>
Events Of Default And Termination	<p>Project Co events of default include:</p> <ul style="list-style-type: none"> • failure to commence or expeditiously and diligently progress the works • abandonment or intention to abandon the project • failure to operate or maintain, repair or insure the facility in a material respect • material default • insolvency (including of material subContractors) • cancellation of finance or draw down rights. <p>There is a regime for Project Co to provide a cure plan and comply with that plan for defaults capable of cure. The Government may agree to extend the cure period where Project Co is complying with the plan and can satisfy the Government that it will cure the default within the extended period.</p> <p>Where Project Co fails to provide a cure plan, comply with the cure plan or cure the default within the agreed period, the Government may exercise its step in rights or terminate.</p> <p>Where the default is not capable of cure, the Government may require a prevention plan to overcome the consequences of the default and compensate the Government or may terminate (without any cure period).</p>	<p>Project Co events of default include:</p> <ul style="list-style-type: none"> • breach which materially and adversely affects performance of the services • a persistent breach (a breach for which a final warning notice has been issued, which has continued for more than a specified number of days or recurs a specified number of times within a six month period after the day on which the warning notice is served • insolvency events • a breach of any obligations under the agreement requiring the Government to approve any subContractors or replacement subContractors • a breach of any restrictions under the agreement on the engagement of employees to work on the Project • assignment, novation or transfer of rights under the Contract without the consent of the Government (other than as part of the Senior Lenders' security package) • change of Ownership without the consent of the Government • abandonment • failure to achieve service by a long-stop date • accumulation of more than a certain number of performance deduction points in a given period • failure to take and maintain required insurance. <p>Government's other termination rights</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<p>Government's other termination rights</p> <p>The Government can also terminate for prolonged <i>force majeure</i>, uninsurable <i>force majeure</i> and where Project Co is prevented from carrying out the project for a specified period by law in relation to a native title application or claim.</p> <p>The Government may also terminate for convenience.</p>	<p>The Government can terminate for prolonged <i>force majeure</i>.</p> <p>The Government should have the right to terminate for convenience, provided Project Co is compensated in full ie it is left in the position it would have been had the contract run its full course.</p> <p>The Government also has the specific right to terminate for fraud or corrupt acts by Project Co, or where Project Co breaches the refinancing provisions. These terminate events have their own specific termination payments.</p>
<p>Government Step-In Rights</p>	<p>The Government may step in and assume all or some of service delivery obligations where:</p> <ul style="list-style-type: none"> • there is an emergency, serious risk to the structure of the facility, the environment, public or users or a serious risk of material damage to property • it is necessary to discharge a statutory duty; or • (in some jurisdictions) a Project Co event of default occurs. <p>The Government has no liability in exercising the step-in rights except where it is grossly negligent (in relation to emergency step-in only), fraudulent or has acted in bad faith.</p>	<p>The focus of the right is a serious short-term problem that can or must be solved quickly, where the Government is in a better position to do this than Project Co.</p> <p>The Government may step in where it reasonably believes that action needs to be taken:</p> <ul style="list-style-type: none"> • because a serious risk exists to health and safety, property or the environment; or • to discharge a statutory duty. <p>The Government should act in accordance with good industry practice in exercising its step-in rights where there has been no Project Co breach and indemnify Project Co for any effects.</p>
<p>Termination Payments</p>	<p>Project Co Default</p> <p>No termination payment.</p>	<p>A marked approach is taken which facilitates the Senior Lenders rights to step-in, manage and rescue or sell the Project if Project Co defaults. If they fail to do so, compensation is paid on termination based on the market value of the unexpired term of the Contract, less any post termination service amounts already paid to the Contractor, the tender costs incurred in obtaining a new Contractor and amounts the Government are entitled to set off or deduct. In addition, the Government will pay an amount equal to the aggregate of all credit balances on any bank accounts held by or on behalf of Project Co on the date the highest priced compliant tender is received, any additional insurance proceeds and other amounts owing to Project Co and any additional post termination service amounts to the extent they have not been directly taken into account in the compliant tender or have not otherwise been received already by the Government.</p>

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
<p>Government Default</p>	<p>Government Default</p> <p>(Note: there is no separate concept of Government default events. However, Project Co does have the right to terminate for Government failure to provide its agreed project contribution.)</p> <p>Compensation payable is</p> <p>Senior debt</p> <p><i>plus</i> finance break costs</p> <p><i>plus</i> projected nominal after tax IRR for the concession period based on:</p> <ul style="list-style-type: none"> • equity return shown in the base case financial model (if termination occurs within a pre-agreed period from commencement of tolling eg 3 or 5 years); or • a reasonable forecast of distributions likely to be made to equity investors based on the historical performance and current projected growth (if termination occurs after that period) <p><i>less:</i></p> <ul style="list-style-type: none"> • all credit balances on any bank accounts held by or on behalf of Project Co on the termination date • any amounts owing by Project Co to the Authority as at the termination date • any insurance proceeds paid or payable to Project Co at any time between the termination date and the date of the termination payment • all sums due and payable to Project Co from the Financiers as a result of any prepayment of senior debt and any third party amounts paid to Project Co at any time during the period between the termination date and the date of payment. <p>The equity return amount must take into account:</p> <ul style="list-style-type: none"> • distributions and amounts received or paid by the shareholders up to the termination date 	<p>Government Default</p> <p>The objective is to fully compensate Project Co and the Financiers so that they are no worse off than if the contract had continued. Compensation can be determined by any of the following:</p> <ul style="list-style-type: none"> • base case IRR for entire concession period (ie does not take account of actual performance) • estimated fair market value • base case for remainder of contract duration (ie future return originally provided for in base case).

Issue	Infrastructure Australia – National ppp guidelines for economic infrastructure	UK PFI guidance (SOPF2)
	<ul style="list-style-type: none"> amounts Project Co must pay as a consequence of the termination (including demobilisation costs and third party costs but not including amounts between parties not engaged on arm's length commercial terms). 	
	<p>Termination for Convenience As for Government Default above.</p>	<p>Termination for Convenience As for Government default above.</p>
	<p>Prolonged Force Majeure/Uninsurable Force Majeure Event As for Government Default above.</p>	<p>Prolonged Force Majeure Senior debt plus share capital (less dividends paid) redundancy payments and subContractor breakage costs.</p>

Termination compensation benchmarking

Sole remedy, FM and Fair Market Value

Generally, the benchmarked projects include the following terms:

- the termination payments are Project Co's sole remedy for termination by the State (Desalination Project, Road Project, Hospital Project and Car Park Project), common law termination rights are expressly excluded (Desalination Project and Road Project) and the State's general law remedies are expressly preserved (Desalination Project, Hospital Project and Road Project) or are not excluded (Desalination Project and Car Park Project) and Project Co waives rights to claims for restitution, including unjust enrichment and quantum meruit (Desalination Project and Road Project)
- Project Co can terminate for extended *Force Majeure* if it is unable to recover under specified insurances (Hospital Project, Desalination Project, Tunnel Project and Car Park Project)
- The assessment of Fair Market Value (if applicable) assumes the Project continues for the remainder of the original term (Hospital Project, Car Park Project, Desalination Project).

Negative payments

Certain projects provide as follows in relation to negative Termination Payments:

- Termination Payment cannot be a negative number (Desalination Project, Car Park Project)
- Project Co must pay the State any negative Termination Payment (Hospital Project)
- If a re-tender option is chosen, the Termination Payment is paid once the Termination Payment is determined upon conclusion of the re-tendering process (Car Park Project).

Concepts such as 'Actual Debt', 'Project Debt', 'Fair Market Value' and 'Equity Return' (or similar terms) used in the following tables are generally the same across projects, however, the specific definitions differ.

Table 1: Summary of benchmarked termination compensation regimes

Termination event	Desalination project	Tunnel project	Road project	Toll road project	Toll road project	Hospital project	Car park project
Project Co default	<i>Alternative options:</i> Highest tender price OR Fair value (each adjusted for costs, cash and gains)			<i>Alternative options:</i> Highest tender price OR Fair value (each adjusted for costs, cash and gains)		<i>Alternative options:</i> Highest tender price OR Fair value (each adjusted for costs, cash and gains)	<i>Alternative options:</i> Highest tender price OR Fair value (each adjusted for costs, cash and gains)
State default		Project debt + equity return (with adjustments)	Project debt + equity return (with adjustments)	Project debt + Equity Return (with adjustments)			
Prolonged force majeure	Project debt (adjusted for costs, cash and gains)			<i>Higher of:</i> Fair value and Project debt (each adjusted for costs, cash and gains)		<i>Higher of:</i> Fair value and Project debt (each adjusted for costs, cash and gains)	<i>Lower of:</i> Actual debt and Forecast debt (and adjusted for costs, cash and gains)

Table 2: Project Co Default

Desalination project	Toll road project	Hospital project	Car park project
<p>Project Co is entitled to receive a Default Termination Amount (except where Project Co default consists of failure to cure breach).</p> <p><i>A. If State re-tenders:</i></p> <p>Payment equals Highest Compliant Tender Price:</p> <ul style="list-style-type: none"> • plus any outstanding amounts owed by the State • plus Electricity Asset Price • less State's tender costs • less amounts owing to State • less State's direct termination costs • less gains to Project Co directly from termination • less insurance proceeds • less credit balances for Project Co • less Post Termination Service Amounts payable by the State. <p><i>B. If no re-tendering:</i></p> <p>Payment is same as for re-tendering option with:</p> <ul style="list-style-type: none"> • 'Highest Compliant Tender Price' replaced with 'estimated Fair Market Value'; and • State's tender costs replaced with State's independent expert costs. <p>Estimated Fair Market Value</p> <p>'Fair Market Value' defined as being the amount at which an asset or liability could be exchanged in an arm's length transaction</p>	<p>Project Co is entitled to receive a 'Default Termination Payment'.</p> <p><i>A. If State re-tenders:</i></p> <p>Payment equals Highest Compliant Tender Price <i>plus</i> any outstanding amounts owed by the State <i>less</i>:</p> <ul style="list-style-type: none"> • State's tender costs • amounts owing to State • State's direct termination costs • Project Co's gains and insurance proceeds • post termination service amounts. <p><i>B. If no re-tendering:</i></p> <p>Payment equals Fair Market Value of the Project (assuming continuation for full term), <i>less</i> same adjustments as listed above for a re-tender process (except State's tender costs replaced with State's independent expert costs).</p> <p>Fair Market Value to be determined by the independent expert.</p>	<p>Project Co is entitled to receive a 'Default Termination Payment'.</p> <p><i>A. If State re-tenders:</i></p> <p>Payment equals Highest Compliant Tender Price <i>plus</i> any outstanding amounts owed by the State <i>less</i>:</p> <ul style="list-style-type: none"> • State's tender costs • amounts owing to the State • State's direct termination costs • Project Co's net gains (non-negative only) • Project Co's insurance proceeds • credit balances and other amounts owed to Project Co not already accounted for • net amounts under loan arrangements between the State and Finance Co. <p>Post-termination service amounts are also payable.</p> <p><i>B. If no re-tendering:</i></p> <p>Payment equals Fair Market Value of the Project (assuming continuation for full term), <i>less</i> same adjustments as listed above for a re-tender process (except State's tender costs replaced with State's independent expert costs).</p> <p>Fair Market Value to be determined</p>	<p>Project Co is entitled to receive a 'Default Termination Payment'.</p> <p><i>A. If State re-tenders:</i></p> <p>Payment equals Highest Compliant Tender Price <i>plus</i> any outstanding amounts owed by the State, <i>plus</i> Management Agreement termination costs <i>less</i>:</p> <ul style="list-style-type: none"> • State's tender costs • amounts owing to the State • State's direct termination costs • Project Co's net gains (non-negative only) • Project Co's insurance proceeds • credit balances and other amounts owed to Project Co not already accounted for • Sub-Sublease Refund Payment. <p>Post-termination service amounts are also payable.</p> <p><i>B. If no re-tendering:</i></p> <p>Payment equals Fair Market Value of the Project (assuming continuation for full term), <i>less</i> same adjustments as listed above for a re-tender process (except State's tender costs replaced with State's independent expert costs).</p> <p>Fair Market Value to be determined by the independent expert.</p>

Desalination project	Toll road project	Hospital project	Car park project
<p>between informed and willing parties, other than in a forced or liquidation sale.</p> <p>To be determined by the independent expert and assumes continuation for life of Project.</p> <p>Expert must use net present value of cashflows and accounting for various factors eg willing buyer bidding in public tender, costs to new Contractor, reinstatement costs incurred etc and using blended discount rate.</p>		<p>by the independent expert.</p> <p>Definition of 'Fair Value' – same as for Desalination Project.</p> <p>NPV formula specified for cashflow projections.</p>	<p>Definition of 'Fair Value' – same as for Desalination Project.</p> <p>NPV formula specified for cashflow projections.</p>

Table 3: State Default

Tunnel project	Road project	Toll road project
<p>Payment equals:</p> <ul style="list-style-type: none"> • Project Debt • <i>plus/less</i> interest rate hedge payments/gains • <i>plus</i> an amount sufficient to give a nominal after tax IRR equal to the Equity Return. <p>'Equity Return' is the nominal after tax (on project cashflows) IRR per annum projected to be earned during concession period (assuming no early termination or extension) based on:</p> <ul style="list-style-type: none"> • distributions in the BCFM (if projection made within first 5 years of tolling) • a reasonable forecast based on historical performance and current projected growth (if projection made after first 5 years of tolling). <p>Calculation of Equity Return must take into account:</p> <ul style="list-style-type: none"> • amounts received by or paid to investors and amounts which Project Co and State must pay as a consequence of termination • amounts actually distributed or accrued prior to the relevant time. 	<p>Early Termination Payment equals:</p> <ul style="list-style-type: none"> • Project Debt • <i>plus/less</i> interest rate hedge payments/gains • <i>plus</i> an amount sufficient to give a nominal after tax IRR equal to the Equity Return. <p>'Equity Return' is the nominal after tax (on project cashflows) IRR per annum projected to be earned during concession period (assuming no early termination or extension) based on:</p> <ul style="list-style-type: none"> • distributions in the BCFM (if projection made within first 5 years of tolling) • a reasonable forecast based on historical performance and current projected growth (if projection made after first 5 years of tolling). <p>Calculation of Equity Return must take into account:</p> <ul style="list-style-type: none"> • amounts received by or paid to investors and amounts which Project Co and State must pay as a consequence of termination • amounts actually distributed or accrued prior to the relevant time. 	<p>Project Debt <i>plus</i>:</p> <ul style="list-style-type: none"> • Other amounts payable to the Financiers as a result of termination • Demobilization and other reasonable costs incurred as a result of termination • Subject to some limitations, third party costs reasonably incurred as a result of termination • Prevailing pre-tax IRR at the date of termination (or the base case equity return if termination occurs prior to or within the first 3 years of tolling) <p><i>less</i> various other amounts such as:</p> <ul style="list-style-type: none"> • any amount owing to the State • amounts received by or paid to Project Co.

Table 4: Prolonged Force Majeure

Desalination project	Road project/tunnel project	Toll road project	Hospital project	Car park project
<p>'Force Majeure Termination Amount' payment is Project Debt:</p> <ul style="list-style-type: none"> plus subcontract and other contract break costs plus outstanding amounts owed by the State plus Electricity Asset Price plus costs OR less gains, arising for Project Co due to termination of Finance Documents less amounts owing to the State less amounts due to Project Co from Financiers for prepayments of debt and interest and amounts received from third parties less debt to be converted to equity (if terminated before date for conversion) less insurance proceeds less Receivables Refund Payment. 	<p>No termination right for Prolonged Force Majeure.</p> <p>Note: Early Termination Payment payable under Road Project if State terminated due to Uninsurable Force Majeure Event. Payment is the same as for State Default (see Table 3 above).</p>	<p>'Force Majeure Termination Payment' is the higher of:</p> <ul style="list-style-type: none"> 'no tendering' Default Termination Payment Force Majeure Termination Payment (below). <p>Force Majeure Termination Payment</p> <p>Payment equals Project debt plus outstanding amounts owed by the State: less various other amounts such as:</p> <ul style="list-style-type: none"> amounts owing to the State by Project Co gains resulting from termination of finance or project documents insurance proceeds and credit balances all sums due and payable to Project Co by Financiers as a result of pre-payment of debt securitisation refund payment. 	<p>'Force Majeure Termination Payment' is the higher of:</p> <ul style="list-style-type: none"> 'no tendering' Default Termination Payment Force Majeure Termination Payment (below). <p>Force Majeure Termination Payment</p> <p>Payment equals Project debt plus outstanding amounts owed by the State:</p> <ul style="list-style-type: none"> plus costs OR less gains, arising for Project Co/Fin Co due to termination of Finance Documents less amounts owing to the State less Project Co's insurance proceeds less amounts due to Project Co or Finance Co from Financiers for prepayments of debt and interest and amounts received from third parties less amounts in Financial Model intended to be refinanced as equity (or debt treated as equity) less credit balances owed to Project Co not already accounted for less net amounts under loan arrangements between the State and Finance Co. 	<p>'Force Majeure Termination Amount' payment equals:</p> <ul style="list-style-type: none"> the lower of Actual Debt and the amount forecast in the Financial Model as owing to the Financiers at the Termination Date (plus interest from Termination Date until the date of payment) plus costs OR less gains, arising for Project Co/Fin Co due to termination of Finance Documents less amounts owing to the State less Project Co's insurance proceeds less amounts due to Project Co or Finance Co from Financiers for prepayments of debt and interest and amounts received from third parties less amounts in Financial Model intended to be refinanced as equity (or debt treated as equity) less credit balances owed to Project Co not already accounted for less Sub-Sublease Refund Payment.

Table 5: Termination for Convenience

Desalination project	Toll road project D	Hospital project B	QEII car park
<p>Payment equals the higher of:</p> <p>(A) Project Debt:</p> <ul style="list-style-type: none"> plus NPV of forecast equity cashflows to end of term (using the discount rate equal to lower of: (i) prevailing market rate of return to equity for projects with similar risk profile; and (ii) equity returns assumed in BCFM) plus Project Co employee redundancy payments and subcontract and other contract break costs plus outstanding amounts owed by the State and Electricity Asset Price plus costs or less gains, arising for Fin Co due to termination of Finance Documents less amounts owing to the State less gains to Project Co directly from termination and insurance proceeds less amounts due to Project Co from Financiers for prepayments of debt and interest and amounts received from third parties less Receivables Refund Payment. <p>AND</p> <p>(B) Project Debt:</p> <ul style="list-style-type: none"> plus costs or less gains, arising for Fin Co due to termination of Finance Documents plus outstanding amounts owed by the State and Electricity Asset Price. 	<p>Project debt plus:</p> <ul style="list-style-type: none"> an amount which gives an equity return calculated for the period between the termination date and the end of the concession being the greater of: <ul style="list-style-type: none"> (i) the Blended Equity Return (pre-tax IRR in Base Case Financial Model) (ii) the fair market value of the equity as reasonably assessed by the Independent Expert, having regard to projects with similar risk profiles various costs arising from the early termination, including employee redundancy payments, D&C or O&M termination costs and finance break costs amounts owing to Project Co by the State <p>less various other amounts such as:</p> <ul style="list-style-type: none"> amounts owing to the State by Project Co gains resulting from termination of finance or project documents insurance proceeds and credit balances all sums due and payable to Project Co by Financiers as a result of pre-payment of debt security refund repayment. 	<p>Project Co is entitled to receive a 'Termination Payment' where termination is for convenience.</p> <p>Payment equals Debt:</p> <ul style="list-style-type: none"> plus Fair Market Value of equity (as assessed by expert and assuming continuation for full term) plus Project Co employee redundancy payments plus subcontract break costs plus costs OR less gains, arising for Project Co/Fin Co due to termination of Finance Documents less amounts owing to the State less Project Co's insurance proceeds less credit balances and other amounts owed to Project Co not already accounted for less amounts due to Project Co or Finance Co from Financiers for prepayments of debt and interest and amounts received from third parties less net amounts under loan arrangements between the State and Finance Co, <p>with a <i>minimum</i> payment of Debt (<i>plus</i> Project Co costs or <i>less</i> Project Co gains, from terminating Finance Documents).</p>	<p>Project Co is entitled to receive a 'Voluntary Termination Amount' where termination is for convenience.</p> <p>Payment equals Actual Debt:</p> <ul style="list-style-type: none"> plus return on equity (assuming continuation for full term) plus Project Co employee redundancy payments plus subcontract break costs plus costs or less gains, arising for Project Co/Fin Co due to termination of Finance Documents less amounts owing to the State less Project Co's insurance proceeds less credit balances and other amounts owed to Project Co not already accounted for less amounts due to Project Co or Finance Co from Financiers for prepayments of debt and interest and amounts received from third parties less the Sub-Sublease Refund Payment.

19 Comparative analysis of key issues in D&C contracts in recent social infrastructure PPPs

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Security package – Construction Bond – Value	[Redacted]% Contract Price	8% Contract Price	7.5% Contract Price	10% Contract Price	8% Contract Price	8.5% Initial Contract Price
Security package – Construction Bond – Commencement	Prior to Financial Close	Prior to Financial Close	Prior to Financial Close	Prior to Financial Close	Prior to Financial Close	Prior to Financial Close
Security package – Construction Bond – Expiry	[Redacted] months after the Original Date for Commercial Acceptance	3 months after the Original Date for Commercial Acceptance	3 months after the Date for Commercial Acceptance	3 months after the Date for Completion	3 months after the Date for Final Completion	3 months after the Original Date for Commercial Acceptance
Security package – Post-Completion Bond – Value	[Redacted]% Contract Price	2.5% Contract Price	2.5% Contract Price	2.5% Contract Price	2.5% Contract Price	3.75% Initial Contract Price
Security package – Post-Completion Bond – Commencement	Upon the issue of the Certificate of Commercial Acceptance	Prior to Date of Commercial Acceptance	Prior to Date of Commercial Acceptance	Prior to Date of Builder Completion	Prior to Date of Final Completion	Prior to Date of Commercial Acceptance

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Security package – Post-Completion Bond – Expiry	No earlier than [redacted] months after the Original Date of Commercial Acceptance	12 months after the Date of Commercial Acceptance (Defects Liability Period)	12 months after the Date of Commercial Acceptance (Defects Liability Period)	12 months after the Date of Builder Completion	12 months after the Date for Final Completion	No earlier than 12 months after Date of Commercial Acceptance
Bond – Draw down	<p>Project Co able to draw down without notice where:</p> <ul style="list-style-type: none"> Project Co has a bona fide Claim against the Builder Insolvency Event affects Builder or Parent Guarantor Project Co entitled to terminate due a Builder Default Termination Event Builder has failed to replace any Performance Bond when required 	<p>Project Co able to draw down without notice where:</p> <ul style="list-style-type: none"> Builder fails to achieve Commercial Acceptance by Date for Commercial Acceptance fails to rectify or complete a Technical Completion Outstanding Item or Commercial Acceptance Outstanding Item within the relevant Outstanding Item Completion Period Builder fails to rectify a Defect within the time required by the relevant Defect Notice 	<p>Project Co able to draw down without notice where:</p> <ul style="list-style-type: none"> Project Co has a bona fide Claim against the Builder the Builder is in breach of the D&C Subcontract or any other D&C Project Document an Insolvency Event occurs in respect of the Builder Project Co becomes entitled to exercise a right under the D&C Subcontract or any other D&C Project Document in respect of any failure by the Builder to 	<p>Project Co able to draw down without notice where:</p> <ul style="list-style-type: none"> Project Co has a bona fide Claim against the Builder Builder is Insolvent Project Co entitled to exercise a right under the Construction Contract or any other Construction Document in respect of any failure by the Builder to perform its obligations, including on termination Project Co is given notice by the Facility Manager in accordance with clause 22(d) of the Interface Deed Terms Sheet 	-	<p>Project Co only entitled to have recourse to extent that:</p> <ul style="list-style-type: none"> exercises a right to terminate following Builder Default Termination Event for an amount in good faith considers due and payable or recoverable as loss suffered considers in good faith that Builder is in breach of any payment or other obligations under this Agreement or any other Builder Document in good faith considers due and payable or recoverable as loss suffered as a

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		<ul style="list-style-type: none"> • Insolvency Event occurs in respect of the Builder or Builder Guarantor • Builder fails to pay an amount which is due and payable under, in respect of, or as a result of, a breach and Project Co has provided written notice • Builder has failed to provide or replace any Construction Bond when required • Builder has failed to pay an amount owing under the Interface Agreement • State requires Project Co to call on the Construction Bond under the Project Agreement due to failure of the Builder 	<p>perform its obligations</p> <ul style="list-style-type: none"> • Builder has failed to provide or replace any Performance Bond when required under the D&C Subcontract • Project Co is given notice by the FM Sub contractor in accordance with clause 20(d) of the Interface Deed <p>directed to do so by the State under the Project Agreement or where the State has a right of recourse to any Performance Bond under the Project Agreement, but only to the extent that the Builder's breach or failure to perform an obligation under the D&C Subcontract</p>	<ul style="list-style-type: none"> • failed to replace any Performance Bond 		<p>result Performance Bond is not replaced when required</p>

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		<ul style="list-style-type: none"> satisfy any Moneys Owning by the Builder to Project Co Project Co terminates the D&C Subcontract as a result of default by the Builder or an Insolvency Event 				
Liability – Cap	<p>[Redacted]% Contract Price</p> <p>Note there is also a cap in respect of Abatement Amounts (Abatement Cap) of [Redacted]% Contract Price</p>	<p>50% of Contract Price</p> <p>Reduced by:</p> <ul style="list-style-type: none"> amount of any payment made by the Builder to the FM Sub contractor under the Interface Agreement any amount demanded under a Performance Bond any amount paid by the Parent Guarantor under a Parent Company Guarantee <p>Increased by:</p> <ul style="list-style-type: none"> by the amount of 	50% of Contract Price	50% of Contract Price	<p>50% of Contract Price</p> <p>Reduced by:</p> <ul style="list-style-type: none"> amounts paid by the Builder directly to the State or the Security Trustee under the side deeds Amounts paid by Construction Contractor to another Key Sub contractor under Interface Amount demanded under a Performance Bond <p>Increased by:</p> <ul style="list-style-type: none"> Amounts Contractor receives from another Key Sub contractor as comp for amounts paid by Contractor to PPP Co in respect of 	50% of Initial Contract Price

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		any payment which the Builder receives from the FM Sub contractor as compensation for any amount paid by the Builder to Project Co in respect of a Liability under the D&C Subcontract			liability <ul style="list-style-type: none"> Amounts a Change causes an increase in Contract Price 	
Liability – exclusions	<ul style="list-style-type: none"> fraudulent act or omission, wilful default or wilful misconduct by the Builder or a Builder Associate abandonment of the Builder Works damage to property arising out of the Builder Works third party claims in relation to IP infringement third party claims in relation to death, 	<ul style="list-style-type: none"> fraudulent act or omission or wilful default or criminal conduct of the Builder to extent payments have been received under insurance policies (or should have been received) abandonment of the Builder Works Liability that is a statutory fine arising out of a breach of statutory duty, Liability that 	<ul style="list-style-type: none"> LDs Fraud, criminal acts, wilful default, wilful misconduct, wilful or reckless damage to extent payments have been received under insurance policies (or should have been received) abandonment of works or failure to commence construction personal injury, death, destruction or 	<ul style="list-style-type: none"> LDs fraud, wilful misconduct, theft and wilful or reckless damage, and criminal conduct extent payments have been received under insurance policies (or should have been received) abandonment of works or failure to commence construction personal injury, death, destruction or damage to property 	<ul style="list-style-type: none"> insured liability under an insurance policy required to be maintained under the Construction Contract, in respect of an amount equal to any insurance proceeds recovered under such insurance policy arose from Construction Contractor malfeasance, fraudulence, wilful default, a liability that cannot be limited at law, a statutory fine Construction Contractor liability arises out of abandonment of 	<ul style="list-style-type: none"> wilful default, fraud or gross negligence by the Builder or any Builder Associate any amount for which the Builder receives insurance proceeds breach of Clauses 21.2, 21.3 and 21.4 (re IP)

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>injury or property damage</p> <ul style="list-style-type: none"> any Liability that cannot be limited or excluded by Law Builder's costs in relation to any Builder Defects during the Defect Liability Period <p>Note cap does not include and will not be eroded to extent of any amount covered (or that would have been recovered) under an insurance policy under the Construction Contract.</p>	cannot be limited by Law	<p>damage to property</p> <ul style="list-style-type: none"> interest payable by Builder under Project Document amounts Builder recovers from an Interface Contractor in respect of the liability Liability that cannot be limited by law. 	<ul style="list-style-type: none"> interest payable by Builder under Project Document amounts Builder recovers from an Interface Contractor in respect of the liability Liability that cannot be limited by law 	Project Works	
Liability – LD cap within general liability cap?	Yes	Yes	No	No	No	No
Liability – LD cap	[Redacted]% Contract Price	12% of Contract Price	10% of Contract Price	Limited to [\$80.2 million]	[15]% of Contract Price – To match Construction Contractor Sunset Date of 12 Months after Date for Final Completion	10% of Initial Contract Price

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Liability – Consequential loss definition	Meaning given in Project Deed	As per Project Deed	<ul style="list-style-type: none"> • loss of opportunity, profit, anticipated profit, business, business opportunities or revenue, any failure to realise anticipated savings • any penalties payable under contracts other than the D&C Subcontract • consequential, indirect, special or punitive damages 	As per Project Deed	<p>Indirect Loss means any loss that is indirect and any of the following losses (whether direct or indirect):</p> <ul style="list-style-type: none"> • loss of profits • loss of revenue • loss of income • loss of production • loss of business • loss of business opportunity • loss of contract • loss of goodwill • loss of use of property • failure to realise anticipated savings • direct or indirect financing costs; or • penalties payable under agreements other than this deed, 	<ul style="list-style-type: none"> • loss of opportunity, profit, anticipated profit, business, business opportunities revenue or any failure to realise anticipated savings • loss or damage to reputation, loss of goodwill or any business interruption, loss of access to markets, loss of use • loss or damage not arise naturally, or according to the usual course of things, from the relevant event itself <p>or any similar costs, loss, expense or damage, whether or not within the reasonable contemplation of the parties as at the Date of this Agreement</p>

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
						and whether that cost, loss expense or damage is present or future, fixed or unascertained, actual or contingent or liquidated or unliquidated
Liability – Consequential loss exclusion	<ul style="list-style-type: none"> any payment expressly stipulated to be payable by the Builder to Project Co in the Construction Contract and the Interface Agreement costs incurred by Project Co in: rectifying or mitigating the effects of Builder Defects and Damage, making the Works safe loss, damage, costs and expenses incurred by Builder that can be claimed from Project Co and is recoverable by Project Co from 	<p>Re liabilities of Builder to Project Co</p> <ul style="list-style-type: none"> any amounts payable by the Builder in respect of Termination Payments Liability to pay Financing Delay Costs Liability to pay Liquidated Damages Project Co's Liability to pay the FM Sub contractor under the interface Agreement any proceeds or amounts recoverable under any insurance policy <p>Re liabilities of</p>	<ul style="list-style-type: none"> [criminal acts or fraud of Builder or any Builder Associate wilful misconduct under any D&C Project Document by Builder or Builder Associate any loss of or damage to third party property or injury to, disease or death of a person to the extent which, by Law, the parties cannot limit or exclude the direct costs incurred by Project Co in rectifying a Defect Builder is 	<ul style="list-style-type: none"> Loss of or damage to third party property LDs abandonment costs incurred by Project Co in rectifying a Defect any amounts payable by either party under Schedule 8 of the Project Deed (Estimated Cost Effect) or clause 15 of this Terms Sheet Project Co's Liability to the Territory pursuant to the Project Deed the Territory's liability to Project Co pursuant to the 	<ul style="list-style-type: none"> loss in respect of death or personal injury or physical damage to third party property due to acts or omissions of in relation to loss sustained by the Project Company or a Project Company Related Party, the Construction Contractor or Construction Contractor Related Party (and vice versa) loss arising from any criminal acts or fraud on the part of in relation to loss sustained by the Project Company or a Project Company Related Party, the Construction Contractor or Construction 	<ul style="list-style-type: none"> wilful default, fraud or gross negligence by the Builder or any Builder Associate any amount for which the Builder receives insurance proceeds breach of Clauses 21.2, 21.3 and 21.4 (re IP)

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>the State subject to the Pass Through Principles</p> <ul style="list-style-type: none"> Liability in respect of any Liability for the Liquidated Damages, Extension Event Compensation Amounts, and Abatement Amounts any amount payable by the Builder in respect of a Change Compensation Event deductions by the State from the Quarterly Service Payment pursuant to clause 31.4 of the Project Agreement Termination Payments as expressly stipulated in the Construction Contract 	<p>Project Co to Builder:</p> <ul style="list-style-type: none"> Liability arising from death, injury or property damage (other than pure economic loss arising as a result of such damage) Liability in respect of Claims in connection with the D&C Subcontract by third parties against an Indemnified Person Liability arising from wilful misconduct on the part of Project Co moneys which Project Co at any time is or becomes actually liable to pay the Builder amounts payable by Project Co re Termination Payments 	<p>liable for</p> <ul style="list-style-type: none"> any amounts payable by the Builder under Schedule 4 of the Project Agreement (Change Compensation Principles) or section 16 Project Co's Liability to the State pursuant to the Project Agreement (including Abatement) LDs any amounts recovered from insurances amounts due by Project Co to pay or repay the indebtedness of Project Co under the Financing Documents on the due date any payment expressly stipulated to be payable by the 	<p>Project Deed</p> <ul style="list-style-type: none"> Liability that is a Pass Through Claim any amounts recoverable from insurances any amounts due by Project Co or a Project Company Related Party to pay or repay the indebtedness of Project Co under the Finance Documents on the due date for payment any payment expressly stipulated to be payable by the Builder to Project Co in the Construction Contract or the Interface Deed any increased costs properly incurred by Project Co in providing the Services or operating and maintaining the 	<p>Contractor Related Party (and vice versa)</p> <ul style="list-style-type: none"> loss arising from wilful misconduct on the part of in relation to loss sustained by the Project Company or a Project Company Related Party, the Construction Contractor or Construction Contractor Related Party (and vice versa) loss which is the subject of the indemnities set out in clauses 7.9, 13.6(c) or 15.9(f) (re carbon emissions data, employee obligations and proprietary material) any liability to the extent to which by law, the parties cannot limit or contract out of Liability in respect of Claims in connection with this deed by third parties against the Project Company or a Project Company Related Party to the extent that if any such 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>subject to the proviso that the above exclusions do not in any way limit Liability of Builder to Project Co which is, or would have been, recovered under an insurance policy required to be held in respect of the Contract, but only to the limit of insurance required under the Project Agreement.</p>	<ul style="list-style-type: none"> • Moneys Owning • any proceeds or amounts recoverable under any insurance policy • payments in respect of the Contract Price • amounts payable in respect of Change Compensation Events 	<p>Builder to Project Co in the D&C Project Documents]</p>	<p>Facility</p>	<p>Claims were able to be made directly against the Construction Contractor by the third party, the Liability in respect of those Claims would be direct or otherwise would not fall within the remainder of this definition of 'Indirect Loss'</p> <ul style="list-style-type: none"> • moneys which the Project Company at any time is or becomes actually liable to pay the Construction Contractor under any provision of a D&C Document which is not otherwise for an Indirect Loss • any amounts payable by the Project Company under clause 74.1 (consequences of termination) • Project Company's liability under clause 88 (Construction Interface Agreement) • cost to the Project Company of procuring an alternative item of FF&E arising from a 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
					<p>breach of clause 19 by the Construction Contractor</p> <ul style="list-style-type: none"> • Liability incurred by the Project Company (including to a third party) in rectifying a Defect for which the Construction Contractor is liable under this deed • Moneys Owing under an express provision of this deed which is not otherwise for an Indirect Loss) • any amounts payable by the Construction Contractor under Schedule 16; (termination payments) • Liability to pay amounts pursuant to clause 21; (time for delivery – Includes delay damages, delay costs and ACL insurance) • Liability to indemnify the Project Company for Abatement Amounts • the Project Company's 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Acts of prevention	<ul style="list-style-type: none"> any act by Project Co or a Project Co Associate, other than as permitted or required under the Construction Contract any omission by Project Co to do something which it is obligated to do under the Construction Contract, other than as permitted or required under the Construction Contract any breach by Project Co of the Construction Contract any Project Co Modification failure to perform a Wrap Exclusion <p>but does not include</p>		<ul style="list-style-type: none"> any act or omission of Project Co or a Project Co Associate any breach by Project Co of any D&C Project Document which affects the performance by the Builder of its obligations under the D&C Subcontract. <p>other than any act, omission or breach to the extent which it:</p> <ul style="list-style-type: none"> is caused or contributed to by the State or any State Associate under a Project Document is authorised or permitted under any D&C Project Document is caused or contributed to by 	<ul style="list-style-type: none"> any act or omission of Project Co or a Project Company Related Party any breach by Project Co of any Construction Document <p>which affects the performance by the Builder of its obligations under the Construction Contract, other than any act, omission or breach to the extent which:</p> <ul style="list-style-type: none"> is caused or contributed to by the Territory or any Territory Related party under a Project Document is expressly authorised or permitted under any Construction Document is caused or 	<p>Liability to pay a party to the Construction Interface Agreement.</p> <ul style="list-style-type: none"> a breach of this deed or any D&C Document by the Project Company an act or omission by the Project Company or a Project Company Related Party not being an act or omission expressly permitted or allowed for by the D&C Documents except to the extent the act or omission is caused or contributed to by a breach by the Construction Contractor of the D&C Documents or any negligent or unlawful act or omission of the Construction Contractor or a Construction Contractor Related Party, and does not result from the exercise by the State or SHFA of any of its powers and functions pursuant to any Law 	<p>'Construction Extension Event' means:</p> <ul style="list-style-type: none"> an act, default or omission of Project Co or a Project Co Associate not caused or materially contributed to by the Builder but which is not Compensable Extension Event or <i>Force Majeure</i> Event or an act or omission of Project Co permitted under this Agreement Project Co Modification a valid suspension of the Works by the Builder

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	an Extension Event under the Project Agreement, a <i>Force Majeure</i> Event or any act, omission or breach to the extent caused by the State or any State Associate, another Key Sub contractor, Builder's breach of the Construction Contract or negligence or wrongful act or omission of the Builder or any Builder Associate.		the Builder's or any Builder Associate's breach of any D&C Project Document or the negligence or wrongful act or omission of the Builder or any Builder Associate.	contributed to by the Builder or any Builder Related Party's breach of any Construction Document or the negligence or wrongful act or omission of the Builder or any Builder Related Party.	under the Project Deed <ul style="list-style-type: none"> any suspension by the Construction Contractor of its obligations under this deed pursuant to clause 73.5(c)(i) a Change Order issued by the Project Company under clause 56.7 	
Project Co Modification	a modification as initiated by Project Co under the Construction Contract (but does not include State Modifications).	-	a Modification proposed by Project Co and confirmed in a Modification Order or which the D&C Subcontract otherwise expressly provides to be a Project Co Modification and which is not a State Modification (but does not include a Minor Modification)	-	-	a Modification initiated by Project Co, or to which Clause 52.20 applies which is not a Modification or FF&E Modification initiated by the State under the Project Agreement

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Additional costs (above Contract Price)	<p>Only:</p> <ul style="list-style-type: none"> • Modifications • Compensable Extension Events • other additional amounts passed down from the Project Agreement • interest that accrues in the Construction Delay Account and the Sub Debt LD Account • insurance proceeds paid to Project Co to which the Builder is entitled • other payments to which the Builder is entitled under the Construction Contract 	<p>Only:</p> <ul style="list-style-type: none"> • Construction Extension Events • Amount payable under Termination Payment Provisions • Any other amounts expressly payable 	<p>Only:</p> <ul style="list-style-type: none"> • Delay costs as a result of a Project Co Act of Prevention • Costs in respect of a Project Co Modification • Amount payable under Termination Payment Provisions 		<ul style="list-style-type: none"> • Changes in accordance with clauses 55 and 56 and the ECE Schedules • Minor Changes • remediation costs under clause 9.5; • acceleration costs under clause 21.7; • Prolongation Costs under clause 21.8; • GST under clause 86.2; • the Construction Contractor's costs of preparing and submitting a Change Notice; • insurance premiums under clause 67.5 • interest under clause 68.11 • cost of repair or rebuilding under clause 64.1; and • any other costs which the Construction Contractor is explicitly entitled to payment for under this deed 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Warranties	<p>All warranties in relation to the design, construction and commissioning of New Facility required to be given by Project Co to the State under the Project Agreement will be passed through consistently with the Obligations Flow Down Table, including the Fit for Intended Purposes Warranty.</p> <p>The Fit for Intended Purposes Warranty to be provided by the Builder as at Commercial Acceptance will cover works and activities that are not Builder Works:</p> <ul style="list-style-type: none"> the Builder will warrant that such works and activities fulfil the Fit for Intended Purposes Warranty as at Commercial 	<p>[In addition to Pass through of warranties from Project Deed + Warranty Items] Builder as at the Date of Commercial Acceptance of the Works the New Facility (as constructed) is and will remain at all relevant times during the Term, Fit for the Intended Purposes (subject to the proper performance by Project Co of its obligations under the Project Agreement during the Operating Term) and it has checked and carefully considered and understands (or is deemed to have checked and carefully considered and understood) fully what is meant by 'Fit for the intended Purposes' and how to ensure</p>	<p>[In addition to warranties passed through from the Project Deed] Builder represents that, as at the relevant Date of Completion, the Facility is Fit for Purpose and capable of being Fit for Purpose at all times throughout the Term, by reference to standards as at the Date of Completion.</p>	<p>Pass through of warranties, including the Fit for Intended Purpose warranties related to the D&C Obligations which will be passed through to reflect the principle that, as at the Date of Completion, the Facility will be and will remain at all relevant times during the Term, Fit for Intended Purpose subject only to clause 4.3(c).</p> <p>Exceptions to warranties (other than Warranty Items) provided at clause 4(c) to extent that Claim or Liability caused by:</p> <ul style="list-style-type: none"> fair, wear and tear of the Works, including a Warranty Item any failure to operate, maintain or repair the Works, including any Warranty 	<p>Additional design and construction warranties:</p> <ul style="list-style-type: none"> (Project Brief): it has checked and carefully considered the Project Brief and other requirements of this deed, in respect to design and construction (design): the design of the Facilities and the Public Realm will be completed in accordance with the requirements of this deed and so that the Construction Contractor satisfies the FFP Warranty and the Sustainability Requirements (Project Objectives and Services) the Scheme Design and the design and construction of the Facilities and the Public Realm is consistent with, and facilitates and does not impair the achievement of the Project Objectives 	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>Acceptance</p> <ul style="list-style-type: none"> • if after Commercial Acceptance a Defect arises in such works and activities, that Defect will not be a Builder Defect, including where the Defect is a failure to fulfil the Fit for Intended Purposes Warranty (This exclusion does not extend to any design obligations of the Builder). 	<p>the New Facility will meet this requirement.</p> <p>Builder warrants that it will design and construct the Builder DCA Works so that, when completed, they will at the date of the Builder DCA Works Completion be fit for their intended purpose as reasonably inferred from the Design and Construction Documents and comply with the requirements of the D&C Subcontract and of Law.</p>		<p>Item in accordance with the Output Specification or Industry Best Practice</p> <ul style="list-style-type: none"> • any failure to operate or maintain the Facility in accordance with the reasonable written operating or maintenance instructions provided by the Builder to the Facility Manager (including any manufacturer/ supplier requirements) • the Facility Manager performing the Services otherwise than in accordance with the Output Specification or Industry Best Practice • damage caused to the Works, including a Warranty Item by 	<ul style="list-style-type: none"> • (full liability for design): its obligations under, and the warranties given will remain unaffected and that it will bear full liability and responsibility for the design and construction of the Facilities and the Public Realm notwithstanding Scheme Design and any other design work carried out by Construction Contractor or by others prior to the Date of this deed and incorporated into this deed any review or approval of, comment upon, or failure to comment on such design by the Project Director, the State, the Project Company or anyone on their behalf • construction in accordance with the Design Documentation will ensure that Technical Completion will be 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
				negligent or unlawful acts or omissions of others (other than the Builder or a Builder Related Party)	<p>achieved by the Date for Technical Completion etc.</p> <ul style="list-style-type: none"> • Project Works, when completed, will be designed and constructed in compliance with all health and safety requirements contained in the WHS Legislation • Construction Contractor has consulted with the Operator prior to preparing the Scheme Design and prior to designing and constructing the Facilities and warrants that the design and construction of the Facilities will be completed in accordance with all requirements of the Operator necessary to enable the Operator to satisfy its obligations under the Operator Agreement 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Relief Events	-	If an Extension Event occurs other than a Compensable Extension Event under the Project Agreement, to the extent that any such Extension Event causes Commercial Acceptance to be delayed the Builder must make good Project Co's Financing Delay Costs and any holding costs payable by Project Co to the FM Sub contractor under the FM Subcontract (including any deductible period under the advanced consequential loss insurance policy taken out by the Builder (ACL Insurance))	-	Relief Events will be passed through to the Builder in accordance with the Pass Through Principles. Subject to clause 12.1(f) of this Terms Sheet (Contract Works Insurance – Advanced Loss of Profit), where the Builder is granted EOT for delay caused by a Relief Event, the Builder will be required to pay an amount equal to the equivalent liquidated damages that would be payable had an extension of time not been granted for the period covered by the Relief Event, to compensate Project Co for its daily financing costs, holding costs and other amounts of a like nature that are not recovered from the Territory under the Project Deed or covered by insurance proceeds under clause 12.1(f).	To extent it delays Final Completion, Construction Contractor must make good PPP Co's debt financing delay costs, for period after Date for Final Completion covered by the Relief Event (including any deductible period under insurance). Payment to other parties if any to be agreed. Above liability limited to lesser of Actual costs incurred by Construction Contractor and Sum of LDs applicable to the Stage for each calendar day from date after original date for Final Completion until last date covered by Relief Event.	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
EOT	<p>Builder will be entitled to an extension of time to the relevant Date for Completion where the Builder is delayed by:</p> <ul style="list-style-type: none"> • a Project Co Act of Prevention • an Extension Event under the Project Agreement 	<p>Pass through of Extension Events under Project Deed</p>	<p>In addition to Pass Through, entitled to EOT for:</p> <ul style="list-style-type: none"> • Project Co Act of Prevention • Project Co Modification • delay due to failure of FM Sub contractor to perform FM Completion Obligations (provided certain obligations are met) 	<p>In addition to Pass Through, entitled to EOT for:</p> <ul style="list-style-type: none"> • Project Co Act of Prevention • Modification directed by Project Co • suspension of Builder under clause 14.4 		<p>Pass through of Extension Events under Project Deed</p> <p>If Extension Event is not a Compensable Extension event or Construction Extension Event, only able to claim for period for which insurance proceeds are available to Project Co under the advanced loss of profit component of contract works insurance.</p> <p>Extension Event means:</p> <ul style="list-style-type: none"> • Compensable Extension Event • <i>Force Majeure</i> Event • failure by a Governmental Agency to carry out works or provide services directly necessary for the implementation of the Project • any event, circumstance or

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
						occurrence, not caused or contributed to by either party, any Project Co Associate or any Builder Associate, which prevents access to the Site • Construction Extension Event
Delay costs	Builder will be entitled to: <ul style="list-style-type: none"> be paid prolongation costs by Project Co if the Builder is granted an extension of time for a Compensable Extension Event under the Project Agreement, consistently with the Pass Through Principles be paid prolongation costs by Project Co if the Builder 	Pass through of Compensable Extension Events under Project Deed	In addition to Pass Through, entitled to delay costs for: <ul style="list-style-type: none"> Project Co Act of Prevention Project Co Modification, calculated in accordance with the Change Compensation Principles in the Project Agreement.	-	-	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	is granted an extension of time for a Project Co Act of Prevention.					
DLP	12 Months	12 Months	None specified (as per Project Deed)	12 Months	12 Months	12 Months
Site/Latent Condition Risk	None specified	None specified (as per Project Deed)	None specified (as per Project Deed)	None specified (as per Project Deed)	None specified (as per Project Deed)	Builder accepts all risks associated with Site Conditions.
Sub-Independent Certifier/Verifier	Project Co will pay the costs of the Sub-Independent Reviewer	Costs of Sub-IV borne equally between Project Co and Builder	Project Co will pay costs of Sub-IV except to extent costs due to dispute or claim raised by Builder that is decided against the Builder, or due to Builder's breach.	Project Co will pay costs of Sub-IC except to extent costs due to dispute or claim raised by Builder that is decided against the Builder, or due to Builder's breach.	Borne equally by the Project Co and the Contractor, unless and to the extent that: <ul style="list-style-type: none"> additional costs are payable to the Sub Independent Verifier and which are incurred as a result of a breach by the Construction Contractor of this deed, a request by the Construction Contractor for the performance of additional services or failure of the Construction Contractor to pass any test, in which case the Construction Contractor will pay for 	[No Sub-IC]

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
					<p>the Project Company's share of such additional costs</p> <ul style="list-style-type: none"> additional costs are payable to the Sub Independent Verifier which are not a result of the circumstances set out above, in which case the Project Company will pay for such costs 	
Events of Default	<p>As listed in Project Agreement plus:</p> <ul style="list-style-type: none"> failure to make payment when due and payable to Project Co under the Construction Contract or Interface Agreement breach of the Builder's obligation to replace a Performance Bond breach by the Builder or any other Builder Associate of a Builder 	<p>Additional Events of Default:</p> <ul style="list-style-type: none"> (payment default) fails to make a payment due and payable failure to comply with the Minimum Safety and Environmental Requirements which is not cured within 20 Business Days Parent Company Guarantee provided under the D&C Subcontract is void or voidable Performance 	<p>Additional Events of Default:</p> <ul style="list-style-type: none"> (payment default) fails to make a payment due and payable within 10 Business Days (insurances): a breach by the Builder of its obligations under clause 39 (Performance Bonds): failure to provide or replace (Change in Control): without Project Co's consent 	<p>Additional Events of Default:</p> <ul style="list-style-type: none"> (payment default) fails to make a payment due and payable within 10 Business Days (insurances): a breach by the Builder of its obligations under clause 24 (Performance Bonds): failure to provide or replace (Sub contractors) breach of clause 30 (Change in Control): without Project Co's 	<p>Additional Events of Default:</p> <ul style="list-style-type: none"> fails to regularly and diligently progress the Development Activities as required Project Co reasonably forms the view that Final Completion will not occur by the Date for Final Completion and the Construction Contractor fails to prepare, submit or comply with a Corrective Action Plan in respect of that delay in accordance with clause 21.6 Sub Independent Verifier on a date which is no more than 	<p>Occurrence of any event of default by the Builder or a Builder Relevant Company or breach of any obligation (other than a Builder Major Default or Builder Default Termination Event) by the Builder under this Agreement, the Parent Guarantee, the Builder Direct Deed or any Financier Builder Direct Deed ordination Agreement or the Financier Certifier Agreement, which event of default or breach the Builder</p>

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>Document (other than the Construction Contract) which has a Material Adverse Effect</p> <ul style="list-style-type: none"> • a default of the Parent Guarantor under the Parent Guarantee or the Parent Guarantee becomes voidable or unenforceable • there are Service Failures and, under the Abatement Regime (whether or not the Builder has actually been abated), the Builder has accumulated Failure Abatements greater than specified percentages in 1, 2, 5 and 12 month averages or a specified 	<p>Bond has been drawn down in full and at least 60% of the amounts drawn were drawn in circumstances where the Builder failed to pay sums due and payable</p>		<p>consent</p>	<p>21 months prior to the Date for Final Completion issues a certificate and the Construction Contractor failures to prepare, submit or comply with a Corrective Action Plan in respect of that delay</p> <ul style="list-style-type: none"> • representation or warranty given by the Construction Contractor in a D&C Document to which the Project Company is a party proves to be untrue • fraud, collusive, misleading or deceptive conduct on the part of the Construction Contractor or a D&C Sub contractor in the performance of the Project Works • breach by the Construction Contractor of an obligation under this deed or any other D&C Document (other than an Availability Failure or a Service Failure) 	<p>fails to cure within 20 Business Days after Project Co gives the Builder a notice in writing</p>

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>percentage of Quality Failure Points</p> <ul style="list-style-type: none"> there have been a specified number of Defaults in any specified period 				<ul style="list-style-type: none"> any time during the Development Phase, the Construction Contractor fails to comply with the terms of a Corrective Action Plan ASIC forms opinion that serious contravention of the Corporations Act relating to the Construction Contractor or a D&C Sub contractor 	
Suspension – Builder	<p>Subject to the Builder Direct Deed and the Builder Consent Deed, if:</p> <ul style="list-style-type: none"> a Project Co Major Default occurs Project Co does not pay that amount or remedy the Insolvency Event within [redacted] Business Days after receipt of a written notice (“Notice of Intended 	-	<ul style="list-style-type: none"> if (subject to Project Co’s rights to set off under the D&C Subcontract) Project Co fails to pay a sum to the Builder which has been certified by the Sub-Independent Certifier as due and payable to the Builder under the D&C Subcontract within 10 Business Days after the date Project Co 	<p>If (subject to Project Co’s rights to set-off under the Construction Contract) Project Co fails to pay a sum to the Builder which has been certified by the Independent Certifier as due to the Builder under the Construction Contract and which amount has become due and payable under the Construction Contract within 10 Business Days after the date Project Co</p>	<p>If a Project Company Default occurs and is subsisting, the Construction Contractor may give the Project Company a notice in writing.</p> <p>If the Project Company fails to rectify the Project Company Default within:</p> <ul style="list-style-type: none"> 3 Business Days after the date on which the Project Company receives, Construction Contractor may suspend performance of its obligations 10 Business Days after 	<p>Subject to the Builder Direct Deed and the Financier Builder Direct Deed, where any amount is due and payable under this Agreement by Project Co to the Builder, not the subject of a dispute, remains unpaid for 7 days after notice of non-payment has been given by the Builder to Project Co then the Builder may suspend the Works</p>

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	Suspension”)		receives notice from the Builder of the intention to suspend for failure to pay (other than monies the subject of a bona fide Dispute) <ul style="list-style-type: none"> total amount of time that the Builder will be required to continue work without payment before suspending the Builder Works is 20 Business Days 	receives notice	the date on which the Project Company receives the notice, Construction Contractor may terminate	
Immediate Termination Events – Builder	Events listed under Project Agreement plus: <ul style="list-style-type: none"> Insolvency Event occurs in respect of the Builder or the Parent Guarantor which is not remedied within specified period Change in Control, other than a Permitted Change of 	<ul style="list-style-type: none"> completion will not occur aggregate Liability of the Builder to Project Co exceeds 75% of the General Liability Cap and Builder does not elect to increase the General Liability Cap up to a maximum of 60% of the Contract Price within 5 Business 	<ul style="list-style-type: none"> fails to diligently pursue a D&C Milestone Cure Plan or to achieve a Cure Milestone in any D&C Milestone Cure Plan by more than 20 Business Days or by the D&C Sunset Date (whichever is earlier) or Sub-IC gives a certificate confirming Builder fails to 	<ul style="list-style-type: none"> Completion has not occurred by the date that is 3 months prior to the Date for Completion and the Sub-IC reasonably forms the view and certifies that the Builder will not achieve by the D&C Sunset Date Builder fails to achieve by the D&C Sunset Date 	<ul style="list-style-type: none"> Abandonment Final Completion not occurred by the Construction Contractor Sunset Date (other than due to <i>force majeure</i>) Probity event; Without PPP Co’s prior consent, assignment or disposal of rights under the Construction Side Deed, Financiers 	<ul style="list-style-type: none"> Insolvency Event occurs in respect of a Builder Relevant Company Change in Control of a Builder Relevant Company without prior consent Builder wholly or substantially abandons Commercial Acceptance has

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>Control, occurs in respect of the Builder, not approved by Project Co, and not unwound within insert Business Days</p> <ul style="list-style-type: none"> • assignment in breach of Contract • aggregate Liability of the Builder to Project Co exceeds specified percentage of General Liability Cap or LD Cap, unless parties have agreed to an increase in cap or Builder has opted to increase cap. 	<p>Days of receiving written notice</p> <ul style="list-style-type: none"> • aggregate Liability of the Builder for Liquidated Damages reaches the LDs Cap • default of the parent Guarantor under any PCG occurs and is not remedied within 5 Business Days or a PCG is void or voidable and is not replaced within 5 Business Days • Performance Bond has not been provided or replaced as required • Builder fails to implement a Draft Cure Plan or Agreed Cure Plan • Builder fails to cure a Builder Major Default by the expiry or earlier termination of 	<p>achieve by the Stage 1 D&C Sunset Date</p> <ul style="list-style-type: none"> • aggregate Liability of the Builder to Project Co exceeds 90% of the General Liability Cap and Project Co has provided 15 Business Days' notice to the Builder • aggregate Liability of the Builder for LCs reaches the Cap and the Builder has not agreed to increase the LDs Cap within 10 Business Days of a request by Project Co • default or breach of any parent Guarantor under any PCG occurs or a PCG is void or voidable and is not replaced within 15 Business Days • Insolvency Event 	<ul style="list-style-type: none"> • Builder abandons the Works or displays an intention to permanently abandon • aggregate Liability of the Builder to Project Co exceeds 75% of the General Liability Cap • aggregate Liability of the Builder for liquidated damages reaches the LDs Cap • a default or breach of any parent Guarantor under any PCG occurs or a PCG is void or voidable and is not replaced within 10 Business Days • (Performance Bond exhausted): a Performance Bond provided by the Builder has been exhausted and is not replaced • (Change to Builder joint venture): there is a change 	<p>Tripartite Deed, Independent Verifier Deed, any Material Subcontract (and any guarantee given thereunder), any Collateral Warranty and any performance related security interest granted by the Construction Contractor</p> <ul style="list-style-type: none"> • Without PPP Co's prior consent, assignment or disposal of rights by a sub contractor under any Material Subcontract or any Collateral Warranty, subject to the Construction Contractor's right to cure • Construction Contractor Major Default not cured when cureable, not capable of cure or cure plan not complied with • Damage or destruction of Works or Facility deemed a Construction Contractor Default 	<p>not occurred by the Construction Contract Sunset Date or given a certificate that don't expect to meet</p> <ul style="list-style-type: none"> • assignment • Uncured Builder Major Default • damage or destruction to the Facility in circumstances deemed to be a Builder Default Termination Event • Builder's aggregate liability for Liquidated Damages to Project Co exceeds 90% of their maximum liability for Liquidated Damages

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		<p>the applicable cure period subject to relief for Extension Events</p> <ul style="list-style-type: none"> • Insolvency Event occurs in respect of the Builder or Builder Guarantor 	<p>occurs in relation to the Parent Guarantor and unable to satisfy Project Co (acting reasonably) within 30 days that the insolvency will not adversely affect the performance under the D&C Project Documents or increase the risks to Project Co;</p> <ul style="list-style-type: none"> • result of a Probity Event, Project Co is required under the Project Agreement to terminate the D&C Subcontract and the Probity Event is not cured to the satisfaction of the State within 10 Business Days of notice 	<p>to the parties comprising the Builder joint venture which has not been approved by Project Co (acting reasonably)</p> <ul style="list-style-type: none"> • (Insolvency Event of Pindan): Parent Guarantor is Insolvent and unable to satisfy Project Co (acting reasonably) within 20 Business Days that the insolvency will not adversely affect the performance under the D&C Project Documents or increase the risks to Project Co • (Illegality Event): an Illegality Event occurs • (Probity Event): as a result of a Probity Event, Project Co is required under the Project Agreement to terminate the D&C Subcontract 	<p>Termination Event</p> <ul style="list-style-type: none"> • Aggregate liability for LDs reaches the LD Cap • Failure to provide or replace performance bonds as required. 	

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Project Co Termination Event	<p>Project Co Major defaults:</p> <ul style="list-style-type: none"> fails to make a payment to the Builder of an amount when due under the Construction Contract, other than a payment which is subject of a bona fide dispute or subject of a Pass Through Claim which has not been paid by the State; or an Insolvency Event of Project Co. <p>Builder will have right to terminate if it provides Notice of Intended Suspension re the above and Project Co does not rectify within specified time.</p>	<ul style="list-style-type: none"> Project Co fails to give access to the Site as required where the State has given equivalent or greater access to the Site to Project Co under the Project Agreement Project Co fails to make a payment certified by the Sub Independent Reviewer as due and payable to the Builder under the D&C Subcontract within 3 Business Days of it being certified as due and payable (where that amount is not in dispute) in circumstances where the payment is for an amount in excess of \$100,000 if Project Co suffers an Insolvency Event 	<p>Subject to the Builder Side Deed and for the avoidance of doubt the D&C Consent Deed:</p> <ul style="list-style-type: none"> if Project Co suffers an Insolvency Event, Builder may give notice of intention to terminate the D&C Subcontract if not cured within 20 Business Days. if Project Co fails to make a certified payment which is due and payable, Builder may give notice of intention to terminate the D&C Subcontract if not corrected within 20 Business Days 	<p>Subject to the Builder Side Deed and for the avoidance of doubt the D&C Consent Deed:</p> <ul style="list-style-type: none"> if Project Co suffers an Insolvency Event, Builder may give notice of intention to terminate the D&C Subcontract if not cured within 20 Business Days. if Project Co fails to make a certified payment which is due and payable, Builder may give notice of intention to terminate the D&C Subcontract if not corrected within 20 Business Days 	As above.	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		<ul style="list-style-type: none"> breach of a provision of the D&C Subcontract by Project Co, which causes delay to the Works or causes material additional losses, expense or liability to the Builder, provided the breach has a Material Adverse Effect on the Builder and only to the extent that the Builder has not been compensated for that delay, loss or liability 				
Payment for Termination – Convenience	Subject to Pass Through Principles (including Termination Payments under Project Deed) where Contract terminated as a result of a termination of the Project Agreement for convenience by the State, Builder entitled to costs of:	-	<ul style="list-style-type: none"> the certified value of the Builder Works performed up to the date of termination reasonable cost of materials, plant and equipment ordered for the Builder Works amounts incurred by the Builder as a direct result of 	<ul style="list-style-type: none"> the certified value of the Builder Works performed up to the date of termination reasonable cost of materials, plant and equipment ordered for the Builder Works amounts incurred by the Builder as a direct result of 	-	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<ul style="list-style-type: none"> removing all personnel, plant, equipment, facilities, vehicles and any construction waste, machinery, rubbish and debris from the Site removing temporary works and plant and equipment from the Site and returning them to their intended location preserving the Works, including storage and maintenance costs cancelling any subcontracts or altering supplier arrangements, which arises as a direct result of the termination of this Deed incurred in expectation of completion of 		<p>termination (including demobilisation, sub contractor breakage and redundancy costs)</p> <p>less</p> <ul style="list-style-type: none"> net amount Builder entitled to recover under insurance 	<p>termination (including demobilisation, sub contractor breakage and redundancy costs)</p> <ul style="list-style-type: none"> reasonable sub contractor breakage costs and redundancy costs an amount equal to 4% of the balance of the Contract Price (taking into account all payments made under this clause) in respect of loss of anticipated profits from the Construction Contract to the extent that amount is a Sub contractor Breakage Cost under the Project Deed <p>less</p> <p>net amount Builder entitled to recover under insurance</p>		

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>the Works</p> <ul style="list-style-type: none"> • outstanding and not yet submitted Claims from the Builder (including for work in progress that would have been included in the next progress claim); • demobilisation costs and costs incurred due to the termination • work carried out up to the date of termination, the amount which would have been certified as payable • costs of goods and materials reasonably ordered by the Builder for the Combined Works to the extent that the Builder has used reasonable endeavours to minimise such costs 					

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>together with:</p> <ul style="list-style-type: none"> • a loss of profit calculated at [redacted %] on the incomplete part of the Works • Liability to third parties directly arising from the termination • amount certified as due to the Builder in any unpaid Payment Certificate 					
Payment for Termination – Event of Default/Immediate Termination Event	<p>Builder is liable for and must indemnify Project Co for all Claims and Liabilities incurred by Project Co in connection with termination, including:</p> <ul style="list-style-type: none"> • any amounts payable to the State or any other person, other than Project Co or a Project Co Associate, under a Project 	<p>If the Project Agreement is terminated must pay:</p> <ul style="list-style-type: none"> • all moneys payable by Project Co to the State under the Project Agreement, and any additional costs incurred by Project Co, as a consequence of the termination • in respect of Financiers, the 	<ul style="list-style-type: none"> • the costs associated with the appointment of a replacement builder to complete the Builder Works in accordance with the D&C Subcontract and to achieve Completion • loss or damage reasonably and properly incurred by Project Co (whether incurred directly 	<ul style="list-style-type: none"> • the costs associated with the appointment of a replacement builder to complete the Builder Works in accordance with the D&C Subcontract and to achieve Completion • in relation to the Financiers – Where the Project Agreement is not terminated, any additional interest 	-	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>Document on termination</p> <ul style="list-style-type: none"> if the Builder is replaced in accordance with the Project Agreement – Costs arising on the appointment of a replacement builder, including tendering costs, and any increase in the cost of performing the remaining Construction Contract in excess of the balance of the Contract Price and any other additional costs, loss or damage incurred by Project Co if the Project Agreement is terminated, an amount equal to the difference between the sum of the amounts payable to the 	<p>difference between the termination payment Project Co receives under the Project Agreement and the aggregate of the principal debt, interest, and break costs payable by Project Co under the Finance Documents (to the extent that such payment received by Project Co is less than such principal debt, interest and break costs)</p> <p>If the Project Agreement is not terminated</p> <ul style="list-style-type: none"> all costs associated with the appointment of a replacement Builder, including the cost of constructing the remaining components of 	<p>or payable to the State in connection with the termination of the Project Agreement)</p> <ul style="list-style-type: none"> any increase in the cost of performing the remaining components of the Builder Works (including financing costs and increased costs in completing those Builder Works) in excess of the balance of the Contract Price in relation to the Financiers – where the Project Agreement is not terminated, any additional interest incurred by Project Co (or the financing vehicles) under the Financing Documents or where the Project Agreement is 	<p>incurred by Project Co under the Financing Documents; or where the Project Agreement is terminated, the difference between the termination payment (referable to debt) received by Project Co under Schedule 10 of the Project Agreement and the principal debt, interest and break costs payable by Project Co under the Financing Documents</p>		

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
	<p>Debt Financiers by Project Co as at termination and arising out of termination, including principal, interest and break costs; plus the capital amount invested by the Equity Financiers AND payment received from the State as a consequence of termination</p>	<p>the Builder Works (to the extent that such costs exceed the unpaid portion of the Contract Price)</p> <ul style="list-style-type: none"> in respect of Financiers, any additional interest incurred by Project Co under the Finance Documents <p>Less amount to cover costs and losses incurred by Project Co if the Builder has not delivered up and vacated the site.</p> <p>Reduced to extent Project Co's acts/omissions contributed to event, amount Project Co receives as insurance proceeds and gain made by Project Co as direct consequence of event of default.</p>	<p>terminated, the difference between the termination payment (referable to debt) received by Project Co under Schedule 10 of the Project Agreement and the principal debt, interest and break costs payable by Project Co (or the financing vehicle) under the Financing Documents</p>			

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Payment for Termination – Project Co Termination Event	<p>Builder’s rights on termination of the Construction Contract for default by Project Co or termination of the Project Agreement, other than as caused by a breach by the Builder or <i>Force Majeure</i> Termination Event will be those as if the Construction Contract had been terminated for convenience of the State.</p>	<ul style="list-style-type: none"> • Builder Termination Costs • Builder Break Costs • an amount in respect of loss of anticipated profits under the D&C Subcontract of 4% of the unspent Contract Price <p>(Builder Break Costs = reasonable cost of materials, plant and equipment ordered for the Builder Works + actual costs reasonably and properly incurred by the Builder in removing temporary work and construction plant from the Site and other reasonable demobilisation and redundancy costs + actual costs reasonably and properly incurred by the Builder in the expectation of completing the</p>	<ul style="list-style-type: none"> • the certified value of the Builder Works performed by the Builder up to the date of termination • the reasonable cost of materials, plant and equipment ordered for the Builder Works, to the extent the Builder cannot cancel • amounts reasonably and properly incurred by the Builder as a direct result of termination • Liabilities to third parties directly arising from the termination <p>less</p> <ul style="list-style-type: none"> • any gains accrued by the Builder as a result of termination • the net amount the Builder is entitled to 	<p>Rights will be those as if the Construction Contract had been terminated at law.</p>	-	-

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
		<p>whole of the Works) (Builder Termination Costs = amount certified as due to the Builder in any unpaid payment certificate and the amount certified as payable in accordance with the D&C Subcontract and payable by reference to timing constraints set out in the Drawdown Schedule for work carried out up to the date of termination) Less amount to cover costs and losses incurred by Project Co if the Builder has not delivered up and vacated the site. Reduced to extent Builder's acts/omissions contributed to event, amount Project Co receives as insurance proceeds and gain made by Builder as direct consequence of event of default.</p>	<p>recover under insurance</p>			

	Hospital project A	Hospital project B	Prison project A	Prison project B	Entertainment centre project	Hospital project C
Payment for Termination – Force Majeure	Builder will be entitled to payment of a termination payment comprising all of the payments set out in respect of termination for Convenience, other than loss of profit	<ul style="list-style-type: none"> • Builder Termination Costs • Builder Break Costs <p>Less amount to cover costs and losses incurred by Project Co if the Builder has not delivered up and vacated the site.</p> <p>Reduced to extent Project Co's acts/omissions contributed to event, amount Project Co receives as insurance proceeds and gain made by Project Co as direct consequence of event of default.</p>	<ul style="list-style-type: none"> • the certified value of the Builder Works performed by the Builder up to the date of termination • reasonable cost of materials, plant and equipment ordered for the Builder Works, to the extent the Builder cannot cancel <p>less</p> <ul style="list-style-type: none"> • net amount the Builder is entitled to recover under insurance 	<ul style="list-style-type: none"> • the certified value of the Builder Works performed by the Builder up to the date of termination • reasonable cost of materials, plant and equipment ordered for the Builder Works, to the extent the Builder cannot cancel • reasonable demobilisation costs incurred by the Builder as a direct result of termination, including sub contractor breakage costs, <p>less</p> <p>net amount the Builder is entitled to recover under insurance</p>	-	-

20 Comparative analysis of key issues in Australian Transport Sector PPPs

Events for which the project co/Operator is entitled to an extension of time

Toll road project A	Toll road project B	Toll road project C	Toll road project D	Light rail project
The Company and the Trustee will be entitled to an extension of the Expected Completion Date only to the extent that a delay in achieving Completion of all Sections is reasonably likely to result from progress of the works being actually delayed as a result of an Extension Event. The extent of any delay caused by or attributable to lack of financial or technical resources shall not be taken into account.	A Concessionaire will be granted an extension of time and the relevant completion date extended if the conditions precedent have been satisfied. The length of extension will be determined by an independent reviewer. The State may also, at any time, whether or not the Concessionaires have made a claim, extend the Completion date.	Not available.*	Project Co will be entitled to claim an extension of time if any Extension Event delays or is likely to delay the Project Co in achieving completion by the completion date and it is beyond the reasonable control of the Project Co.	If Operator Franchisee is, or is likely to be, delayed in achieving Completion by a Compensation Event or a Relief Event, Operator Franchisee may claim an extension of time.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
State breach	Breach of any project document by the State.	A breach of any project document by the State. A breach of any other obligation owed by the State to the Concessionaire under law.	N/A	A breach by the State or Authority of any Project Document to which the State is a party.	A breach by the State of its obligations under a State Project Document which adversely affects the ability of Operator Franchisee to perform any of its obligations or exercise any of its rights under the State Project Documents.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
State act or omission	An Act of Prevention. An action or omission that hinders, disrupts or prevents the Company or Trustee in implementing the project.	An Act of Prevention if the State which prevents, hinders or disrupts the implementation of the project by the Concessionaries.	<i>N/A</i>	Any reckless, unlawful or malicious act or omission of the State or a State Associate in respect of the project.	Destruction, loss or damage to the Project Works, the Project Area or the System, to the extent such destruction, loss or damage is the direct result of a fraudulent, unlawful or negligent act or omission of the State or any of its Associates or caused or contributed to by an act or omission of the V8 Supercar Event Promoter or any of its Associates.
State directed modifications	Where the State requires a variation of the Concession Deed or where it gives a notice for change prior to completion.	A modification but only to the extent of the extension of time agreed upon.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Step-in by state	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	The exercise of any Step-In Rights or the taking of any Required Action by the State which is taken other than as a result (directly or indirectly) of any negligence, Wilful Misconduct, breach or default of Operator Franchisee or its Associates.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Native title claims and artefacts, heritage	<p>Claims by any Commonwealth or State Minister that the construction site is a sacred site, that there are Aboriginal relics or are places of significance or that native title exists.</p> <p>Any action taken under the Historic Buildings Act 1981 (Vic), which protects an existing building or structure.</p>	<p>Where a Concessionaire is prevented from performing its obligations under the Deed in respect of the Construction Activities as a result of a Native Title Application or Native Title being found to exist in respect of a Licensed Area.</p>	<i>N/A</i>	<i>N/A</i>	<p>A Native Title Claim resulting in Operator Franchisee or a Core Contractor being directed, ordered or required by the State, a court or tribunal to suspend or cease to perform any of the Project Activities (or to change the way it does so).</p> <p>The discovery of an Artefact on or under the surface of the Project Area resulting in Operator Franchisee or a Core Contractor being directed, ordered or required by the State, a court or tribunal or by Law to suspend or cease to perform any of the Project Activities (provided that, to the extent that the discovery of the Artefact occurs during the D&C Phase, Operator Franchisee or the Core Contractor must be required to suspend or cease to perform the Project Activities, with respect to the relevant part of the Construction Site on which the Artefact</p>

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Industry wide industrial action	<p>Industrial action directed at the ESEP Project where it can be reasonably demonstrated by or on behalf of Clepco that the industrial action:</p> <p>(a) results from an act or omission of the State or any Victorian Government Agency directly in relation to the ESEP Project; or</p> <p>(b) results from or is part of an organised campaign in opposition to the implementation of the ESEP Project or any part thereof or in opposition to the implementation of other State projects or State policies.</p>	<p>Industrial Action directed at the Project where it can be reasonably demonstrated by or on behalf of the Concessionaire that the Industrial Action results from an act or omission of the State or its Associates directly in relation to the Project.</p>	N/A	N/A	<p>is discovered for a period of 30 days (in aggregate) or more).</p> <p>Any Industrial Action within Australia which:</p> <ul style="list-style-type: none"> affects the construction or light rail operation or maintenance sectors or significant segments of those sectors; and does not affect only the Project Area, the Project Works or the System.
Project-specific industrial action	N/A	N/A	N/A	<p>Industrial action that directly affects the project.</p> <p>The Project Co must be able to demonstrate that the action results directly from an act or omission of the State.</p>	N/A

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
				Excludes any industrial action caused or motivated by the deliverance of a project by way of PPP.	
Utilities	N/A	N/A	N/A	N/A	<p>During the Operations Phase, electricity required for the operation of the System not being available for use (either at all or in the necessary quantity) at the mains connection to the System Site for any reason other than because of:</p> <ul style="list-style-type: none"> • any act or omission or lack of diligence by Operator Franchisee or any of its Associates; or • a dispute under the electricity supply contract or any other arrangement between Operator Franchisee or its Associates and ENERGEX, regardless of how that dispute is initiated or by whom.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Suspension by state/required by law	N/A	N/A	N/A	Suspension, cessation of any part of O&M activities (or a change in the way they are performed) because of a: <ul style="list-style-type: none"> • government direction • court or tribunal order • requirement of law 	During the Operations Phase, an by an Authority to suspend the Project Activities (or any part of them) which prevents Operator Franchisee from performing a material part of its obligations.
Contamination	Any radioactive contamination or toxic or dangerous chemical contamination (other than pollution contamination). The existence of any pollution or contamination on ESEP Land or any other land to which Clepco has access or in relation to which the State is required to provide an indemnity under clause.	Any unexpected pollution where the Concessionaire can demonstrate that all reasonable preventative measures have been taken by it to minimise the effects of such event and that the occurrence of such event did not result from the Concessionaire breaching the Project Documents	N/A	N/A	Ionising radiation, contamination by radioactivity, nuclear contamination, or sudden and accidental chemical or biological contamination. The remediation of Migrating Contamination within the Project Area by or on behalf of the State in accordance with clause 12.3(c) (iii) (C), to the extent such remediation delays or prevents the performance of the Project Activities. Contamination in, on, over or under the Project Area to the extent such Contamination is the direct result of an act or omission of the V8 Supercar Event Promoter or its Associates.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Change in law	N/A	Any discriminatory change in law.	N/A	A project-specific change in law.	<p>A Qualifying Change in Law.</p> <p>Qualifying Change in Law means:</p> <ul style="list-style-type: none"> • a Project-Specific Change in Law occurring after the date of this deed and requiring Operator Franchisee to incur additional costs or loss of revenue; or • a General Change in Law occurring after the date of this deed and requiring Operator Franchisee to incur, during the Operations Phase and with respect to the O&M Activities (or, if the General Change in Law is a Change in Environmental Law, occurring after the date of this deed and requiring Operator Franchisee to incur, during the Term and with respect to the Project Activities): <ul style="list-style-type: none"> • additional Capital Expenditure; • additional operating costs which would not

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
					<p>otherwise be incorporated into the Service Payment as a consequence of the indexation or benchmarking of Service Payments pursuant to this deed; or</p> <ul style="list-style-type: none"> • loss of revenue.
Failure of governmental agency	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Failure by any Authority to carry out works or provide services to the Project Area which it is obliged by Law to carry out or provide.
Access	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	A failure by the State to give to Operator Franchisee the right to access a part of the Construction Site on or before the Site Access Date for the relevant part of the Construction Site in accordance with the Site Access Schedule.
Fire, flood or explosion	Any fire, flood, hurricane, explosion or natural disaster.	Fire, flood, hurricane, explosion, earthquake, natural disaster, where the Concessionaire can demonstrate that all reasonable preventative measures have been taken by it to minimise	<i>N/A</i>	<i>N/A</i>	Flood, fire, explosion, lightning, cyclone, hurricane, mudslide, landslide, earthquakes, droughts declared as a state of emergency and high seas inundation.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
		the effects of such event and that the occurrence of such event did not result from the Concessionaire breaching the Project Documents.			
War or terrorist acts	Any sabotage, act of public enemy, war, revolution.	Sabotage, act of public enemy, war, revolution or act of terrorism where the Concessionaire can demonstrate that all reasonable preventative measures have been taken by it to minimise the effects of such event and that the occurrence of such event did not result from the Concessionaire breaching the Project Documents.	<i>N/A</i>	<i>N/A</i>	A "terrorist act" (as defined in section 5 of the Terrorism Insurance Act 2003 (Cth) as at the date of this deed). War (declared or undeclared), armed conflict, riot, civil commotion.
Loss or damage to the site	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Any event or occurrence which causes loss or damage to the Project Works, the Project Area or the System.
Blockade or embargo	A riot, civil commotion or blockade.	Any riot, blockade or other civil commotion resulting from an Act by the State directly in relation to the project or forms part of an organised campaign in opposition to the implementation of the	<i>N/A</i>	<i>N/A</i>	Any blockade or embargo.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
		project where the Concessionaire can demonstrate that all reasonable preventative measures have been taken by it to minimise the effects of such event and that the occurrence of such event did not result from the Concessionaire breaching the Project Documents			
Failure to implement legislation	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	The Assumed Legislative Amendment with respect to schedule 4 of the Sustainable Planning Regulation 2009 (Qld) is not implemented by the Assumed Legislative Amendment Date.
Legal proceedings/rulings	Any court or tribunal decision which prevents or delays construction, except where the decision is caused by or results from the Company or Trustee acting in breach of the project documents.	Where a court makes a ruling relating solely to Laws which it is in the legislative power of the State to change which delays the Concessionaire from undertaking all, or substantially all, of the Project except where the decision is caused by or results from the Concessionaires acting in breach of the Project Documents or from an event or circumstance the	<i>N/A</i>	Legal action taken in respect of a key project approval procured by the State (eg Planning Scheme Amendment, Heritage Permit, Environmental Effects Assessment etc.).	A legal challenge in relation to a Key Approval or the modification, withdrawal, revocation, suspension, invalidation or replacement of a Key Approval, unless the legal challenge, modification, withdrawal, revocation, suspension, invalidation or replacement relates to or arises out of or in connection with: <ul style="list-style-type: none"> • legal action brought

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
		occurrence or existence of which reflects the crystallisation of a risk accepted (or responsibility for which has been accepted) by the Concessionaire under the Project Documents.			by or on behalf of Operator Franchisee or its Associates <ul style="list-style-type: none"> any failure of the Project Works or the System to comply with all Approvals
Preliminary works	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Early and enabling works (EEW) have not achieved "practical completion" on a part of the Construction Site identified in the Site Access Plans as an "Area for Early and Enabling Works", on or before the relevant Site Access Date for that part of the Construction Site. Operator Franchisee acknowledges that "practical completion" may be achieved under the EEW Contracts notwithstanding the existence of minor defects in the EEW and that the presence of such defects will not constitute a Compensation Event.

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Knock-on events	<i>N/A</i>	<p>Any delay in the performance by the State of either a proximate State work or a modification in respect of which the State has made an election, where:</p> <p>4 the delay in performance by the State has been as a result of an extension event</p> <p>5 the extension event occurred after the extension of time agreed upon in respect of the proximate state work or modification</p>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Interference by third-parties	N/A	<p>A delay to the Project (other than the DSB Aspects of the Project) due to a person exercising a right under the EPBC Act in respect of all or a substantial part of the Project in a manner that has a material impact on the Construction Activities.</p> <p>Except where it is due to the Concessionaire's non-compliance with their obligations under the deed or is in relation to any departure to the Day 1 design or subsequent departure from the Concept Design.</p>	N/A	N/A	<p>A breach by GCCC of its obligations under the Council Direct Deed or a breach by TTA of its obligations under the TTA Direct Deed, which adversely affects the ability of Operator Franchisee to perform any of its obligations or exercise any of its rights under the State Project Documents.</p> <p>Damage to the Project Works or the System or unreasonable interference with the Project Activities, directly caused by a third party Contractor engaged by or on behalf of the State, GCCC or TTA, in carrying out Proximate Works, implementation of a Future Stage or rectification of an EEW Defect, provided that Operator Franchisee has fully complied with all of its obligations under the deed in relation to the works which gave rise to such damage or unreasonable interference.</p>

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
Excluded works	N/A	N/A	N/A	The carrying out of excluded works in respect of O&M Activities. Excluded works are where the state omits, deletes or removes work from the scope of the Project Activities and carry out that work itself (or engage another party to carry out that work).	N/A
Agency approval or minister's decision	Any compliance with the requirements resulting from and Environmental Impact Statement.	<p>EPBC Event</p> <p>Where the outcome of any referral of the DSB Aspects of the Project to the Minister for Environment and Heritage under the EPBC Act being unresolved 18 months from the date of referral as a result of the time taken to obtain the Minister's approval under the EPBC Act, including a person exercising a right under the EPBC Act in relation to the DSB Aspects of the Project.</p> <p>Except where it is due to the Concessionaire's non-compliance with their obligations under the deed or is in relation to any departure to the Day 1 design or subsequent</p>		<p>The approval of a Management Plan under the Environmental Protection and Biodiversity Conservation Approval not being obtained by a certain date.</p> <p>Additionally, where the relevant Minister has not made a decision under the <i>Environmental Protection and Biodiversity Conservation Act</i> by a certain date.</p>	<p>A delay by the Rail Safety Regulator in granting Accreditation required for Completion, provided that:</p> <ul style="list-style-type: none"> • it is a pre-condition to relief (and compensation, if applicable) under this paragraph (m) that Operator Franchisee has fully complied with all of its obligations under the Rail Safety Accreditation Plan • any delay by the Rail Safety Regulator in granting Accreditation as a result of the Rail Safety Regulator reasonably requiring additional information or

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
		<p>departure from the Concept Design.</p> <p>EES Event</p> <p>A delay to the Project (other than the DSB Aspects of the Project) of more than 6 months due to the relevant Minister under the Environment Effects Act 1978 (Vic) requiring an environment effects statement to be prepared under the Act in respect of all or part of the Project.</p> <p>The relevant Minister under the Environment Effects Act 1978 (Vic) requiring an environment effects statement to be prepared for the DSB Aspects of the Project and such assessment being unresolved 18 months after the Commencement Date, except to the extent that:</p> <ul style="list-style-type: none"> • it is due to the Concessionaires' non-compliance with their obligations under this Deed • it is in relation to any departure from the Day 1 Design. 			<p>reasonably requiring additional testing to satisfy itself that the requirements for Accreditation have been met (provided that the Rail Safety Regulator has the statutory right to require that additional information or additional testing) will not be a Compensation Event (regardless of whether the additional information or additional testing was contemplated under the Rail Safety Accreditation Plan).</p>

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
		<p>Tunnel Ventilation Delay</p> <p>A delay to the Project exceeding 18 months from application, in the Concessionaires obtaining a works approval under the Environment Protection Act 1978 (Vic) (including any review or appeal prior to the first grant of the approval) in respect of the tunnel ventilation system for the tunnels under the Mullum Mullum Creek, except to the extent that it is due to the Concessionaires' non-compliance with their obligations under this Deed.</p>			
Other	N/A	N/A	N/A	N/A	<p>A Station Defect, other than to the extent the State implements a Modification for Operator Franchisee to carry out the defect rectification.</p> <p>Station Defect means:</p> <ul style="list-style-type: none"> any aspect of the works constructed under the EEW Contract (Station Shell) which is not in

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
					<p>accordance with the requirements of the EEW Contract (Station Shell)</p> <ul style="list-style-type: none"> any aspect of the works constructed under the EEW Contract (Station Hospital Canopy) which is not in accordance with the requirements of the EEW Contract (Station Hospital Canopy) <p>which has a significant detriment on the Project Activities or the D&C Program, provided that for the purposes of this definition, a defect (within the meaning set out in paragraph (a) or (b)) will be deemed to have a significant detriment on the Project Activities to the extent Operator Franchisee is abated under schedule 3 as a result of that defect.</p>

	Toll Road Project A	Toll Road Project B	Toll Road Project C*	Toll Road Project D	Light Rail Project
<i>Force majeure</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Any <i>Force Majeure</i> event (see part 5 below for a list of these events).	<i>N/A</i>
Exercise of statutory power	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<p>An exercise of a power or an instruction by the State or the V8 Supercar Event Promoter under or in connection with the Motor Racing Events Act 1990 (Old) occurring after the date of this deed or an act or omission of the V8 Supercar Event Promoter on the Project Area that:</p> <ul style="list-style-type: none"> materially differs from the V8 Supercar Event Requirements as at the date of this deed; and delays or disrupts Operator Franchisee or prevents Operator Franchisee from performing a material part of its obligations.

* Extension of time provisions were incorporated in the EWAG Works Deed and the NB Works Deed and were unavailable.

Conditions precedent to a claim for EOT

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>N/A</p>	<p>It is a condition precedent to the Concessionaires' entitlement to an extension of time:</p> <ul style="list-style-type: none"> • that the Concessionaires have given the claim (notice) required • that the Concessionaires are, or will be: • (A) prevented from achieving Freeway Section Completion by the relevant Planned Date for Freeway Section Completion or the relevant Late Completion Date (as the case may be) • (B) after the relevant Planned Date for Freeway Section Completion or the relevant Late Completion Date (as the case may be), delayed in achieving Freeway Section Completion, by an Extension Event • that: • (A) the relevant delay is demonstrable on an assessment of the actual and then current critical path to achieving Freeway Section Completion of the Construction Activities in 	<p>N/A</p>	<p>The Project Co's entitlement to an extension of time is subject to the following condition's precedent:</p> <ul style="list-style-type: none"> • Project Co must submit a Change Notice • the cause of the delay must be beyond the reasonable control of Project Co and its Associates • The Project Co has actually been, or is likely to be, delayed by an Extension Event in a manner which will delay it from achieving Completion as agreed • Project Co must have submitted a D&C Program and must otherwise be fully complying with its obligations in respect of the D&C Program (at the time of submitting the Change Notice). 	<p>It is a condition precedent to Operator Franchisee's entitlement to an extension of time that:</p> <ul style="list-style-type: none"> • Operator Franchisee submits its Change Notice and any updated Change Notice in the manner required by clause 16.7(b)(i) • the cause of the delay was beyond the reasonable control of Operator Franchisee and its Associates (provided that the fact that a delay occurs after the Date for Completion will not, of Itself, disentitle Operator Franchisee from relief on the basis that the delay was within the reasonable control of Operator Franchisee) • Operator Franchisee has actually been, or is likely to be, delayed by a Compensation Event or a Relief Event in a manner which will delay it from achieving Completion in the relevant manner set out in clause 16.7(a) • subject to clause 16.7(e), Operator Franchisee has

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>relation to the relevant Section by the relevant Planned Date for Freeway Section Completion or the relevant Late Completion Date</p> <ul style="list-style-type: none"> • (B) without limitation, the Concessionaires have complied with their obligations under clause 17.3 (Updating the Design and Construction Program) and clause 17.5(c) (Updated Design and Construction Program) as at the commencement and cessation of the Extension Event. <p>For the avoidance of doubt, the Concessionaires will not be entitled to an extension of the relevant Planned Date for Freeway Section Completion or the relevant Late Completion Date (as the case may be) under clause 20.4(g) (Assessment):</p> <ul style="list-style-type: none"> • except to the extent that the Concessionaires are or will be delayed by the Extension Event in achieving Freeway Section Completion of the Construction Activities in relation to that Section • if the Concessionaires can achieve Freeway Section 			<p>submitted a D&C Program in accordance with clause 16.3 and is otherwise (at the time it submits a claim under this clause 16.7) fully complying with its obligations in respect of the D&C Program under clause 16.3.</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Completion of the Construction Activities in relation to that Section by the relevant Planned</p> <ul style="list-style-type: none"> • Date for Freeway Section Completion or the relevant Late Completion Date (as the case may be) without the extension of time • in respect of the Construction Activities in relation to a Section which are not affected by the Extension Event • to the extent that either Concessionaire has not complied with its obligations under clause 20.5(a) (Obligation to mitigate) • in respect of the relevant Late Completion Date, to the extent that the delay caused by the relevant Extension Event has otherwise been taken into account in the relevant Late Completion Program • except to the extent that the cause of the delay is not attributable to a breach of the Project Documents by the Concessionaires. 			

Delay liquidated damages

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
The State does not impose delay liquidated damages.	The State does not impose delay liquidated damages.	The State does not impose delay liquidated damages.	The State does not impose delay liquidated damages.	The State does not impose delay liquidated damages.

State-Proposed variations

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The State may request information as to cost and other matters specified in the request in relation to a proposed variation of the project.</p> <p>The Company and Trustee must, as soon as possible, provide details of costs, impact on the completion date and impact on relevant traffic flows.</p> <p>The Company and Trustee shall not be required to begin work on the variation until all details have been agreed upon or have been determined by expert determination.</p> <p>Once an agreement or determination has been made, and the State has made a request, the Company and Trustee must carry out the variation.</p>	<p>The State may request information as to the revenue and cost impacts of a proposed modification of the project works. The Concessionaires must then give a notice to the State with all relevant information on cost, revenue, time, facilities, funding, implementation, etc. The Concessionaires are under a number of obligations in regards to this information, including the fact that the information must be prepared:</p> <ul style="list-style-type: none"> • in a way that minimises the need for third party consents • on an open book basis • in a way that minimises freeway disruptions <p>Where the State proposes to request a modification, it</p>	<p>The State may at any time issue a Modification Proposal to the PPP Cos.</p> <p>Within 20 business days, the PPP Cos must respond with a notice giving an estimate of costs, funding and implementation time etc.</p> <p>Following notice of the PPP Cos, the State either accept, reject or withdraw its Modification Proposal.</p> <p>If the State accepts, the PPP Cos must implement the modification as required.</p> <p>If the State rejects, there is a procedure for consultation and then, if needed, dispute resolution. Following the outcome of that process, the State can either require the PPP Cos to carry out the modification or withdraw its proposal.</p>	<p>The State may at any time issue a Modification Proposal setting out the details of a proposed Change which the State is considering.</p> <p>Within 20 business days, the project co must respond with a modification notice, that amongst other things, includes:</p> <ul style="list-style-type: none"> • an estimate of the compensation to which it considers itself entitled • the basis on which it would be prepared to fund the modification • the time in which the modification is to be implemented <p>The State must then either:</p> <ul style="list-style-type: none"> • advise Project Company that it requires further information or 	<p>The State may at any time issue to Operator Franchisee a notice titled "Modification Proposal" setting out the details of a proposed Modification which the State is considering, including the State's proposed requirements for the implementation and funding of the proposed Modification.</p> <p>If, in Operator Franchisee's opinion, any direction given by the State other than a direction given in a Notice to Proceed or Modification Order constitutes or involves a Modification, Operator Franchisee must provide notice to this effect to the State within 3 Business Days. Within 2 Business Days of receipt of such notice, the State will notify Operator Franchisee that it either agrees that the direction constitutes or involves a Modification (in which case the State will issue a Modification Proposal or Modification Order), or it disagrees that the direction constitutes or involves a Modification, and that it considers Operator Franchisee is required to comply with the direction in accordance with this deed or at Law. Alternatively, the State may withdraw the direction.</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The State shall pay the variation costs.</p>	<p>will provide the Concessionaires with details and consult at least 30 business days prior to issuing a formal request.</p> <p>Within 60 business days of receiving the required information from the Concessionaires, the State must accept or reject the notice given. If the State accepts, the Concessionaires are then under an obligation to finalise funding and obtain any relevant third party consents.</p> <p>If the State rejects the notice given by the Concessionaires, it may then require that the two parties consult in good faith to achieve a mutually acceptable resolution and/or that the Concessionaires conduct a tender process.</p> <p>The State may refer the dispute for expert determination 60 business days after the commencement of consultation or 10 business days after the tender process is complete.</p>	<p>The State may require that the PPP Co conduct a tender for some or all of the works.</p> <p>Excluding works</p> <p>The State has the right, as part of a modification to omit, delete or remove work from the O&M activities, project works and project activities.</p> <p>Restriction</p> <p>The State cannot require a modification that would adversely affect the capacity, patronage or use of the Toll road (or the ability to levy tolls). Additionally, no modification can be required to the works or project activities after the last defects liability period date.</p>	<p>clarification or has reduced the scope of the Modification Proposal</p> <ul style="list-style-type: none"> • accept the Modification Notice and, if the Modification Notice contains any options, nominate which option the State accepts • reject the Modification Notice • withdraw the proposed State Initiated Modification. <p>The State also has the option (regardless of whether a Modification Proposal or Notice has been issued, there is a matter referred for dispute resolution or whether the parties have reached an agreement on a disputed matter in the Modification Notice) of instructing the Project Co to implement a modification and make interim determinations on compensation until the parties come to an agreement or it is settled through the agreed resolution procedure.</p> <p>The Project Co. must then implement the modification</p>	<p>If the parties fail to agree whether a modification is involved, the matter may be referred by either party for resolution in accordance with clause 57 (Dispute resolution).</p> <p>Within 20 Business Days of receipt of a Modification Proposal from the State, Operator Franchisee must prepare and submit a Modification Notice to the State. The State will not be obliged to proceed with any Modification proposed in a Modification Proposal or which is the subject of a Modification Notice.</p> <p>Without limiting the State's rights, however, the State may, at any time after issuing a Modification Proposal, issue a Notice to Proceed with the Modification together with a Modification Order.</p> <p>If the State issues a Notice to Proceed to Operator Franchisee:</p> <ul style="list-style-type: none"> • Operator Franchisee must proceed to implement the Modification in accordance with the directions of the State • Operator Franchisee will be relieved of its obligations under the State Project Documents to the extent specified in the Notice to Proceed • the parties will use their reasonable endeavours to agree to the Estimated Cost Effect of the Modification and any relief required by Operator Franchisee from its obligations under the State

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Following any expert determination, the State can decide whether or not to proceed with the modification.</p> <p>For smaller modifications (less than \$20million), the time periods mentioned above shall be shortened as much as practicable and no tender process will be required.</p>		<p>(regardless of whether some matters remain in dispute). Whilst the Project Co cannot refuse to implement the modification, it may refer some matters (ie compensation) for dispute resolution.</p> <p>The State may also remove work from the stated project activities.</p>	<p>Project Documents (including extensions Date for Completion or Sunset Date) as is reasonable for the Modification</p> <ul style="list-style-type: none"> if the parties cannot agree to the Estimated Cost Effect or the relief required by Operator Franchisee, the matter will be referred to dispute resolution by expert determination and will be reasonably determined by the State until the matter is resolved any necessary adjustments to the Estimated Cost Effect and the relief granted will be made following the determination of the dispute (if applicable) <p>The State can then either accept or reject the modification notice. The State can also inform Operator Franchisee that it does not wish to proceed with the proposed Modification.</p> <p>If the State rejects the Notice, the parties must then consult in good faith. There is also a provision for dispute resolution if agreement cannot be reached. The State can issue a Notice to Proceed with the modification during dispute resolution. Following dispute resolution the State may either require that the modification be carried out or withdraw the modification.</p> <p>If the State requires that the modification be carried out (or accepts the Operator Franchisee’s Modification Notice), then the Operator Franchisee must carry out the modification in accordance with the Modification Order.</p>

Events which constitute Force Majeure

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>A <i>Force Majeure</i> is any one or more of:</p> <ul style="list-style-type: none"> • fire • flood • hurricane • explosion • earthquake • natural disaster • sabotage, act of a public enemy • war (declared or undeclared) • revolution • radioactive contamination or toxic or dangerous chemical contamination • riot • civil commotion or blockade <p>or any event which is beyond the reasonable control of the Company or Trustee.</p> <p>The risk must not be reasonably capable of adequate insurance in the commercial insurance market on reasonable terms and causes the Company or the Trustee to be unable to perform any one or more of their obligations to the State under the Project Documents, where that cause</p>	<p>A <i>force majeure</i> is an event that is beyond the reasonable control of the Concessionaires and their Contractors and one which causes them to be unable to perform an obligation under the project documents (where that has not resulted from a breach of the project documents by the Concessionaires). The event must also be one that could not have been prevented or remedied by the Concessionaires exercising a reasonable standard of care.</p> <p>A <i>force majeure</i> does not include any event the risk of which, or the occurrence of a matter or event responsibility for which, has been accepted by the Concessionaire. This does not, however, include:</p> <ul style="list-style-type: none"> • fire • flood • hurricane • explosion • earthquake • explosion • earthquake • natural disaster • unexpected pollution 	<p>A <i>Force Majeure</i> is any of the following events.</p> <p>Prior to the toll road opening:</p> <ul style="list-style-type: none"> • lightning, earthquake, cyclone, natural disaster, landslide and mudslide • explosion, malicious damage, sabotage, riots or a "terrorist act" (as defined in section 5 of the Terrorism Insurance Act 2003 (Cth) as at the date of this deed) • a flood which might at the date of this deed be expected to occur less frequently than once in every 50 years • war, invasion, act of a foreign enemy, hostilities between nations (whether war be declared or not), civil war, rebellion, revolution or military or usurped power, martial law or confiscation by order of any Authority • toxic chemical contamination • ionising radiation or contamination by radioactivity from any nuclear waste or from combustion of nuclear fuel 	<p>A <i>Force Majeure</i> includes:</p> <ul style="list-style-type: none"> • earthquake, cyclone, natural disaster, landslide, seismic activity and mudslide • explosion, malicious damage, sabotage, riots or a terrorist act • a flood which might, at the date of this deed, be expected to occur less frequently than once in every 100 years • war, invasion, act of a foreign enemy, hostilities between nations (whether war is declared or not), civil war, rebellion, revolution or military or usurped power, martial law or confiscation by order of any Authority • toxic, chemical or biological contamination • ionising radiation or contamination by radioactivity from any nuclear waste or from combustion of nuclear fuel <p>The event must also be beyond the reasonable control of the Project Co and must prevent or delay the Project Co from performing its obligations. The</p>	<p>A <i>Force Majeure</i> Event is the occurrence of a Relief Event which:</p> <ul style="list-style-type: none"> • exists or occurs or the effects of which exist or occur, or can reasonably be expected to exist or occur, for a continuous period exceeding 180 days • directly causes or the direct and immediate effects of which cause either party to be unable to comply with a material part of its obligations under the State Project Documents. <p>A relief event is:</p> <ul style="list-style-type: none"> • flood, fire, explosion, lightning, cyclone, hurricane, mudslide, landslide, earthquakes, droughts declared as a state of emergency and high seas inundation • a "terrorist act" (as defined in section 5 of the Terrorism Insurance Act 2003 (Cth) as at the date of this deed) • war (declared or undeclared), armed conflict, riot, civil commotion • ionising radiation, contamination by

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>could not have been prevented, overcome or remedied by the exercise of a standard of care and diligence consistent with that of a prudent person undertaking the obligation without that prudent person having any expectation of relief from performing that obligation, including the expenditure of all reasonable sums of money.</p> <p>A <i>Force Majeure</i> does not include:</p> <ul style="list-style-type: none"> • any event, the risk of which is or the occurrence of a matter or event • responsibility for which has been accepted by the Company or the Trustee • any Extension Event • any event or combination of events referred to in column 1 of Items 1 to 7 of the Appendix (claims of Aboriginal sites, native title, heritage protection, acts of prevention, industrial action) • lack of financial or technical resources • mechanical, electrical or equipment breakdown • any change in Law 	<ul style="list-style-type: none"> • sabotage, act of a public enemy • war (declared or undeclared) • terrorism • revolution • riot, civil commotion or blockade (resulting from a State act or in direct opposition to the project) <p>A <i>force majeure</i> does not include:</p> <ul style="list-style-type: none"> • change in law • lack of financial or technical resources • mechanical, electrical or equipment breakdown which is not extraordinary and highly unlikely • an act of prevention • failure by the State to provide support • industrial action • proximate State work • the State or any of its Associates exercising a right or power with respect to Melbourne's transport network 	<ul style="list-style-type: none"> • After to the toll road opening • any event specified above • any other material event the risk of which is not otherwise specifically allocated in the State Project Documents and is beyond the reasonable control of the PPP Cos. The event must also prevent the PPP Cos from carrying out an obligation under the project documents and must not have been prevented, remedied or overcome by PPP Cos taking prudent and reasonable measures. 	<p>event or consequence must not have been caused by the Project Co and cannot have been prevented, overcome or remedied by the Project Co by taking reasonable and prudent steps.</p>	<p>radioactivity, nuclear contamination, or sudden and accidental chemical or biological contamination</p> <ul style="list-style-type: none"> • failure by any Authority to carry out works or provide services to the Project Area which it is obliged by Law to carry out or provide • any event or occurrence which causes loss or damage to the Project Works, the Project Area or the System • any blockade or embargo • any Industrial Action within Australia which • affects the construction or light rail operation or maintenance sectors or significant segments of those sectors • does not affect only the Project Area, the Project Works or the System.

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<ul style="list-style-type: none"> any industrial action <p>it also does not include anything that would not have occurred had the Works been entirely designed and constructed to address floods of a level that might at the date of the Deed be expected to occur once in every 50 years.</p>				

Relief for Force Majeure

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>If the Company or the Trustee is unable to perform an obligation to the State under the Project Documents because of a relevant event (which includes a <i>Force Majeure</i>), then those obligations shall be suspended for the relevant period.</p> <p>The State will also be unable to exercise its right of termination because of a failure to diligently pursue repair and reinstatement if the damage or destruction was caused by a <i>Force Majeure</i>.</p>	<p>To the extent that the Concessionaire is prevented or delayed by a <i>Force Majeure</i> Event, a Concessionaire's performance of its non-financial obligations under the Deed will be suspended to that extent from the date the Concessionaires give a Suspension Notice in respect of that <i>Force Majeure</i> Event until the relevant Concessionaire ceases to be so prevented or delayed.</p> <p>The Concessionaires will not be entitled to an extension of time to the Planned Date for Freeway Section Completion as a result of any delay caused by a <i>Force Majeure</i> Event, except where expressly entitled.</p>	<p>The Project Co's obligations are suspended to the extent affected by the FM. No default notice may be issued by the State in respect of any breach of an obligation that has been suspended.</p> <p>Upon the PPP Cos, the State Works Contractor or the NB Works Contractor (as applicable) becoming able to recommence performing the obligations which were suspended, the PPP Cos must recommence (and ensure that the State Works Contractor and the NB Works Contractor recommence, as applicable) the performance of those obligations.</p> <p>The State will not be obliged to</p>	<p>The Project Co's obligations are suspended to the extent affected by the FM.</p> <p>Quarterly Services Payment will be abated in accordance with the Abatement regime, but any application of this regime will be ignored for the purpose of assessing an Event of Default so long as the Project Co complies with its obligations regarding actions to be taken in an FM event.</p> <p>If any abatement results in the Project Co not being able to make repayments of project debt and the FM event is not one that is uninsurable, should have been insured or was required to have been insured, then they Project Co will be</p>	

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	The obligation to keep all traffic lanes of the Freeway open for public use is not affected or suspended by a <i>Force Majeure</i> if safe passage of vehicles can be allowed.	provide any financial relief to PPP Cos during suspension. The PPP Cos will not be liable to compensate the State for any costs or losses which the State incurs during the period of suspension.	entitled to an amount of money necessary to make it's scheduled repayments (less the abated quarterly service payment and any amount that the Project Co is able to recover under insurance).	

Termination for prolonged Force Majeure

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
N/A	<p>There is no general right of termination but where notice is given to the State of an uninsurable <i>force majeure</i> event and the cost of the project (after relevant repairs/remedies) increases such that the equity return would be lower than the lower of (immediately prior to the relevant damage):</p> <ul style="list-style-type: none"> the applicable Base Case Equity Returns the applicable Equity Returns <p>then the State may, upon giving 15 days' notice, terminate the rights and obligations under the deed.</p>	<p>At any time after the occurrence of an Uninsurable <i>Force Majeure</i> Event, the State may in its absolute discretion terminate this deed by giving a notice to that effect to each PPP Co after which this deed will be terminated.</p>	<p>A <i>Force Majeure</i> Termination Event is where a <i>Force Majeure</i> prevents the Project Co from undertaking all or substantially all of its Project Activities for a continuous period of more than six months.</p> <p>Where a <i>Force Majeure</i> Termination Event occurs, either party can terminate the deed by giving notice.</p> <p>The Project Co cannot, however, terminate the deed:</p> <ul style="list-style-type: none"> prior to completion unless any advanced consequential insurance has expired if during the O&M term the O&M Contractor or the Project Co is entitled to recover insurance referable to the FM suspension period or would have been 	<p>If:</p> <ul style="list-style-type: none"> the parties are unable to agree on appropriate terms to mitigate the effects of the <i>Force Majeure</i> Event and facilitate the continued performance of the State Project Documents on or before the date falling 20 Business Days after the date of the commencement of the relevant <i>Force Majeure</i> Event (or the date on which the relevant Relief Event became a <i>Force Majeure</i> Event) the <i>Force Majeure</i> Event is continuing or its consequence remain such that the affected party has been or is unable to comply with a material part of its obligations under the State Project Documents during

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
			<p>able to recover had it complied with its obligations.</p>	<p>that 20 Business Day period, then either party may terminate the deed by giving 20 Business Days' notice to the other party.</p> <p>Restrictions on Termination</p> <p>The Operator Franchisee, however, may only terminate the deed if:</p> <ul style="list-style-type: none"> • the <i>Force Majeure</i> Event occurred during the D&C Phase • if Operator Franchisee is entitled to recover under the advance business interruption insurance policy, the maximum indemnity period stated in the advance business interruption insurance policy has been exceeded • if Operator Franchisee is not entitled to recover under the advance business interruption insurance policy (other than because Operator Franchisee has not complied with its obligations under clause 43 or made a proper claim), at the end of the 20 Business Day period • the <i>Force Majeure</i> Event

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
				<p>occurred during the Operations Phase</p> <ul style="list-style-type: none"> • if Operator Franchisee is entitled to recover under any business interruption insurance policies, the maximum indemnity period stated in the business interruption insurance policies has been exceeded • Operator Franchisee is not entitled to recover under any business interruption insurance policies (other than because Operator Franchisee has not complied with its obligations under clause 43 or made a proper claim), at the end of the 20 Business Day period. <p>Suspension of Operator Franchisee's right to terminate</p> <p>Subject to some requirements, the State also has the power to suspend the Operator Franchisee's right to terminate. Instead of being treated as a <i>Force Majeure</i> event, the event will be treated as a Relief Event (for the purpose of the period of suspension). The period of suspension cannot be greater than six months.</p>

Events which constitute a general change in law

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Change in law is not defined.</p>	<p>Definition</p> <ul style="list-style-type: none"> • a change in Law existing as at the Commitment Date • the enactment of a new Law after the Commitment Date • a change in the judicial interpretation of an existing Law, after the Commitment Date, <p>but does not include:</p> <ul style="list-style-type: none"> • a change in Tax other than a Change in Relevant Tax • a change in relation to Part IVAA of the Wrongs Act 1958 (Vic) or its application which: <ul style="list-style-type: none"> – limits or eliminates the impact of that Part on the legal risk allocation under the Transaction Documents as between all of the parties to the Transaction Documents (as at the date of this Deed) in so far as that legal risk allocation, in each case, relates to the Project (whether or not it has a wider application to other persons or risks) – is not expressed to apply differently to the different parties to the 	<p>Change in law is not defined.</p>	<p>Definition</p> <p>A general change in law means:</p> <ul style="list-style-type: none"> • a change in, or repeal of, an existing Law • the enactment of a new Law • a change in the way a Law is applied or interpreted as a result of a binding decision of a court of competent jurisdiction which reverses, overrules or refuses to follow an earlier binding decision of a court of competent jurisdiction where that earlier decision existed at the date of this deed <p>but does not include:</p> <ul style="list-style-type: none"> • a modification • a change in the way a Law is applied or is interpreted as a result of a court decision (other than as stated above or a decision which is the first decision on the relevant issue) • a change in the way a Law is applied or is interpreted as a result of the failure of Project Company to comply with a Law or a requirement of any Approval, or in 	<p>Definitions</p> <p>Qualifying Change in Law means:</p> <ul style="list-style-type: none"> • a Project-Specific Change in Law occurring after the date of this deed and requiring Operator Franchisee to incur additional costs or loss of revenue • a General Change in Law occurring after the date of this deed and requiring Operator Franchisee to incur, during the Operations Phase and with respect to the O&M Activities (or, if the General Change in Law is a Change in Environmental Law, occurring after the date of this deed and requiring Operator Franchisee to incur, during the Term and with respect to the Project Activities) <ul style="list-style-type: none"> – additional Capital Expenditure; – additional operating costs which would not otherwise be incorporated into the Service Payment as a consequence of the

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Transaction Documents, provided that any such change to the extent that it expressly seeks to change the risk allocation as between users of the Freeway and any parties to a Transaction Document and does not take effect more broadly than the Victorian toll road sector will not be taken to be excluded from the definition of Change in Law by virtue of this paragraph (e);</p> <ul style="list-style-type: none"> • a change in relation to Division 2 or 3 of Part 6 of the Road Management Act in so far as that change permits in whole or part: • a Claim of the State or its Associates • a Liability of the Concessionaire or its Associates to the State or its Associates, in connection with the Project which would have been permitted had those Divisions as at the Commitment Date not existed • any amendment to the Project Legislation to: <ul style="list-style-type: none"> – make clear that the DSB 		<p>response to an illegal act or omission of Project Company (including any breach of the deed by Project Company)</p> <ul style="list-style-type: none"> • any change in an Approval resulting from any direct or indirect action of Project Company including any Modification requested by Project Company • a change in any Law relating to Taxes including the Income Tax Assessment Act 1936 (Cth), the GST Act and the Income Tax Assessment Act 1997 (Cth) and the GST Law • a change in Law which was not in force at the date of this deed but which had been published in the Government Gazette (by way of bill, draft bill or draft statutory instrument or otherwise specifically referred to prior to the date of the deed), is contained or referred to in any Project Document, or a party experienced and competent in the performance of activities similar to the Project Activities would have reasonably foreseen or anticipated prior to the date 	<p>indexation or benchmarking of Service Payments pursuant to this deed; or</p> <ul style="list-style-type: none"> – loss of revenue. <p>A General Change in Law means a Change in Law that is not a Project Specific Change in Law.</p> <p>Change in Law means:</p> <ul style="list-style-type: none"> • the amendment, repeal or change after the date of this deed of any Law existing at the date of this deed • the enactment of any new Law after the date of this deed • a change in the way a Law is applied as a result of a binding decision of a court or tribunal of competent jurisdiction which reverses, overrides or refuses to follow an earlier binding decision of a court or tribunal of competent jurisdiction where that earlier decision existed on the date of this deed • a Change in Codes and Standards, to the extent Operator Franchisee is required to comply with that change under clause 26.4,

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Aspects of the Project are included in the Project</p> <ul style="list-style-type: none"> – give effect to the enforceability of the KPI Regime • a change in relation to Divisions 2 and 3 of Part 9 of the Project Legislation which provides for a Two-Stage Demand Process in place of the single demand contemplated by Division 2 of Part 9 of the Project Legislation: <ul style="list-style-type: none"> – attaching to each demand such terms, conditions, processes and procedures (including nomination rights and time periods) as considered reasonably necessary by the State to implement a Two-Stage Demand Process so long as, with respect to each demand, those terms, conditions, processes and procedures (including nomination rights and time periods) are not inconsistent with those applying to a demand under section 200 of the Project Legislation as at the date 		<p>of the deed</p> <ul style="list-style-type: none"> • a change in law relating to Part IVAA (Proportionate Liability) of the Wrongs Act 1958 (Vic) or its application which limits or eliminates the impact of that Part or any legal risk allocation, whether or not it has any application. 	<p>but excluding:</p> <ul style="list-style-type: none"> • any amendment, repeal, change or enactment of any Legislation, or any Code or Standard, contemplated by and in substantially the same form as the Assumed Legislative Amendments; • any amendment, repeal or change of the Income Tax Assessment Act 1936 (Cth), the GST Law or the Income Tax Assessment Act 1997 (Cth) • any amendment, repeal, change or enactment of any Law, or any Code or Standard, which, as at the date of this deed: <ul style="list-style-type: none"> – was published or of which public notice had been given (even as a possible amendment, repeal, change or enactment) – a party experienced and competent in the delivery of works and services similar to the Project Works or the Project Activities (as applicable) would have reasonably foreseen or anticipated, in substantially the same

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>of this Deed</p> <ul style="list-style-type: none"> – such that the Owner of the vehicle driven, or a person who drives a vehicle on the Freeway is not guilty of an offence unless the relevant tolls and administration fees are not paid before the end of the process (including the nomination process) applicable to the later demand • unless the parties otherwise agree, a change in so far as that change permits the State in whole or part to: <ul style="list-style-type: none"> – effect, or require the granting of, any licences in the Tolling System as are required – effect, or require the provision or making available of, any materials, information, assistance, rights, access or personnel as are necessary, by any person who has any Intellectual Property Rights in the Tolling System so as to enable either: – the Concessionaires to fully and properly grant the licences granted 			<p>form as the amendment, repeal, change or enactment eventuating after the date of this deed, other than</p> <ul style="list-style-type: none"> – a Change in Law by reason of the introduction of an Emissions Trading Scheme or any associated amendment, repeal, change or enactment of a Carbon Emissions Law – an increase to the minimum Employer superannuation contributions required under the Superannuation Guarantee Charge Act 1992 (Cth) or the Superannuation Guarantee (Administration) Act 1992 (Cth) and its regulations, to the extent applicable to the O&M Contractor's employees working on the Project • any amendment, repeal, change or enactment of any Law, or any Code or Standard, effected in response to an illegal act or omission by Operator

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>under, and perform all the Concessionaries' obligations required to be performed under, the IP Licence Deed and the Escrow Agreement</p> <ul style="list-style-type: none"> – the provision of equivalent rights (subject to any equivalent obligations and restrictions), as referred to in paragraph (iii) directly to the State or its nominee. 			<p>Franchisee (not including an act or omission which became illegal as the result of the amendment, repeal, change or enactment).</p>

Relief for a general change in law

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Not available.</p>	<p>Not available.</p>	<p>A change in law is a Possible MAE Event. Possible (but not guaranteed redress includes):</p> <ul style="list-style-type: none"> • a change to the project documents • variation of the concession period and term of the lease • restructuring of financing arrangements • variation of toll calculation schedule • any other agreed action <p>and, as a last resort, financial contribution from the State.</p>	<p>A general change in law is a type of Compensable Relief Event.</p> <p>If a general change in law occurs, the State will pay an amount equal to the net incremental costs less any savings, insurance proceeds, damages or compensation.</p>	<p>Where a General Change in Law meets the requirements of paragraph (b) of a Qualifying Change in Law, the Operator Franchisee will be entitled to compensation.</p>

Events which constitute a Project-Specific change in law

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>There are no defined project-specific changes in law.</p>	<p>There are no defined project-specific changes in law.</p>	<p>There are no defined project-specific changes in law.</p>	<p>A project-specific change in law is a general change in law in relation to a State Law which:</p> <ul style="list-style-type: none"> • specifically and only affects the Project or only affects companies undertaking similar road projects procured under public private partnership arrangements • does not include a change in State Law solely on the basis that it has a greater effect on Project Company than other companies <p>A project-specific change in law also includes the introduction of a Carbon Pollution Reduction Scheme.</p>	<p>Project-Specific Change in Law means:</p> <ul style="list-style-type: none"> • a Change in Law, the terms of which apply to • the Project or the System, and not to other light rail projects in Australia • Operator Franchisee, and not to other persons • the Project Area, and not to any other • similarly situated land or facilities • land or facilities where similar activities to the Project Activities are undertaken • projects procured or established under the National Public Private Partnership Guidelines or other policies of the Commonwealth or the State in respect of privately financed projects, and not to other projects • a Change in Railway Law.

Relief for Project-Specific change in law

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
There are no defined project-specific changes in law.	There are no defined project-specific changes in law.	There are no defined project-specific changes in law.	Where the project-specific change in law occurs prior to completion and the Project Co is granted an extension of time (or is not entitled to an extension of time but the change of law has had an effect on D&C activities) then the Project Co may submit a Change Notice. The State will then pay Project Co an amount equal to the net incremental cost less any savings, insurance proceeds, damages or compensation.	A project-specific change in law is a Qualifying Change in Law for which the Operating Franchisee is entitled to compensation.

Step change in technology

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
During the Concession Period the Company shall maintain such a level of technology in its systems of operation (including the Tolling System), maintenance and repairs of the Link as would be maintained by a prudent Operator of the Link consistently with current good practices and standards.	<p>General undertaking</p> <p>During the Concession Period, the Road Operator must maintain such a level of technology in its systems for the operation (including Tolling), maintenance and repair of the Freeway as would be maintained by a prudent Operator of the Freeway, consistently with Operation and Maintenance Best Practices and to ensure that the Interoperability of the Freeway is maintained.</p> <p>Tolling technology</p> <p>Consistent with Operation</p>	<p>The Project Co has an obligation to comply with O&M Best Practices throughout the O&M term.</p> <p>O&M best practices include the requirement that advancements in technology which the Project Co must implement are responded to and incorporated into the O&M Activities no later than the time when the relevant component of the Toll road and the Maintained Non-Toll road Works is due to be replaced.</p>	<p>The Project Co has an obligation to comply with O&M Best Practices throughout the O&M term.</p> <p>O&M best practices include the requirement that advancements in technology which the Project Co must implement are responded to and incorporated into the O&M Activities no later than the time when the relevant infrastructure component is due to be replaced.</p>	<p>An obligation of the Operator Franchisee is to adhere to O&M Best Practices.</p> <p>Amongst other things, O&M Best Practices include everything reasonably necessary to ensure that advancements in technology which Operator Franchisee must implement to enable it to meet its obligations under the State Project Documents are promptly responded to and incorporated into the O&M Activities no later than the time when the relevant component of the System is</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>and Maintenance Best Practices and Customer Service Practices Requirements, the Road Operator must develop and improve the Tolling System, having regard to:</p> <ul style="list-style-type: none"> • advancements in technology • the most appropriate and efficient means of Tolling, from the perspective of Customers and users of the Freeway • the means of Tolling offered by other Toll Road Service Providers. 			<p>due to be replaced.</p> <p>In addition, throughout the Term, Operator Franchisee must review and, if necessary, update, Operator Franchisee's Privacy Plan to take account of any evolution in technology upon request of the State.</p>

Definitions of loss, Liability and consequential loss

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Loss is not defined</p>	<p>Loss includes any cost, expense, loss, damage or liability whether direct, indirect or consequential (including pure economic loss), present or future, ascertained or unascertained, actual, prospective or contingent, or any fine or penalty.</p>	<p>Loss means:</p> <ul style="list-style-type: none"> • any cost, expense, loss, damage or liability whether direct, indirect or consequential (including pure economic loss), present or future, fixed or unascertained, actual or contingent • only to the extent not prohibited by Law, any fine or penalty. 	<p>Loss is</p> <ul style="list-style-type: none"> • any cost, expense, loss, damage or liability whether direct, indirect or consequential (including pure economic loss), present or future, fixed or unascertained, actual or contingent • only to the extent not prohibited by Law, any fine or penalty. 	<p>Loss means:</p> <ul style="list-style-type: none"> • any cost, expense, loss, damage or liability whether direct, indirect or consequential (including pure economic loss), present or future, fixed or unascertained, actual or contingent • only to the extent not prohibited by law, any fine or penalty.

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Liability is not defined	Liability means any debt, obligation, cost (including legal costs, deductibles or increased premiums), expense, loss, damage, compensation, charge or liability of any kind, including those that are prospective or contingent and those the amount of which is not ascertained or ascertainable, and whether arising under or for breach of contract, in tort (including negligence), restitution, pursuant to statute or otherwise at law or in equity.	Liability is not defined	Liability is not defined	Liability is not defined
Indirect and Consequential Loss is not defined.	Indirect or Consequential Loss is not defined.	Indirect or Consequential Loss is included in the definition of 'loss'.	Indirect or Consequential Loss means any: <ul style="list-style-type: none"> • loss of opportunity, profit, anticipated profit, business, business opportunities or revenue or any failure to realise anticipated savings • any penalties payable under agreements other than the deed. Consequential Loss means: <ul style="list-style-type: none"> • pure economic loss • loss of profit • loss of revenue • loss of opportunity • anticipated savings • change to goodwill or reputation 	Indirect or Consequential Loss means: <ul style="list-style-type: none"> • loss of opportunity, profit, anticipated profit, business, business opportunities or revenue, or any failure to achieve anticipated savings • any penalties under agreements other than the State Project Documents.

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
			<p>and excludes loss arising from:</p> <ul style="list-style-type: none"> • personal injury, nervous shock or death • property damage • third party liability claims in respect of property damage, personal injury, nervous shock or death • criminal acts or fraud <p>and excludes all costs of the type described in sections 233(8) and 234(7) of the <i>Major Transport Projects Facilitation Act</i> incurred by SEITA or Project Company as a result of a delay in carrying out the Utility Works.</p>	

Exclusion of indirect or consequential loss

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Liability is not excluded for indirect or consequential loss.</p>	<p>There are about over 75 listed events which, to the extent permitted by Law, neither the State, its Associates nor (if applicable) any Protected Contractor will have any Liability, nor will either Concessionaire or its Associates be entitled to make, continue or enforce any Claim against, or seek, pursue or obtain an indemnity against or contribution to Liability from, the State, any of its Associates.</p>	<p>Liability is not excluded for indirect or consequential loss.</p>	<p>No party will be liable to the other for any consequential loss.</p>	<p>Neither the State nor any Associate of the State has any liability to Operator Franchisee, nor will Operator Franchisee be entitled to make any Claim, in respect of any Indirect or Consequential Loss incurred or sustained by Operator Franchisee as a result of any act or omission of the State or any Associate of the State (whether negligent or otherwise) or as a result of a breach of the State Project</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>These events include:</p> <ul style="list-style-type: none"> • the existence or submission of or any errors or omissions in the Models • any act or omission of the Independent Reviewer • a Concessionaire being required by the State to remove any personnel • a Concessionaire being obliged to adopt the Project Scope and Project Requirements • a Concessionaire being obliged to correct any Defect <p>The State is also not liable for any loss (including indirect or consequential) resulting from an estimation of compensation or an extension of time in relation to a proximate State work.</p>			<p>Documents by the State, except to the extent that such Indirect or Consequential Loss is in respect of:</p> <ul style="list-style-type: none"> • an amount for which the State is liable under clause 38 (Payment Provisions), schedule 3, clause 40 (Benchmarking) or schedule 6; • an amount for which the State is liable under clause 45 (Termination) or schedule 7 • an Uninsurable risk for which the State is liable to indemnify or otherwise pay Operator Franchisee under clause 43.2 (Insurability). <p>The Operator Franchisee also excludes liability except in respect of:</p> <ul style="list-style-type: none"> • Wilful Misconduct, Gross Negligence, a criminal act or fraud of Operator Franchisee or an Associate of Operator Franchisee • a liability that cannot be limited or excluded at Law; • a reduction to the Service Payment • economic loss which is insured or required to be covered in an insurance

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
				<p>policy held by Operator Franchisee or a sub contractor in compliance with this deed</p> <ul style="list-style-type: none"> any injury to, or death or disease of persons any third party suit, claim, action, demand, proceeding, penalty, cost, charge or expense arising out of or in relation to a breach of the State Project Documents by Operator Franchisee or its Associates.

Scope of indemnities given by project Co/Operator

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>General Indemnity</p> <p>The Company and the Trustee each severally release the State from and indemnifies it against any claim, demand, damage, expense, loss or liability brought against or suffered, incurred or payable by the State in respect of:</p> <ul style="list-style-type: none"> loss, destruction or damage to real or personal property injury to, or disease or death of, persons <p>arising out of the Project or (other than in the case of the indemnity provided by the</p>	<p>Indemnity for Concessionaires breach</p> <p>The Concessionaires must indemnify the State and its Associates on demand against any Claim, Liability or Loss (including any Claim made by, or Liability to, a third party) the State or any of its Associates suffers or incurs arising out of or in respect of or in connection with, a Concessionaire breaching any provision (including any obligation, representation or warranty) of the Deed or any other Project Document except</p>	<p>General Indemnity</p> <p>Each PPP Co must indemnify the State against any Loss or Claim brought against, incurred or suffered by the State or its Associates in respect of:</p> <ul style="list-style-type: none"> non-compliance with Work Health and Safety legislation damage to, loss or destruction of, or loss of use of (whether total or partial), any real or personal property (including property belonging to the 	<p>General Indemnity</p> <p>Project Company must indemnify the State against any Claim or Loss arising out of or in connection with:</p> <ul style="list-style-type: none"> damage to, loss or destruction of, or loss of use of (whether total or partial), any real or personal property (including property belonging to the State) and the Returned Works after Handback to the State or the applicable Facility Owner any injury to, disease or 	<p>Indemnity from Operator Franchisee</p> <p>Subject to some exceptions, Operator Franchisee must release and indemnify the State from and against:</p> <ul style="list-style-type: none"> any Claim or Loss brought against, suffered or incurred by the State or its Associates in respect of: <ul style="list-style-type: none"> damage to, loss or destruction of, or loss of use (whether total or partial) of, any real or personal property (including properly

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Trustee) the operation, maintenance or repair of the Link or any activities related thereto, except to the extent that such loss, destruction, damage, injury, disease or death is a consequence of a negligent wilful or reckless act or omission of the State, of any of its nominees or Contractors.</p> <p>Exclusions to indemnity</p> <p>This exception shall not, however, apply insofar as its application would be inconsistent with the acceptance of risk provided for under, or any representation, warranty, undertaking, waiver or acknowledgment provided for.</p>	<p>to the extent that breach is due to a Wilful Default by the State or its Associates.</p> <p>Other indemnities</p> <p>The Concessionaires also give the State a number of other indemnities including:</p> <ul style="list-style-type: none"> physical damage to any infrastructure, property or assets caused by the connection of the Works, the Temporary Works or the Freeway (other than the Freeway Plant and Equipment, in the case of the Trustee) to such infrastructure, property or assets loss, destruction or damage to real or personal property, injury to, disease or death of, persons or economic loss suffered by third parties, arising out of or in respect of or in connection with the Project, the design and construction of any of the Facilities or the performance of the Construction Activities, the operation, maintenance or repair of the Freeway and the maintenance or repair of the Maintained Off-Freeway Facilities or any 	<p>State) and the Busway, EWAG and Returned Works after handover to the State or the applicable Facility Owner</p> <ul style="list-style-type: none"> any injury to, disease or death of, persons pure economic loss suffered by third parties, caused by, arising out of, or in any way in connection with: the Projects or the Project Activities the State's ownership of the Licensed Construction Areas, the Leased Area and the Licensed Maintenance Areas the use or occupation of the Licensed Construction Areas, the Leased Area and the Licensed Maintenance Areas by a PPP Co or its Associates. <p>Exclusions to indemnity</p> <p>A PPP Co's obligation to indemnify the State will be reduced to the extent that any wrongful act or omission by the State contributed to the Loss or Claim.</p> <p>The general indemnity does not apply in respect of any third party claim for pure</p>	<p>death of, persons</p> <ul style="list-style-type: none"> pure economic loss suffered by third parties arising out of, or in connection with: the Project or the Project Activities the use or occupation of the Relevant Land by Project Company or its Associates <p>Exclusions to Indemnity</p> <p>The general indemnity does not apply in respect of any third party claim for pure economic loss to the</p> <ul style="list-style-type: none"> extent the claim arises solely as a result of: the decision by the State to proceed with the Project; or the existence or location of PLP <p>Contamination Indemnity</p> <p>The Project Company must indemnify the State against any third party claim arising out of or in connection with any Contamination existing on, in, over, under or emanating from the Project Area which:</p> <ul style="list-style-type: none"> was caused or contributed to by an act or omission of Project Company or its Associates 	<p>belonging to the State or its Associates)</p> <ul style="list-style-type: none"> any injury to, or death or disease of persons any third party suits, claims, actions, demands, proceedings, penalty, costs, charges or expenses not otherwise covered by clause 42.1 (a) (i) or 42.1(a) (ii), to the extent caused or contributed to by or arising out of: the condition of the Project Area or the use or occupation of the Project Area by Operator Franchisee or its Associates any act or omission of Operator Franchisee or its Associates in relation to, or in consequence of, the Project or the Project Activities (including the performance or non-performance by Operator Franchisee of its obligations under the State Project Documents) <ul style="list-style-type: none"> any Claim or Loss suffered by or incurred by the State or its Associates to the extent caused or

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>activities related to the Project</p> <ul style="list-style-type: none"> the provision of, or the purported reliance upon, or use of, the Disclosed Information, any other information or data referred to in clause 53 (Concessionaires' acknowledgment) or the Concessionaire Intellectual Property, by an Obligor, a Contractor, their sub contractors or any other person to whom the Disclosed Information is disclosed by an Obligor, a Contractor, their sub contractors or any person on an Obligor's or a Contractor's behalf the Disclosed Information or any other information or data referred to in clause 53 (Concessionaires' acknowledgment) being relied upon or otherwise used by an Obligor, a Contractor, their sub contractors or any other person to whom the Disclosed Information is disclosed by an Obligor, a Contractor, their sub contractors or any person on an Obligor's or a 	<p>economic loss to the extent the claim arises as a result of:</p> <ul style="list-style-type: none"> the decision by the State or the Council to proceed with the Projects the existence or location of the Toll road, EWAG or the Busway. 	<ul style="list-style-type: none"> was not caused or contributed to by an act or omission of Project Company or its Associates but was disturbed or interfered with by Project Company or its Associates; or would have been prevented or minimised by a prudent, experienced and competent Contractor in the circumstances. <p>Approval Indemnity</p> <p>The Project Co must indemnify the State against any claim or loss arising out of or in connection with a failure of the Project Co to comply with its obligations with respect to complying with approvals and assessments.</p> <p>OHS Indemnity</p> <p>The Project Co must indemnify the State against any Claim or Loss arising out of or in connection with any breach by Project Company or any of its Associates of the OHS Legislation.</p> <p>Other Specific Indemnities</p> <p>The Project Co must also indemnify the State against claims or loss arising out of:</p> <p>A failure to cooperate with</p>	<p>contributed to by or arising out of:</p> <ul style="list-style-type: none"> breach or failure to comply with the terms of any State Project Document by Operator Franchisee or its Associates negligent or unlawful acts or omissions or Wilful Misconduct by Operator Franchisee or its Associates. <p>Exclusions to Indemnity</p> <ol style="list-style-type: none"> The Operator Franchisee liability will be reduced to the extent that a claim or loss arises from: a fraudulent, negligent, unlawful or wrongful act or omission or Wilful Misconduct of the State or its Associates a fraudulent, unlawful or negligent act or omission of the VB Supercar Event Promoter or Its Associates a breach by the State or its Associates of their respective express obligations under a State Project Document Operator Franchisee following an express

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Contractor's behalf in the preparation of any information or document, including, to the extent permitted by Law, any Disclosed Information which is 'misleading or deceptive' or 'false and misleading' (within the meaning of those terms in sections 52 and 53 (respectively) of the Trade Practices Act 1974 (Cth) or any equivalent provision of State or Territory legislation)</p> <ul style="list-style-type: none"> • any Defect which may arise (whether directly or indirectly) as a result of or in connection with any of the matters, information, data or material referred to in clause 53 (Concessionaires' acknowledgment); the rights of a third party which have not been adequately or accurately described by a Concessionaire under the provisions of clause 56.9(c)(ii) (Licence for specified use) • any acts or omissions by the entities referred to in clause 59.3(f) (Liability for acts of Contractors) 		<p>third-party Contractors in relation to interfaces with other roads</p> <p>A failure to comply with modification obligations</p> <p>Any taxes incurred as a result of the project</p> <p>Any act done by the Project Co that contravenes Information Privacy Principles and any Privacy Code.</p>	<p>direction of the State with respect to its obligations under the State Project Documents if such directions are given in accordance with this deed, provided that this does not reduce Operator Franchisee's liability under clause 42.1 to the extent the State direction arises out of, or is given in relation to a circumstance which is caused by, a breach of the State Project Documents by Operator Franchisee or its Associates</p> <ul style="list-style-type: none"> f a third party suit, claim, action, demand, proceeding, penalty, cost, charge or expense for pure economic loss arising solely as a result of: <ul style="list-style-type: none"> i the decision by the State to proceed with the Project ii the decision by the State to proceed with the System iii the existence of the System or location of the System Site Corridor

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<ul style="list-style-type: none"> • the termination of this Deed (other than under clauses 37.11 (State options) or 67 (Termination by Concessionaire)), including all reasonable out-of-pocket expenses (including legal fees (on an indemnity basis), enforcement costs and Taxes) incurred by the State or any of its Associates arising out of or in respect of or in connection with, the enforcement and protection of their rights under this Deed or any other Project Document, including but not limited to, the costs of collection; and • the exercise of any Step-In Rights in accordance with clause 70 (Step-In) (except to the extent that the State acts in a reckless or grossly negligent manner or in bad faith in the exercise of those rights). • other risks 			<p>any of:</p> <ul style="list-style-type: none"> iv a Compensation Event, Relief Event or <i>Force Majeure</i> Event, to the extent Operator Franchisee is entitled to relief in respect of that event under clause 16, 26, 27 or 28 (as applicable) v provided that Operator Franchisee has complied with all of its obligations under this deed in respect of the Migrating Contamination (including the conditions of any Approvals), the effects of Migrating Contamination vi the effects of Contamination caused or contributed to by the State or its Associates during the Term, to the extent the State retains the risk of such Contamination under clause 12.3 vii an Uninsurable risk to the extent the State

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
				<p>has agreed to indemnify Operator Franchisee for that risk under clause 43.2</p> <p>viii destruction, loss or damage, to the extent such destruction, loss or damage is the direct result of the circumstances in clause 41.2(b), other than to the extent that Operator Franchisee Is entitled to recover (or would have been entitled to recover if Operator Franchisee had fully complied with clause 43 and made a proper claim) under any insurance policy.</p>

Types and requirements of security provided

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Not available	<p>The Trustee must provide a Construction Bond for the value of \$87,570,000 (in a maximum of two bonds).</p> <p>the Road Operator must procure an Operation Phase Bond for \$5,000,000</p> <p>The Concessionaires may</p>	<p>(D&C Bond) The BC Trustee must provide the State with a bond for \$10 million or bonds that aggregate \$10million.</p> <p>(NB Bonds) The PPP Cos must provide the State with bonds for \$20 million comprising of two bonds to the</p>	<p>Project Co must provide a Condition Precedent Bond (CPB). The Project Co may also provide the State with a Handover Bond, so as to fulfil its handover obligations.</p> <p>Requirements</p> <p>Each Bond must be:</p>	<p>Operator Franchisee must provide the State with each Handback Bond required under clause 46.3(a) (Handback Bond or Retention Fund – Relevant Amount) or 46.8(a) (Handback Bond or Retention Fund – Handback Security).</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>procure that a bond is issued to the State so as to fulfil their respective handover obligations.</p> <p>Requirements</p> <p>Each Bond must:</p> <ul style="list-style-type: none"> • be in the form of Exhibit A (Pro forma Bond) (or in such form and substance as the State may otherwise approve);= • be issued by an Issuer with the Required Rating • expire no earlier than the relevant date specified in clause 5.4 (Expiry Date) • be payable at an office of the Issuer in Melbourne or Sydney (or such other place as the State may otherwise approve). <p>Expiry Date</p> <p>Each Bond must not expire earlier than the following times:</p> <ul style="list-style-type: none"> • for the Construction Bond, 24 months • for the Operation Phase Bond, 12 months • for the Handover Bond, 12 months, after the date it is issued to the State. 	<p>procure that a bond is issued to the State so as to fulfil their respective handover obligations.</p> <p>Requirements</p> <p>Each Bond must:</p> <ul style="list-style-type: none"> • be in the form of Exhibit A (Pro forma Bond) (or in such form and substance as the State may otherwise approve);= • be issued by an Issuer with the Required Rating • expire no earlier than the relevant date specified in clause 5.4 (Expiry Date) • be payable at an office of the Issuer in Melbourne or Sydney (or such other place as the State may otherwise approve). <p>Expiry Date</p> <p>Each Bond must not expire earlier than the following times:</p> <ul style="list-style-type: none"> • for the Construction Bond, 24 months • for the Operation Phase Bond, 12 months • for the Handover Bond, 12 months, after the date it is issued to the State. 	<p>value of \$10 million each.</p> <p>(EWAG Bonds) The PPP Cos must provide the State with bonds for \$13.5 million comprising of two bonds for \$6.75million each.</p> <p>(O&M Bond) Where there had been a failure to comply with O&M obligations, BC Operations must provide the State with one or more bonds as required by the State up to \$20million.</p> <p>(Handover Bond) Each PPP Co may provide the State with a Handover Bond to fulfil its handover obligations.</p>	<ul style="list-style-type: none"> • in the prescribed form or such other form as the State may approve • in favour of the State • a continuing liability without an expiry date • at all times provided by a bank acceptable to the State that maintains the Required Rating • payable at an office of the issuer in Melbourne (or such other place as the State may approve) • where required, duly stamped. 	<p>Requirements</p> <p>Each Bond must be:</p> <ul style="list-style-type: none"> • in the form of schedule 2 or such other form as the State may approve • in favour of the State • at all times provided by a bank or insurance company acceptable to the State that maintains the Required Rating and is regulated by the Australian Prudential Regulation Authority • payable at an office of the issuer in Brisbane (or such other place as the State may approve).

State's right to make a demand under a bond

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Not available</p>	<p>The State may make a demand under the Construction Bond or the Operation Phase Bond in respect of any amount which the State considers is, or at any time may become, due or payable by either Concessionaire to the State or SEITA under a Project Document, or which the State or SEITA has incurred, or the State considers it or SEITA may incur, arising out of or in respect of or in connection with any default, wrongful act or omission or breach of, or a failure to comply with, an obligation or Liability.</p> <p>The State may also make a demand under any Handover Bond.</p> <p>Where any demand is made, the State must, as soon as practicable after it has made a demand and received payment under a Bond, give a notice to the Concessionaires specifying the amount of the demand and the State's reason for making the demand.</p> <p>The State may make a demand under a Bond irrespective of whether or not the amount demanded and the</p>	<p>The State may make a demand under a Bond at any time. Each PPP Co must not (and must ensure that the NB Works Contractor does not) take any steps to injunct or otherwise restrain:</p> <ul style="list-style-type: none"> • the issuer of a Bond from paying the State pursuant to the Bond • the State from making a demand or receiving payment under a Bond • the State using the proceeds of a Bond. <p>The State may use the proceeds of any Bond to reimburse it for any Loss, and in payment of any other moneys owing by a PPP Co or the NB Works Contractor (including monies owing under any indemnity).</p> <p>Any proceeds remaining will be repaid to a PPP Co in return for a replacement bond.</p>	<p>The State may make a demand under a Bond at any time, subject to the following conditions:</p> <p>Condition Precedent Bond</p> <p>The State may make a demand under the Condition Precedent Bond to reimburse it for any Loss, and in payment of any other moneys owing by Project Company (including moneys owing under any indemnity), if the State considers that:</p> <ul style="list-style-type: none"> • Project Company is in breach of any Day 1 Clause • Project Company is seeking to introduce, either formally or informally, whether in writing or otherwise, any variations or additions to the Project • Documents which were not, by the date of this deed, specifically identified in writing and agreed by the State • Project Company has failed to satisfy a Condition Precedent for the benefit of the State (or the State and Project Company) by the relevant Condition Precedent Deadline Date. 	<p>Failure to replace bond</p> <p>If Operator Franchisee fails to replace any Bond when required, the State may make a demand on the Bond which is to expire.</p> <p>Inspection at end of Term</p> <p>At the end of the Term, the State must give notice specifying:</p> <ul style="list-style-type: none"> • details of what needs to be rectified or remedied and the amount of money required • the extent (if any) to which the State considers the actual Residual Design Life is less than the Required Residual Design Life <p>If the Operator Franchisee agrees with the State or fails to give notice that it disagrees, one of the options available to the State is to make a demand under the Handback Bond to recover the relevant amount.</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>circumstances relating to the amount:</p> <ul style="list-style-type: none"> • are in dispute • have been referred for determination in accordance with Part L (Dispute Resolution) or similar determination in any other Project Document • are the subject of a claim under any of the insurances provided • are subject to any Proceeding 		<p>Handover Bond</p> <p>If Project Company gives the State a Handover Agreement Notice, or fails to give a Handover Disagreement Notice, then:</p> <ul style="list-style-type: none"> • the amount set out in the Handover Notice will be a debt due and payable by Project Company to the State • without prejudice to any other rights the State may have, the State may draw on the Handover Escrow Account or make a demand under the Handover Bond to recover the amount set out in the Handover Notice. <p>No injunction</p> <p>Project Company must not take any steps to injunct or otherwise restrain:</p> <ul style="list-style-type: none"> • the issuer of a Bond from paying the State pursuant to the Bond • the State from making a demand or receiving payment under a Bond • the State using the proceeds of a Bond. 	

Assignment/Transfer by the project co

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Neither the Company nor the Trustee may assign, novate, mortgage or charge or otherwise deal with its interest in, or obligations under, any of the Project Documents or Transaction Documents (and shall not permit or suffer any such assignment, novation, mortgage, charge or dealing) without the prior approval of the State save that the Trustee shall be entitled to grant a sub-lease of the Trust Land to the Company to enable the Company to comply with its obligations under this Deed.</p> <p>This does not, however, restrict:</p> <ul style="list-style-type: none"> the listing of Project Securities with Australian Stock Exchange Limited the issue or transfer of Project Securities in the Company anything permitted under this Deed, the Deed of Charge or the Contractors' Deed of Novation. 	<p>Each Concessionaire must not assign, novate, mortgage, charge or declare any trust over or otherwise deal with its interest in, or obligations under, any of the Transaction Documents (and will not permit or suffer any such assignment, novation, mortgage, charge or dealing) without the prior consent of the State.</p>	<p>Except as expressly permitted by the deed, the Debt Finance Side Deed or the State Deed of Charge, each PPP Co must not assign, novate, transfer, mortgage, charge or otherwise deal with its interest in, or obligations under, any of the Project Documents, without the State's prior approval (which must not be unreasonably withheld).</p>	<p>Project Company must not assign, novate, transfer, mortgage, charge or otherwise deal with its interest in, or obligations under, any of the Project Documents, without the State's prior approval.</p> <p>Project Company must not:</p> <ul style="list-style-type: none"> create or allow to exist any security interest over lease, license, transfer, sell, dispose of, part with possession of, or otherwise deal with, the whole or any part of the Relevant Land or PLP, except as expressly permitted under this deed, the Debt Finance Side Deed or the Debt Financing Documents or as otherwise approved by the State. 	<p>Except as expressly permitted by the deed, the Debt Finance Side Deed or the State Deed of Charge, Operator Franchisee must not assign, novate, transfer, mortgage or charge its interest in, or obligations under, any of the Project Documents, without the State's prior approval (such approval not to be unreasonably withheld or delayed in respect of the Equity Documents).</p>

Assignment/Transfer by the state

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The State will not assign, novate, mortgage, charge or otherwise deal with its interest in, or obligations under, any of the Project</p>	<p>The State will not assign, novate, mortgage, charge or otherwise deal with its interest in, or obligations under, any of the Project Documents</p>	<p>The State may not sell, transfer or assign or otherwise dispose of its interest in the Project Documents without the prior</p>	<p>The State may not sell, transfer or assign or otherwise dispose of its interest in the Project Documents without the prior written consent of Project</p>	<p>No assignment without consent</p> <p>The State may not sell, transfer or assign or otherwise dispose of its</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Documents without the prior approval of the Company and the Trustee. The State may, however:</p> <ul style="list-style-type: none"> assign any of its rights under any of the Project Documents to receive revenue, provided that the assignment does not directly or indirectly impose any additional obligations on or reduce any rights of the Company or the Trustee or have a Material Adverse Effect dispose of Concession Notes, but only if it is a term of such disposal that demand for payment of the notes may be made only by the State or any delegate of the State 	<p>without the prior consent of each Concessionaire. However, the State may assign any of its rights under any of the Project Documents to receive revenue.</p>	<p>written consent of the PPP Cos. The State may, however, assign any of its rights under the Project Documents to receive revenue. A PPP Co must give its consent if:</p> <ul style="list-style-type: none"> it has been provided with written details of the proposed transferee and the terms and conditions of the proposed transfer the proposed transferee is an Authority and has the requisite power and financial capability to comply with the State's obligations under the relevant Project Documents the proposed transferee has agreed to be bound by the relevant Project Documents. 	<p>Company. Project Company must give its consent if:</p> <ul style="list-style-type: none"> it has been provided with written details of the proposed transferee and the terms and conditions of the proposed transfer the proposed transferee is an Authority (including any Minister) which is an agent of, or the obligations of which are supported by, the Crown in the right of the State of Victoria the proposed transferee has agreed to be bound by the relevant Project Documents. 	<p>interest in the State Project Documents without Operator Franchisee's consent (subject to the exception for revenue rights, below).</p> <p>Assignment of revenue rights</p> <p>The State may assign any of its rights under the State Project Documents to receive revenue.</p> <p>Consent to be given</p> <p>Operator Franchisee must give its consent if:</p> <ul style="list-style-type: none"> it has been provided with details of the proposed transferee and the terms and conditions of the proposed transfer; the proposed transferee is an Authority of the type referred to in paragraph (a) of the definition of Authority and has the requisite power and financial capability to comply with the State's obligations under the relevant State Project Documents the proposed transferee has agreed to be bound by the relevant State Project Documents.

Change in control

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The Company and Trustee represents and warrants that the Operator is controlled by Transfield Holdings and Transrout International.</p> <p>The Company and Trustee must obtain approval of the State (which shall not be unreasonably withheld or delayed) for material changes in:</p> <ul style="list-style-type: none"> the acquisition or control of the Construction Contractor the acquisition or control of the Operator. 	<p>Each Concessionaire must not, without the prior consent of the State:</p> <ul style="list-style-type: none"> permit a Change in Control of the relevant Concessionaire or FinCo amend, or permit to be amended, it's or FinCo's constitution or other constituent documents. <p>Concessionaire Change in Control</p> <p>Each Concessionaire must give the State reasonable prior notice of a proposed Change in Control for which the consent of the State is sought. That notice must include full details of the proposed Change in Control including the acquisition of voting power, the change in control or any other event which will constitute the Change in Control.</p> <p>Controlling entity Change in Control</p> <p>If shares or other equity interests in an entity with ultimate control of a Concessionaire or FinCo (as applicable) are quoted</p>	<p>Each PPP Co undertakes not to (without the consent of the State) permit or suffer any change to (or transfer of the share capital or units in) the ultimate holding company (as defined in the Corporations Act) of, or the ultimate holding trust of, or the ultimate holder of the entire limited partners' interest in an Equity Investor which results in a change in Control of the PPP Cos.</p>	<p>The State may only withhold its consent to a proposed Share Capital Dealing if the State is of the reasonable opinion that:</p> <ul style="list-style-type: none"> a new Equity Investor or Equity Investors (or any direct or indirect Holding Entity of a new Equity Investor or Equity Investors): is or are not solvent and reputable has or have an interest or duty which conflicts or may conflict in a material way with the interests of the State the proposed Share Capital Dealing: <ul style="list-style-type: none"> is against the public interest would adversely affect the ability or capability of Project Company to perform its obligations under any Project Document would have a material adverse effect on the Project would increase the liability of, or risks accepted by, the State under the State Project Documents or in any other way in respect of the Project would negatively impact upon the State's commercial position under the State Project Documents or in any other way in respect of the Project. 	<p>Operator Franchisee must give the State at least 15 Business Days prior notice of any Permitted Change in Control.</p> <p>Permitted Change in Control means:</p> <ul style="list-style-type: none"> in the case of a Designated Investor, any Change in Control following which the relevant Designated Investor Holding Company Controls the Designated Investor; in the case of an Equity Investor, any Change in Control following which the relevant Equity Investor Holding Company Controls the Equity Investor in the case of a Core Contractor, any Change in Control following which the relevant Core Contractor Holding Company Controls the Core Contractor.

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>on a prescribed financial market and a Change in Control occurs due to the transfer of such shares or interests on that market, promptly after a Concessionaire becomes aware of the Change in Control, the Concessionaires must notify the State, providing full details of the Change in Control including the acquisition of voting power, the change in control or any other event which has constituted the Change in Control.</p>		<p>The State's consent to a Share Capital Dealing, other than a Share Capital Dealing:</p> <ul style="list-style-type: none"> • in relation to units or share capital issued in or by a Holding Entity which are publicly listed on a stock exchange • that is not a transfer of units or share capital in a Holding Entity by a Designated Investor • may be given or withheld, or may be given subject to any conditions, as the State thinks fit if the Share Capital Dealing will occur during the period commencing on the date of this deed and ending on the date that is 2 years after the Date of Completion. 	

Refinancing

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p><i>No provisions with respect to refinancing in the Deed.</i></p>	<p>The Concessionaires may not and must procure that FinCo does not refinance all or any part of the Actual Debt otherwise than with the prior consent of the State.</p> <p>If a Concessionaire or FinCo intends to undertake any refinancing, the Concessionaires must submit a notice to the State seeking its consent at least 30 Business Days prior to the refinancing (that notice must give a range of information on the proposal).</p> <p>The State must advise the Concessionaires within 20 Business Days of receiving the Concessionaires' notice that:</p> <ul style="list-style-type: none"> • it consents to the proposed refinancing • the proposed refinancing is unacceptable to it and the reasons why this is the case • (it requires further information from the Concessionaires regarding the proposed refinancing. If so, the Concessionaires must provide the additional information reasonably sought by the State within a further period of 5 Business Days, after which the State must respond in again within 5 Business Days. <p>The State has an obligation not to refuse its consent (subject to a number of conditions being satisfied).</p>	<p>Each PPP Co must not, and must ensure that FinCo does not, Refinance all or any part of the Actual Debt otherwise than with the prior consent of the State. The State must not unreasonably withhold or delay its consent to a proposed Refinancing.</p> <p>The State and the PPP Cos will use their respective reasonable endeavours to agree the Refinancing Gain and the manner and timing of paying of the State's share of the Refinancing Gain to the State. For these purposes, the PPP Cos must provide the State with all information concerning the Refinancing, the Distributions and the AL Project that the State may require to calculate the Refinancing Gain.</p> <p>If the parties fail to agree the Refinancing Gain or the manner or timing of payment of the State's share of the Refinancing Gain to the State, either party may require that the matter be determined in accordance with clause dispute resolution procedures.</p> <p>For these purposes the parties must require any expert or arbitrator to make his or her determination on the basis that the State is to receive</p>	<p>Project Company must not enter into or implement any refinancing without the prior written consent of the State, which will:</p> <ul style="list-style-type: none"> • not be unreasonably withheld or delayed • be given or withheld within 20 Business Days of receipt of the information provided by Project Company <p>The State and the Project Co will share in any gains from refinancing (the proportional split between the two parties has been redacted).</p> <p>Situations in which it will be reasonable for the State to withhold consent include where:</p> <ul style="list-style-type: none"> • refinancing would be an increase or adverse change in the risks and liabilities of the State under the 1project • the terms and conditions of the refinancing are not on arm's length commercial terms or not in accordance with market practice • the refinancing terms and conditions are less favourable than the terms under the debt financing documents and the State believes that the refinancing will adversely affect Project Co's ability to perform 	<p>Operator Franchisee must not enter into any Refinancing except if:</p> <ul style="list-style-type: none"> • the State has given its prior consent to the Refinancing • the Refinancing is an Assumed Refinancing, the amount and manner and timing of payment of any Refinancing Gain has been agreed or otherwise determined • the incoming Financiers and Operator Franchisee have executed a deed substantially in the form of the Debt Finance Side Deed and otherwise on terms reasonably acceptable to the State. <p>The Operator Franchisee must give full details by notice to the State. The State cannot unreasonably withhold consent. It must not withhold consent at all to an Assumed Refinancing. The Operator Franchisee must pay the</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>Refinancing Gain</p> <p>The State is to receive 50% of any refinancing gain.</p>	<p>50% of any Refinancing Gain and that the State is to be paid its share of the Refinancing Gain no later than any Equity Investor receives its share of the Refinancing Gain.</p>	<p>its obligations</p> <ul style="list-style-type: none"> the financial indebtedness assumed under the Refinancing will not be used solely for the Project matters in regard to the sharing of gains have not been agreed upon 	<p>State's costs in reviewing the proposed refinancing.</p> <p>The State is entitled to 50% of any gains from refinancing.</p>

Project co events of default

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
General breach of obligations	Breach by Project Co of its obligations under the project agreement, the consequences of which are material	A Concessionaire defaults in a material respect in the due observance and performance of any of its other obligations under this Deed or any other Project Document.	PPP Co, the State Works Contractor or the NB Works Contractor defaults in a material respect in the due observance and performance of any of its other obligations under this deed, the EWAG Works Deed, the NB Works Deed or any other Project Document.	A material default by the Project Co	Any other breach of an obligation under any State Project Document by Operator Franchisee (other than a breach as a result of which the Service Payment has been or will be subject to a reduction in the Service Payment).
Abandonment	<i>N/A</i>	A Concessionaire displays an intention to permanently abandon or permanently abandons the Project.	PPP Co or the NB Works Contractor displays an intention to permanently abandon, or permanently abandons one or more of the Projects.	<i>N/A</i>	<i>N/A</i>
Assignment/change in control	Company or Trustee breach an obligation to seek approval of State before novation, assignment, mortgage	There is a failure to comply with the relevant change of control clause.	<i>N/A</i>	Project Company breaches an obligation in relation to assignments, transfers or	Operator Franchisee breaches its obligations with respect to change in control (eg seeking consent).

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	or charge.			disposals of any of its obligations under the Project Documents or Share Capital Dealings without the State's prior Consent.	
Insurance obligations	Failure to maintain and effect required insurances during the project.	N/A	N/A	BC Operations fails in a material respect to operate, maintain, repair or insure the Toll road or maintain and repair the Maintained Non-Toll road Works in accordance with its obligations.	N/A
Project Co Insolvency	N/A	An Insolvency Event occurs in relation to a Concessionaire, whether or not a Concessionaire is then in breach of this Deed.	An Event of Insolvency occurs in relation to a PPP Co, the State Works Contractor or the NB Works Contractor, whether or not that PPP Co, the State Works Contractor or the NB Works Contractor has been in breach of a State Project Document.	N/A	N/A
Insolvency of entity other than Project Co	N/A	An Insolvency Event occurs in relation to a Contractor or a Guarantor whether or not a Concessionaire is then in breach of this Deed and that insolvent party is not replaced	An Event of Insolvency occurs in relation to the D&C Contractor, the D&C Guarantor, the O&M Contractor or the O&M Guarantor, whether or not a PPP Co is then in breach of a	An insolvency event occurs in relation to the D&C Contractor, the D&C Guarantor, the O&M Contractor or the O&M Guarantor, whether or	N/A

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
		within 40 business days.	State Project Document, and that D&C Contractor, D&C Guarantor, O&M Contractor or O&M Guarantor is not replaced within 60 days.	not Project Company is then in breach of a State Project Document.	
Failure to achieve milestones	Neither the Company nor the Trustee shall be in breach of the Deed or liable in damages to the State solely as a result of either a Construction Milestone not being achieved by the Relevant Milestone Date.	Concessionaire fails to commence, or to expeditiously and diligently progress, the Construction Activities as required.	PPP Co fails to commence (or ensure that the State Works Contractor and the NB Works Contractor commence), or to expeditiously and diligently progress (or ensure that the State Works Contractor and the NB Works Contractor expeditiously and diligently progress) in accordance with the D&C Activities.	Project Company fails to achieve Completion by the Sunset Date.	N/A
Fraud, deceptive conduct and untrue warranties	A representation made by the Company or Trustee being untrue when made or repeated.	N/A	N/A	Project Co engages in fraud, collusion, misleading or deceptive conduct in performing their obligations under the Project Documents including the Project Activities.	Where there is any fraud or any collusive or misleading or deceptive conduct on the part of Operator Franchisee or its Associates in the performance of any of the Project Activities (including any fraud or intentionally false, misleading or deceptive reporting discovered during any audit.
Ceasing the services/lane	The Company and Trustee are under an	After Freeway Section Completion of the	After the Toll road Opening Date, BC	Project Co closes or permits the closure of	N/A

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
closures	obligation to operate and maintain the Link. An event of default will be a failure to meet this obligation where the consequences are material and notice has been given.	Construction Activities in relation to a Section, the Road Operator closes or permits the closure of one or more traffic lanes (in whole or in part) of that Freeway Section, other than for an agreed reason.	Operations closes or permits the closure of one or more traffic lanes, in whole or in part, of the Toll road other than for reasons permitted.	one or more freeway lanes for reasons other than permitted.	
Failure to progress	The Company and Trustee are under an obligation to design and construct the Link. An event of default will be a failure to meet this obligation where the consequences are material and notice has been given.	<i>N/A</i>	<i>N/A</i>	Project Co fails to commence D&C activities which is likely to have a material adverse effect on its ability to achieve completion by the date for completion.	<i>N/A</i>
Failure to consult	<i>N/A</i>	<i>N/A</i>	PPP Co defaults in a material respect in the due observance and performance of its obligations under this deed with respect to its environmental and community consultation obligations.	<i>N/A</i>	<i>N/A</i>
Representation and warranty	A breach of warranty or the making of an untrue representation.	A representation or warranty given by a Concessionaire under this Deed is found to be materially incorrect or misleading	A representation or warranty given by a PPP Co, the State Works Contractor or the NB Works Contractor under a State Project Document	A representation or warranty given by Project Company under a State Project Document is found to be materially	A representation or warranty made or given by Operator Franchisee in any State Project Document proves to be untrue.

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
			is found to be materially incorrect or misleading.	incorrect or misleading.	
Services failures (abatement)	N/A	N/A	N/A	Project Co has been abated more than a certain proportion of its quarterly service payments.	If during the operations phase, the total abatement arising from the Performance Abatement and calculation of the Availability Entitlement under schedule 3 is greater than [unspecified]% of the Base Service Payment.
Persistent/wilful default	N/A	A Concessionaire commits a Wilful Default.	N/A	Project Co defaults in a persistent or repeated fashion in the performance of obligations under the project deed or debt financing documents.	N/A
Defaults under other agreements	N/A	N/A	N/A	Where the obligation of a Debt Financier to provide funding under the Debt Financing Documents is cancelled.	N/A
Failure to maintain required authorisations	N/A	A Concessionaire fails to comply with or obtain relevant approvals.	N/A	N/A	N/A
Failure of other obligations	An event of default will be any breach of any obligation or representation made by the Company or Trustee where the consequences are	A Concessionaire fails to provide the updated model information to the State in accordance with the times agreed.	N/A	Project Company breaches an obligation in relation to sub contractors in whether or not due to an act or omission by	Operator Franchisee breaches its obligations in relation to subcontracting.

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	material.			Project Company.	
Failure to provide and maintain security	<i>N/A</i>	IF the Road Operator fails to procure the provision to the State of either the Operation Phase Bond or a replacement bond.	<i>N/A</i>	<i>N/A</i>	Operator Franchisee fails to provide the State with a Bond required under this deed within the time period required under this deed.
Failure to repair or rebuild	<i>N/A</i>	A Concessionaire fails in a material respect to operate, maintain, repair or insure the Facilities in accordance with this Deed.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Failure to pay	<i>N/A</i>	A Concessionaire fails to pay any amount that is due and payable by it under the Deed when it is due and that failure is not remedied within 10 Business Days.	<i>N/A</i>	<i>N/A</i>	Operator Franchisee fails to pay an amount that is due under any State Project Document when it is due and the failure is not remedied with 20 Business Days of a demand from the State.
Probity Events	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Project Company fails to remedy a Probity Event in accordance with agreed terms.	<i>N/A</i>
Funding	<i>N/A</i>	Cancellation of funding or credit change.	The obligation of a Debt Financier to provide funding under the Debt Financing Documents is cancelled.	<i>N/A</i>	The obligation of a Debt Financier or an Equity Investor to provide funding under the Debt Financing Documents or the Equity Documents, respectively, is cancelled due to a breach, an event of default or review event (in each case, however described) under a

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
					Debt Financing Document or an Equity Document (as applicable), or a Debt Financier or Equity Investor fails (in whole or in part) to provide funding under the Debt Financing Documents or the Subscription Agreement or the Deferred Equity Commitment Deeds for the amounts set out in the Base Case Financial Model;
Cross default	<i>N/A</i>	It will be an Event of Default in relation to the Road Operator if an Event of Default (any described above) occurs in respect of the Trustee, or if the Road Operator does or omits to do anything which, if it were done or omitted to be done by the Trustee, would be an Event of Default on the part of the Trustee. The same cross default rules apply for the Trustee.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Failure to report	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Operator Franchisee fails to comply with its reporting obligations under this deed or a report from Operator Franchisee contains a material inaccuracy.

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Refinancing	N/A	N/A	N/A	N/A	Operator Franchisee breaches its obligations with respect to refinancing.
Illegality Event	N/A	N/A	N/A	N/A	An Illegality Event occurs.

Remedy of an operator event of default

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>After an event of default or a project default, the State may give notice to the Company and Trustee of an intention to terminate.</p> <p>Within 15 business days, the Company and Trustee must give notice of the anticipated date by which the breach will be remedied and the program that will be adopted in order to overcome the breach.</p> <p>If a remedy program is not given by the Company and Trustee, the State may prepare its own program. If no agreement can be reached, the matter can be referred to expert determination.</p> <p>The Company and Trustee are then under an obligation to remedy the breach and to diligently pursue all steps agreed upon in accordance with the agreed program.</p>	<p>The Concessionaires have an obligation to notify the State of any Event of Default and to immediately commence diligent action to remedy the default.</p> <p>After a default, the State may then give a Notice to Remedy Default. The State must give the Concessionaires a reasonable amount of time to remedy the default.</p> <p>The Concessionaires must then comply with the Notice and provide a program setting out the program for remedy. Following agreement of that program with the State, the Concessionaires must implement that program.</p> <p>The Concessionaires must be entitled to an extension of time to remedy the default if they have been reasonably pursuing the remedy and have kept the</p>	<p>Where an event of default occurs the State may give notice to the PPP Cos requiring a remedy for the default and setting out a timeline.</p> <p>The PPP Cos have an option to request more time from the State, however the maximum remedy period is six months.</p> <p>If the event of default is not remedied, within the specified time or a remedy has not been diligently pursued, then the State may give notice to terminate.</p>	<p>There is a regime for Project Co to provide a remedy program and comply with that remedy program for defaults capable of being remedied.</p> <p>If the State gives a notice of default, the Project Company must give the State a program to remedy the default (or overcome its effects) in accordance with the terms of the State's notice which will specify steps to address the underlying causes of abatement and to avoid similar abatements occurring in the future.</p> <p>The parties must consult in good faith to develop and settle the remedy program; and, following agreement or determination of the remedy program, Project Company must implement and comply with the remedy program. Extensions of time for remedy</p>	<p>Where an event of default occurs, the State may notify the Operator Franchisee of the nature of the default and a reasonable period in which to remedy the default.</p> <p>Whether or not a notice has been issued, the Operator Franchisee must immediately commence and diligently pursue action required to remedy the default. If a default notice has not been issued, the State must be notified of the default.</p> <p>There is provision for consultation between the parties as to the applicable time needed to cure a default.</p> <p>Where an event of default occurs, the Operator Franchisee must also prepare a prevention plan which details the actions to be taken to prevent the event of default</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Variations to this program can be made by agreement of both parties. If the Company and Trustee fail to satisfy these obligations, then the State may give notice to terminate with 25 business days' notice.	freeway lanes open (to the extent that it is safe to do so).		may be given by the State.	from reoccurring.

State right to terminate for project co default

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
As mentioned in 13.2, if a remedy for an event of default is not diligently pursued (as agreed) or the breach not remedied by the agreed date, the State may terminate the agreement with 25 days' notice.	<p>The State may give 20 business days of notice to terminate the deed where:</p> <ul style="list-style-type: none"> the Concessionaire fails to remedy an event of default within the specified time if, at any time, the Concessionaire is not diligently pursuing or has not diligently pursued the remedy of an event of default all traffic lanes of any Freeway Section which has achieved Freeway Section Completion are not open to the general public to the extent that it is safe to do so. <p>If, after the 20 day notice period has expired and the event of default has not been remedied, the Concessionaire</p>	<p>If an event of default is not remedied, within the specified time or a remedy has not been diligently pursued, then the State may give notice to terminate. The State may also give notice to terminate if after the Toll road Opening Date, all traffic lanes of the Toll road are not open to the general public to the extent that it is safe to do so.</p> <p>The State may give the PPP Cos 20 Business Days' notice of its intention to terminate this deed. During this 20 Business Day period the PPP Cos will have the right to remedy the Event of Default.</p> <p>If at the end of the 20 Business Day period the default has not been remedied or the lanes not reopened the State may</p>	<p>On the occurrence of a Default Termination Event, the State may terminate the deed immediately and without granting Project Company any cure period by notice in writing if:</p> <ul style="list-style-type: none"> Project Company displays an intention to wholly or substantially abandon or does permanently abandon the Project an Insolvency Event occurs in relation to Project Company, whether or not Project Company is then in breach of a State Project Document. <p>The State may also terminate for project default. The State must give 20 business days' notice of intention to terminate</p>	<p>If an Operator Franchisee Termination Event occurs and is subsisting, the State may terminate this deed by not less than 10 Business Days' notice to Operator Franchisee, which states the Operator Franchisee Termination Event in respect of which the notice is given, with effect from the date stated in the notice, without any cure period being given to Operator Franchisee.</p> <p>Without limiting the State's other rights and remedies under the State Project Documents, if an Operator Franchisee Termination Event has occurred and is subsisting, the State may take any action it considers appropriate or necessary to overcome the effects of Operator Franchisee</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>has not recommended diligently pursuing the remedy or freeway lanes have not been reopened, then the State may terminate the deed.</p> <p>The State may also terminate the deed for a failure by the Concessionaires to achieve freeway section completion (or for a failure to diligently pursue) in accordance with their obligations.</p>	<p>terminate the deed by giving notice to the PPP Cos.</p>	<p>the deed if the Project Co fails to comply with any of its obligations or fails to remedy any defaults. If the company does not remedy the default within 20 business days, the State may terminate the deed.</p>	<p>Termination Event or preserve the Project, which may include the State (or its nominees) entering and remaining on or in the Project Area or the System and the amount of any costs or expenses incurred in taking such action will be payable on demand by Operator Franchisee to the State.</p>

Project co termination events

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Failure to cure a curable default event</p>	<p>Where an Event of Default or Project Default occurs, the State may give notice of an intention to terminate the deed if:</p> <ul style="list-style-type: none"> • a remedy to the of the breach • the overcoming of the consequences of the breach <p>is not diligently pursued.</p> <p>If the Company and Trustee subsequently fail to:</p> <ul style="list-style-type: none"> • remedy the relevant 	N/A	N/A	N/A	<p>A failure by Operator Franchisee to Remedy an Event of Default which is capable of being Remedied within the Applicable Cure Period.</p>

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>breach or overcome its consequences by the date specified in the agreed or determined Proposed Remedy Program</p> <ul style="list-style-type: none"> diligently pursue all steps and actions described in the agreed or determined Proposed Completion Program or the agreed or determined State Remedy Program <p>then the State is entitled to terminate the agreement.</p>				
Failure to source finance	<p>If the Company and Trustee fail to ensure that:</p> <ul style="list-style-type: none"> on Financial Closing, unconditional commitments by persons notified to the State on or before 30 October 1995 subsist to subscribe for, or procure the subscription of, 	<i>N/A</i>	<i>N/A</i>		<i>N/A</i>

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	Project Securities in an amount of not less than \$455 million then the State may terminate the agreement.				
Insolvency	N/A	N/A	N/A	An Insolvency Event occurs in relation to the Project Co	<p>An Event of Insolvency occurs in relation to Operator Franchisee, whether or not Operator Franchisee has been in breach of this deed.</p> <p>An Event of Insolvency occurs in relation to a Core Contractor or a Core Guarantor whether or not Operator Franchisee is then in breach of this deed, and either:</p> <ul style="list-style-type: none"> • that Core Contractor or Core Guarantor is not replaced within 120 Business Days (or, at any time during that period, Operator Franchisee is not diligently pursuing the replacement of that Core Contractor or Core Guarantor (as applicable)), by a person that: • satisfies the requirements of clause 56; or • is otherwise acceptable to

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project the State (acting reasonably)
Prevention by law	Where the Company or Trustee is prevented (absolutely) from carrying out works intended to be constructed. If this occurs, the State may acquire the project for the Early Termination Amount.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Assignment by Project Co/share capital restrictions	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Operator Franchisee breaches its obligations with respect to assignment. Operator Franchisee breaches its obligations with respect to the deed's restrictions on dealing with share capital.
Abandonment	The State may terminate if the Company or Trustee fails to take efforts to achieve completion for either: <ul style="list-style-type: none"> • a period of three consecutive months • an aggregate period of six months in any 12 month period. 	<i>N/A</i>	<i>N/A</i>	Project Co at any time wholly or substantially abandons the works or displays an intention to do so.	Operator Franchisee wholly or substantially abandons the Project or displays an intention to do so.

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Persistent/repeated breach	N/A	N/A	N/A	N/A	<p>The State has issued a Final Persistent Breach Notice and the relevant breach has continued beyond 30 Business Days (or such longer period determined by the State under clause 44.1 (d)(iv)) or recurred three or more times within the six month period after the date of service of the Final Persistent Breach Notice.</p> <p>The State has issued a Final Frequent Breaches Notices and Frequent Breaches continue to occur at any time in the six month period after the date of service of the Final Frequent Breaches Notice.</p>
Unacceptable quality	N/A	N/A	N/A	N/A	Operator Franchisee accumulates more than [<i>figure withheld</i>] per Payment Month in any 4 out of 6 consecutive Payment Months.
Failure to proclaim legislation	If Project Legislation is not proclaimed in the form of the Project Bill or as otherwise agreed by each of the parties by 31 March 1996, either the Company or the Trustee may, by notice to the State given within 10 Business Days of that date, terminate this Deed.	N/A	N/A	N/A	N/A

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
Failure to satisfy conditions precedent	If any of the conditions precedent contained in paragraph 2.7(b) or (c) are not satisfied or waived within 75 Business Days from the proclamation of Project Legislation, any party entitled to the benefit of the conditions may terminate this Deed by notice to the other parties.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
Completion not achieved by in time	<p>If Completion of all the Sections of the Link is not achieved by the Link Expected Completion Date and the Company and Trustee subsequently fail to:</p> <ul style="list-style-type: none"> achieve Completion of all Sections by the date specified in the agreed or determined Proposed Completion Program, or the agreed or determined State Program (as the case may be), diligently pursue all 	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Completion has not occurred by the Date for Completion and the Independent Verifier reasonably forms the view (including having regard to any applicable Cure Plan or Prevention Plan which Operator Franchisee is diligently implementing) that Operator Franchisee will not achieve Completion by the Sunset Date; or Completion has not occurred by the Sunset Date.

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	steps and actions described in the agreed or determined Proposed Completion Program or the agreed or determined State Program (as applicable) then the State will be entitled to terminate (notice periods apply).				
Failure to commence	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	Following Financial Close, Operator Franchisee fails to commence within 60 Business Days the performance of the Project Activities.
Requirement for approvals	If, before Financial Closing, the Company, the Trustee or the State becomes aware that an Environmental Impact Statement is, or will be, required in relation to the Project, it shall be entitled to terminate this Deed by giving, prior to Financial Closing, notice of termination to the other parties. If, after Financial Closing, the Company	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>or the Trustee becomes aware that an EIS is, or will be, required in relation to the Project, it shall promptly notify the State of it. If, after Financial Closing, the State becomes aware that an EIS is or will be required in relation to the Project and:</p> <ul style="list-style-type: none"> • Completion of all Sections has not occurred, it may terminate this Deed by notice to the Company and the Trustee given within 20 Business Days after it becomes aware of the EIS requirement or provide the limited indemnity described in paragraph (c). If the State does not give such a notice, it will be deemed to have elected to provide that indemnity • Completion of all Sections has occurred, it must 				

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	provide the limited indemnity described in paragraph (c).				
Failure to effect and maintain insurance	N/A	N/A	N/A	N/A	Operator Franchisee fails to effect and maintain (or cause to be effected and maintained) the Insurances it is required to effect and maintain pursuant to this deed.
Default under other Agreements	The State may terminate the Deed by notice to the Company and the Trustee if the Company, the Trustee or a Hedging Project Bank (within the meaning of the Treasurer's Deed of Covenant) exercises its right under paragraph 2.1(a) of that Deed (note: a copy of the Treasurer's Deed of Covenant is not available).	N/A	N/A	N/A	N/A
Unacceptable availability	N/A	N/A	N/A	N/A	The Availability Entitlement is less than [withheld amount] in any 3 out of 6 consecutive Payment Months.
Failure to prevent	N/A	N/A	N/A	N/A	A failure by Operator Franchisee to prevent the recurrence of an Event of

	Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
					<p>Default which is the subject of a Prevention Plan.</p> <p>A failure by Operator Franchisee to submit a draft Cure Plan or a draft Prevention Plan or to consult in good faith with the State to agree to a Cure Plan or a Prevention Plan, if such failure is not remedied within 6 Business Days of notice from the State regarding that failure.</p>

State's other termination rights

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The State may also terminate the Deed by notice to the Company and the Trustee if:</p> <ul style="list-style-type: none"> at a particular time, the State was unable to exercise a right of termination in relation to a <i>Force Majeure</i> event (due to s 13.8) and no liability of the Trustee and Company subsists in relation to the project debt; the Trustee or a Hedging Project Bank exercises its right under cl 2.1(a) of the Treasurer's Deed of Covenant; or subject to exceptions, if an Appendix Event (eg an act of prevention, change in law, industrial action etc.) results in an event which gives the State the right to terminate under cl 15.2 or 15.3 and that 	<p>State may terminate the deed if the Concessionaire notifies it that it is unable or unwilling to carry out a modification requested by the State. If the State terminates, it must pay the Concessionaires an Early Termination Amount.</p> <p>The State may also terminate, with 15 days' notice, if an</p>	<p>At any time after the occurrence of an Uninsurable <i>Force Majeure</i> Event, the State may in its absolute discretion terminate this deed by giving a notice to that effect to each PPP Co after which this deed will be terminated.</p>	<p>State may terminate for convenience and prolonged <i>Force Majeure</i> event that affects activities for a period of greater than six continuous months.</p>	<p>Either party may terminate for occurrence of a <i>Force Majeure</i> with 20 business days' notice. Some restrictions do apply to the Operator Franchisee's ability to terminate and, in some instances, the State may suspend the right of the Operator Franchisee to terminate.</p>

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
event had a material adverse effect.	uninsurable <i>Force Majeure</i> Event occurs.			

Step-in events

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>The State may step-in where there is a material risk resulting from the operating default to:</p> <ul style="list-style-type: none"> the health and safety of users of a section of the link material damage to a section of the link 	<p>If a Concessionaire breaches an obligation under a project document and the State:</p> <ul style="list-style-type: none"> reasonably forms the opinion that unless it exercises some or all of its step-in rights, there is likely to be a material risk to either the environment, health or safety of facility users, general public, or a risk of material damage to the freeway works has given the Concessionaires a notice to remedy a breach and that breach has not been remedied 	<p>If a PPP Co breaches an obligation under any State Project Document, the State may give the PPP Cos notice requiring the relevant PPP Co to remedy the breach.</p> <p>If a PPP Co:</p> <ul style="list-style-type: none"> has not, within a reasonable time after receipt of the State's notice under clause 42.1 taken steps to remedy the breach having taken such steps, fails to remedy the breach within a reasonable time, <p>then the State may take such action as</p>	<p>A State may step-in when:</p> <ul style="list-style-type: none"> an incident is subsisting the State is required by Law to act to discharge a statutory power or duty an event of default occurs a default termination event occurs any Project Activities are suspended following the occurrence of a <i>Force Majeure</i> Event 	<p>A Step-In Event is an Operator Franchisee Termination Event, or an event or circumstance which:</p> <ul style="list-style-type: none"> arises out of or in connection with the Project and poses a serious threat to, or causes or will cause material damage or material disruption to: <ul style="list-style-type: none"> the health or safety of persons the Environment any property the safe and secure performance of the Project Activities or the operation of the System requires the State to exercise any of its responsibilities or functions at law.

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>within the reasonable time allowed</p> <p>then the State may exercise its step-in rights.</p> <p>The State may also exercise its step –in rights where a cure notice has been issued by the Construction Contractor or Operator in accordance with the Construction Tripartite Agreement or the Operating Tripartite Agreement (as applicable) or a notice has been issued by any Customer Service Contractor or Relevant Entity (including any Customer Service Contractor) (as the case may be) under any Relevant Tripartite Agreement advising that the Customer Service Contractor or Relevant Entity is</p>	<p>may be necessary to remedy the breach (including requiring the Toll road or part of it to be closed).</p> <p>If the State elects to exercise its step-in the PPP Cos must assist the State wherever and however possible to ensure that the State is able to exercise its step-in right effectively and expeditiously, including giving the State or its nominees access to the Project Areas and any other land upon which the Project Activities are being carried out.</p> <p>Each PPP Co acknowledges and agrees that the State is not obliged to remedy any breach, or to overcome or mitigate any risk or risk consequences, in respect of which the State exercises its step-in rights.</p>		

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
	<p>entitled, in accordance with the terms of the relevant Material Contract to which the Relevant Tripartite Agreement relates, to terminate the Material Contract due to a failure by a Concessionaire to comply with its obligations under that Material Contract.</p>			

Step-in rights

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>State or its nominee may operate, repair or maintain (as the case may be) the relevant part of that Section or of the Link in an endeavour in good faith to address the risk or mitigate its consequences.</p> <p>When assuming control of the Link, the State has no entitlement to tolls levied during any period during which the State is exercising its rights.</p> <p>The Company shall co-operate with the State,</p>	<p>Where a step-in event occurs, the State may:</p> <ul style="list-style-type: none"> • temporarily take or assume total or partial management and control of the Construction Activities or possession, management and control of the Facilities • take such other steps or action that, in the reasonable opinion of the State, are necessary or desirable to: <ul style="list-style-type: none"> – progress or complete the Construction 	<p>The State may take such action as may be necessary to remedy the breach (including requiring the Toll road or part of it to be closed).</p>	<p>The State may step in and temporarily assume total or partial management of the project activities, access the relevant land and take such other steps as necessary.</p> <p>The Project Co's obligations will be suspended for the period of step-in.</p> <p>Any loss suffered by the State must be compensated by the Project Co.</p>	<p>If a Step-In Event occurs, the State may instruct Operator Franchisee to do any one or more of the following:</p> <ul style="list-style-type: none"> • immediately suspend performance of all or any part of the Project Activities • provide additional or alternative services or other Project Activities • take, or procure that its Associates take, such other steps as the State determines are necessary or desirable in order to:

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Government Agencies, Utilities and other persons in ensuring that they are given reasonable access to the Project Land and Lay Down Areas to enable them to carry out repair and maintenance work to roadways and structures situated on, below, above or adjacent to the Link.</p> <p>If the State or its nominee exercises the right vested in the State to step in, consequent upon the occurrence of an Operating Default, neither the Company nor the Trustee shall be liable in damages to the State for the particular failure to perform an obligation which comprised part of that Operating Default. The exercise of that right shall not, however, otherwise extinguish, qualify or limit any other right, remedy or power of the State.</p>	<p>Activities</p> <ul style="list-style-type: none"> – operate, maintain or repair the Freeway or maintain or repair the Maintained Off-Freeway Facilities; – levy, charge or collect tolls or User Charges <ul style="list-style-type: none"> • minimise the risk: <ul style="list-style-type: none"> – to the Environment, to users of the Freeway or the Maintained Off – Freeway Facilities, or to other members of the general public – of material damage to the Freeway or the Maintained Off-Freeway Facilities, or to the routine operation or maintenance of the Facilities • remedy the failure by the Concessionaire or the Concessionaires (as applicable) • do anything which a Concessionaire is entitled to do under a Transaction Document or with respect to the Project 			<ul style="list-style-type: none"> • continue the performance of the Project Activities; or • minimise the risk to: <ul style="list-style-type: none"> – the health or safety of persons – the Environment – any property – the safe and secure performance of the Project Activities or the operation of the System, in each case to ensure that the Step-In Event is dealt with and normal performance of the Project Activities resumes as soon as is reasonably practicable <p>Required Action</p> <p>The State or its nominees may take such action as notified and any consequential additional action as the State believes is necessary to exercise those rights (together, the Required Action) and Operator Franchisee must (and must procure that its Associates) give all assistance to the State and its nominees while it is taking the Required Action including by:</p> <ul style="list-style-type: none"> • giving the State or its nominees access to the System, including the Project Area and any other land upon which the Project Activities are

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
				<p>being carried out</p> <ul style="list-style-type: none"> • making available to the State all relevant staff of Operator Franchisee and its Associates and authorising the State to give lawful directions to all such staff • making available to the State all parts of the System, including all spare parts, consumables and repairable items held by Operator Franchisee or its Associates in relation to the Project (wherever located) • making available to the State all documentation relating to the Project, including the documents referred to in clause 47.9 • enabling the State to step in to any relevant Core Contract or Significant Contract.

Termination payments for project co/operator default

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>If the Deed is terminated by the State, the Company and the Trustee shall pay to the State an amount equal to the aggregate of:</p> <p>(i) if it is terminated prior to Completion of all Sections, amounts due and payable by them or either of them to the State in respect of:</p> <ul style="list-style-type: none"> • indemnities • sub-paragraph 3.1(c)(ii) or 3.1(c)(iii) <p>(ii) if it is terminated after Completion of all Sections, amounts due and payable by them or either of them to the State in respect of:</p> <ul style="list-style-type: none"> • indemnities • sub-paragraph 3.1(c)(ii) or 3.1(c)(iii) • sub-paragraph 3.1(c)(i) or Step – In Payments • paragraphs 2.6(e) and (f) • paragraph 3.1(a) • rental under a Lease • paragraph 3.1(d) • Concession Notes. 	<p>State's right to damages</p> <p>Any termination of the Deed by the State (Termination by State) will entitle the State to recover all Loss from the Concessionaires that the State may suffer or incur arising out of or in respect of or in connection with, the termination of the Deed.</p>	<p>State's right to damages</p> <p>Any termination of this deed by the State will entitle the State to recover from the PPP Cos any Loss that the State may suffer or incur arising out of or in any way in connection with the termination of the deed.</p>	<p>Following termination, if the State elects to conduct a tender, the State must pay the highest complaint tender price and any amounts owing by the State to Project Co less:</p> <ul style="list-style-type: none"> • the tender costs • any amounts owing by Project Co to the State • any additional costs reasonably incurred by the State as a result of the default termination event • value of all post termination service amounts • any net gains that have accrued to Project Co as a result of termination • insurance proceeds. <p>If the State does not elect to conduct a Tender, the State must pay Project Co:</p> <ul style="list-style-type: none"> • the estimated fair value of the project • any amounts owing by the State to Project Co <p>less:</p> <ul style="list-style-type: none"> • costs incurred in engaging an independent expert and determining the value of the project • any amounts owing by Project Co to the State • any additional costs reasonably incurred by the State that result from the termination event • value of all post termination service amounts • any net gains that have accrued to Project Co as a result of termination • insurance proceeds 	<p>Where the deed is terminated:</p> <ul style="list-style-type: none"> • For an Operator Franchisee Termination Event • Voluntarily by the State • Due to a <i>Force Majeure</i> Termination Event <p>the State must pay to the Operator Franchisee (except in the case of Operator Franchisee abandonment), an amount determined by the relevant formula (as set in in one of the schedules).</p>

Termination payments for state default

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>If the Deed is terminated by the Company and the Trustee, there shall be deducted from the Early Termination Amount payable under that clause:</p> <ul style="list-style-type: none"> any amount to which the State would be entitled under that clause were the termination made by the State at that time any amount due but unpaid to the State under the Project Documents. 	<p>Early Termination Amount</p> <p>If the Deed is terminated under clauses 37.12(b) (Additional State remedies) or 67 (Termination by Concessionaires), the State must, within 30 Business Days of the Termination Date, pay to the Concessionaires the Early Termination Amount. Other than the Early Termination Amount, the State will not be liable to pay any compensation or other amounts to a Concessionaire in any way arising out of or in respect of or in connection with such termination.</p>	<p>The State must, within 30 Business Days of termination, pay to the PPP Cos the Early Termination Amount and pay, if applicable, to the NB Works Contractor the NB Termination Amount and the EWAG Termination Amount.</p> <p>Payment of the Early Termination Amount, the NB Termination Amount and the EWAG Termination Amount will be full and final settlement of the PPP Cos' and the NB Works Contractor's rights against the State.</p> <p>Early termination payment</p> <p>The total of:</p> <ul style="list-style-type: none"> the project debt on the date of termination an amount sufficient to give each PPP Co the ability to give the Equity Investors (treated as if those Equity Investors were all Notional Initial Equity Investors) a nominal after tax internal rate of return to that date equal to the Equity Return on amounts invested by Notional Initial Equity Investors. <p>It does not include:</p> <ul style="list-style-type: none"> any interest on the Project Debt to the extent that it is calculated at a rate which would constitute a penalty any amount included in the calculation of the NB Termination Amount or the EWAG Termination Amount. 	<p>Project Co does not have the right to terminate for State default and, accordingly, there is no termination payment for such an event.</p>	<p>N/A</p>

Termination payments for termination for convenience

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
There is no termination for convenience clause in the Concession Deed.	There is no termination for convenience clause in the Concession Deed.	There is no termination for convenience clause in the Project Deed.	<p>If the State elects to terminate for convenience, it must pay:</p> <ul style="list-style-type: none"> • the outstanding project debt with interest at the termination date • an amount which gives an equity return for the period between the termination date the original term expiry • redundancy payments for Project Co employees • amounts reasonably incurred by the Project Co due to the termination of agreements with D&C Contractors and O&M Contractors • any costs incurred by the Project Co as a result of terminating the debt financing documents • amounts owing by the State to the Project Co (incl. quarterly service payments) <p>less:</p> <ul style="list-style-type: none"> • any gains realised by 	<p>Where the deed is terminated voluntarily by the State, the Termination Payment is equal to:</p> <ul style="list-style-type: none"> • an amount equal to the Termination Senior Debt; • an amount which gives an internal rate of return on Equity equal to the Base Case Equity Return • an amount equal to the Sub contractor Breakage Costs • any amounts due and payable by the State to Operator Franchisee in accordance with the terms of the State Project Documents as at the Termination Date; • the total of all redundancy

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
			<p>the Project Co as a result of terminating the debt financing documents</p> <ul style="list-style-type: none"> • any amounts owing by the Project Co to the State • any credit balances held by or for the benefit of the Project Co and any insurance proceeds owing to the Project Co • all sums due and payable to the Project Co from any prepayment of debt • any insurance proceeds • the securitisation refund payment 	<p>payments for employees of Operator Franchisee</p> <p>less:</p> <ul style="list-style-type: none"> • any amounts owing by Operator Franchisee to the State, under the State Project Documents as at the Termination Date • any gains which have or will accrue to Operator Franchisee as a result of the termination of this deed and any other Project Documents, not included in the definition of Termination Senior Debt • the net amount (which, for the avoidance of doubt, will be net of any amount deductible under the relevant insurance policy)

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
				<p>Operator Franchisee is entitled to retain, or would be entitled to retain had Operator Franchisee complied with the requirements of clause 43 and the relevant insurance policy, under any insurance policy</p> <ul style="list-style-type: none"> • the total of all amounts standing to the credit of the Insurance Proceeds Account or Asset Management Retention Account as at the Termination Date • the Securitisation Refund Payment

Termination payments for prolonged force majeure/uninsurable force majeure events

Toll Road Project A	Toll Road Project B	Toll Road Project C	Toll Road Project D	Light Rail Project
<p>Whilst there is no right of termination for a <i>force majeure</i> event, obligations under the Deed may be suspended and the Company and Trustee relieved of their liability.</p> <p>If the Company or the Trustee is unable to perform an obligation to the State under the Project Documents because of a relevant event (eg <i>Force Majeure</i>), then the obligation shall be suspended (and the Company or the Trustee (as the case may be) shall be relieved from liability arising by reason of that inability)</p> <p>for the duration of the relevant period.</p>	<p>Termination of rights and obligations by the State for an uninsurable <i>Force Majeure</i> does not constitute a breach of a project document by the State.</p>	<p>Where the project is terminated for an uninsurable <i>Force Majeure</i> event, an Early Termination Payment will be payable by the State.</p> <p>Early termination payment</p> <p>The total of:</p> <ul style="list-style-type: none"> the project debt on the date of termination an amount sufficient to give each PPP Co the ability to give the Equity Investors (treated as if those Equity Investors were all Notional Initial Equity Investors) a nominal after tax internal rate of return to that date equal to the Equity Return on amounts invested by Notional Initial Equity Investors. <p>It does not include:</p> <ul style="list-style-type: none"> any interest on the Project Debt to the extent that it is calculated at a rate which would constitute a penalty any amount included in the calculation of the NB Termination Amount or the EWAG Termination Amount. 	<p>If the State or Project Co terminates due to a <i>Force Majeure</i> Event, the Termination Payment is the greater of a Default Termination Payment was due (as calculated above where the state elects not to re-tender) and the following calculation:</p> <ul style="list-style-type: none"> Project debt amounts owing by the State to Project Co amount of any costs incurred from terminating or reversing derivative position under finance documents <p>less:</p> <ul style="list-style-type: none"> gains realised from terminating or reversing derivative position under finance documents any amounts owing by Project Co to the State insurance proceeds all sums due to Project Co from the Financiers any accrued, deferred or rolled up interest from outstanding amounts of the project debt that are intended to be refinanced credit balances held for the benefit of Project Co securitisation refund payment 	<p>If:</p> <ul style="list-style-type: none"> the parties are unable to agree on appropriate terms to mitigate the effects of the <i>Force Majeure</i> Event and facilitate the continued performance of the State Project Documents on or before the date falling 20 Business Days after the date of the commencement of the relevant <i>Force Majeure</i> Event (or the date on which the relevant Relief Event became a <i>Force Majeure</i> Event) the <i>Force Majeure</i> Event is continuing or its consequence remain such that the affected party has been or is unable to comply with a material part of its obligations under the State Project Documents during that 20 Business Day period, <p>then either party may terminate this deed by giving 20 Business Days' notice to the other party.</p> <p>Restrictions</p> <p>The State can suspend the Operator Franchisee's right to terminate provided that any suspension does not last longer than six months.</p>

General

21 Alliancing

Introduction

This paper considers the nature and features of alliancing and when alliancing should be used. It is important to understand the decision whether to use alliancing as the framework for delivery of a project is dependent on the size, nature and complexity of the project as well as the participants involved. This is extremely important as there are significant dangers if alliancing is used as the framework for delivery of a project without appropriate consideration of these factors and the other issues identified in this update.

What is alliancing?

Alliancing is a co-operative form of contracting where the participants enter into a relationship (alliance) which is designed to align the commercial interests of the participants. Each participant in the alliance will share in the success or failure of the project and in decision making and risk management.

Under an alliance, the participants will structure their relationship to share commercial risk and reward. Therefore, it is in the interests of all participants to work co-operatively and openly.

What are the key features of alliancing?

An alliance generally has the following key features:

- commonly aligned objectives
- joint and several liability between the participants
- fair and equitable sharing of risk between the participants designed to avoid any “win-lose” outcomes
- fiduciary duties. A performance or incentive basis of remuneration which will include payment of costs and an agreed division of margin (profit) taking into account performance levels measured against clearly defined indicators
- an integrated project team
- an environment which encourages innovation and breakthroughs
- unanimous agreement by the alliance representatives, particularly for the division of responsibilities and the type
- quality of works and services required to meet the objectives of the alliance.
- commitment to a “best for project” approach which means that the alliance representatives will need to choose between any competing proposals put forward by a number of participants in the alliance
- open and honest communications, trust, integrity and respect
- depending on the type of alliance, a “no-blame” and “no dispute” culture
- the use of a facilitator to guide the alliance participants and help create an alliance “environment”.

How is alliancing different to traditional contracting?

Alliancing is often described as a “risk embrace” culture under which the parties seek to better manage risks by embracing them (rather than trying to transfer them) and then work together to manage them within a flexible project delivery environment. It is an agreement between two or more entities who undertake to work cooperatively, on the basis of a sharing of project risk and reward, for the purpose of achieving agreed outcomes based on principles of good faith and trust and an open-book approach towards costs.

In contrast, traditional contracting is often described as “risk transfer” where the parties seek to transfer as much risk as possible to others under a range of separate contracts. Under a traditional contracting arrangement, the Owner and the main Contractor would enter into a master/servant style contract for the performance of the works and the main Contractor would then flowdown as many risks as possible by using a series of master/servant style subcontracts.

Paragraph heading

In order to promote the culture and objectives of alliancing, it is common for alliance participants to appoint an independent facilitator to assist them during the workshop and documentation phase and then the implementation phase of a project.

Workshop and documentation phase

During the workshop and documentation phase of a project, the main role of the facilitator is usually to assist the alliance participants by:

- helping create an environment of trust, co-operation, open and honest communication and flexibility
- implementing workshops for developing a group approach to identification of goals and objectives, stakeholder interests, functional performance requirements and risks and constraints.

Implementation phase

During the implementation phase of a project, the alliance management committee would normally ask the facilitator to focus on the following key issues:

- developing an environment of trust, co-operation, open and honest communication and flexibility
- building best practice behaviours and focusing on common project goals
- monitoring results and making recommendations to keep the project on track
- encouraging innovation and breakthroughs.

Why is it important to use a facilitator?

Alliancing requires a substantial and dramatic change in:

- the way works and services are provided
- the manner in which the parties relate to each other during the life of a project
- a facilitator is essential to the implementation and management of these changes and often provides the stimulus for the necessary cultural change which needs to be embraced by the alliance participants, the alliance management committee and the project management team.

When should alliancing be used?

The drivers for establishing an alliance as the framework for delivery of a project include the:

- ability to efficiently pool together knowledge, skills and resources from across a number of parties with differing skill sets
- ability to select the “best team” for delivery of the works and services
- alignment of objectives
- increased possibility of exceeding required performance levels and obtaining a greater reward
- opportunities for economies of scale and increased profit margins.

Therefore, if a project is technically complex an alliance should be considered. Alternatively, an alliance should be considered when it is difficult to accurately define the finished “product”. For example, when design is a key element and it is not feasible to complete the design prior to going to tender.

Alliances may also be appropriate when there is likely to be a long term relationship. An alliance environment may better equip the parties to deal with inevitable problems that arise over the course of the relationship than a more traditional contract. This is because the parties will have the freedom and ability, and indeed the obligation, to develop pro-active solutions to those problems. A more traditional structure may lead to disputes and the breakdown of the relationship.

The key determinative factor should be are the parties willing and capable of working in the co-operative way required for a successful alliance. If not, an alliance should not be considered.

When should alliancing not be used?

The obvious answer is whenever the pre-requisites discussed above are not present. If a project is straightforward an alliance is probably inappropriate. Similarly, if there is any concern that the parties involved will not be able to adopt an alliance “mindset” an alliance should not be used because the integration and motivation of the parties will determine the success or failure of the alliance.

Alliancing is first and foremost about people and relationships

The other key consideration is, does the project Sponsor want to finance the project? If so, an alliance structure may not be suitable because Lenders may be reluctant to finance an alliance on a nonrecourse basis especially during the construction phase. This is because the Lenders will not have the certainty of a guaranteed contract price and completion dates with the standard protections eg step in rights, liquidated damages and performance bonds. As a result of these risks, we understand that a pure alliancing arrangement has not yet been used in a project financed on a project financing basis.

Alliancing challenges the way parties have structured their business relationships in the past. It will not work for all projects, particularly if the individuals involved do not quickly adapt to the culture of alliancing.

Conclusion

The commercial, bankability, financial, taxation and practical issues must be considered, in their entirety, before any decision is made as to the most appropriate and effective contracting structure for the delivery of a project.

For the reasons outlined in this update, alliancing is a project delivery arrangement which can be considered for complex projects or for long term relationships.

22 Assignment, novation and other dealings boilerplate clause

Need to know

This clause regulates the manner in which the rights (benefit) and/or obligations (burden) under a contract can be transferred to a third party. Including this clause in a contract encourages parties to follow a best practice process in order to minimise informal assignments and novations and, in turn, bring certainty to any agreed changes to the contract. The underlying benefit of this clause is that it is likely to protect parties against casual and unfounded allegations that assignments, or any other dealings under the contract, have been made.

The sample clauses

Option 1 – Assignment, novation and other dealings – consent required

A party must not assign or novate this [deed/agreement] or otherwise deal with the benefit of it or a right under it, or purport to do so, without the prior written consent of each other party [which consent is not to be unreasonably withheld/which consent may be withheld at the absolute discretion of the party from whom consent is sought].

Option 2 – Assignment, novation and other dealings – specifies circumstances in which consent can reasonably be withheld

- (a) **[Insert name of Party A]** may not assign or novate this [*deed/agreement*] or otherwise deal with the benefit of it or a right under it, or purport to do so, without the prior written consent of [insert name of Party B], which consent is not to be unreasonably withheld.
- (b) [Insert name of Party A] acknowledges that it will be reasonable for **[insert name of Party B]** to withhold its consent under this clause if:
 - (i) **[Insert name of Party B]** is not satisfied with the ability of the proposed assignee to perform [insert name of Party A]'s obligations under this [*deed/agreement*]
 - (ii) **[Insert name of Party B]** is not satisfied with the proposed assignee's financial standing or reputation
 - (iii) the proposed assignee is a competitor of [insert name of Party B]
 - (iv) **[Insert name of Party B]** is in dispute with the proposed assignee

1 What is this clause and why is it used?

1.1 General

There may be a variety of reasons why the rights and or obligations under a contract may need to be transferred to another party. However, there are two main legal tools available to achieve this, namely:

- assignment, for the transfer of benefits (rights)
- novation, for the transfer of rights and obligations (burdens).

Each has unique features that must be taken into account when deciding which is the preferred option.

1.2 What is the purpose of this clause?

The purpose of an “assignment, novation and other dealings” clause is to set out the requirements which the parties agree are needed to effect a future change to the contract and/or its parties and thereby preclude all, or at the very least minimise the incidence of, transfers which are not made in accordance with those formalities. The clause is concerned with retaining control over the assignment of, or any other dealing with, the contract.¹

A contracting party at common law has a general right to assign its rights without any necessary consent or approval from the other party. An “assignment, novation and other dealings” boilerplate provision is included in a contract to exclude or limit this common law right.² The purpose of the clause is to ensure that the obligor has contractual dealings only with the obligee – eg an obligor might have a personal preference for dealing with the obligee rather than with a third party assignee. In order for the assignment of rights by one party not to be exercised unilaterally without the knowledge of the other party, it is common for contracts to include a provision that a party can only assign its rights under the contract with the consent of the other party.

At common law, the obligations under a contract can only be novated with the consent of all original contracting parties, as well as the new contracting parties, because the novation extinguishes the old contract by creating a new contract. Including one of the sample clauses in an agreement is designed to prevent oral consent to a novation, or consent being inferred from a continuing party's conduct.

2 How effective is it?

2.1 Effectiveness of a non-assignment clause

(a) General

If the contract contains non-assignment provisions, they are generally effective provided they have been clearly drafted. Contracts commonly provide for assignment with the consent of the other party and such provisions usually provide that consent must not be unreasonably withheld.³ A purported assignment that contravenes such contractual restriction (including failure to comply with a clause which expressly requires consent to be obtained) constitutes a breach of contract (possibly resulting in a right to terminate depending on construction of the clause in the context of the contract as a whole) and may result in an ineffective assignment.⁴

However, in practice, purported assignors often do not comply with strict contractual provisions and serve a notice of assignment on the other party in the hope that the other party will accept the assignment through confirmation or conduct that is consistent with acceptance. It is prudent to always record acceptance in writing.

After assignment, the assignee is entitled to the benefit of the contract and to bring proceedings (either alone or by joining the assignor) against the other contracting party to enforce its rights. As assignment only transfers existing rights and does not create new ones, the assignee cannot enforce rights that the assignor did not have.

The assignee does not become a party to the contract with the promisor. Therefore, if A assigns its rights under a contract with B to C, the contract is still between A and B.⁵ As the burden or obligations of the contract cannot be assigned, the assignor remains liable post assignment to perform any part of the contract that has not yet been performed.

1 However, see *Leveraged Equities Ltd v Goodridge* (2011) 191 FCR 71, concerning assignment of benefits and related burdens.

2 Australian Encyclopaedia or Forms & Precedents – Commentary to Boilerplate Clauses, para 63-75.

3 It is also possible for a court to imply a restriction on the exercise of the discretion to provide consent, providing it would not be inconsistent with the rest of the contract. Including reference to “absolute discretion” provides a basis for a party saying that an implied term would be inconsistent.

4 See generally *Re Turcan* (1888) 40 Ch D 5; *Anning v Anning* (1907) 4 CLR 1049. See Carter on Contract – Part IV – Parties to the Contract – Chapter 17, ‘Exceptions’ to the Privity Doctrine. For further analysis on whether an assignment in contravention of a contractual restriction is valid, please refer to Seddon, N, Bigwood, R, Ellinghaus, M, *Cheshire and Fifoot Law of Contract*, 10th ed, 2012, Lexis Nexis at 358-362 and Tolhurst, ‘The Efficacy of Contractual Provisions Prohibiting Assignment; (2004) 20 *Syd L Rev* 161. The law in this area is unsettled.

5 Carter JW, *Contract Law in Australia*, 6th ed, 2013, LexisNexis Butterworths at p357.

(b) Assignment of the 'whole' contract

As a general principle, an assignment of the “whole contract” will not extend further than assignable contractual rights (ie it will not extend to the obligations or burden of the contract).

(c) Declarations of trust

If a contract is not able to be assigned because it contains, for example, non-assignment provisions, it may still be possible for a contracting party to declare a trust in favour of a third party over the benefit of the contractual rights.

2.2 Effectiveness of a novation clause

Similar to non-assignment provisions, contracts commonly provide for novation with the written consent of the other party and such provisions usually provide that consent must not be unreasonably withheld. A novation that contravenes such contractual restriction which requires consent in writing may constitute a breach of contract (possibly resulting in a right to terminate depending on construction of the clause in the context of the contract as a whole) and will often result in an ineffective novation. In any event, novation requires the consent of all the parties to the original contract (outgoing and continuing parties) and the new incoming party. The consent may be given in advance by the original parties – see *Leveraged Equities Ltd v Goodridge* (2011) 191 FCR 71 (Goodridge). However, “written” consent is not specifically required as a matter of contract law.

3 Drafting and reviewing the clause

3.1 Should I always include it, and what happens if I don't?

When drafting a commercial contract, you need to consider how the parties intend to deal with circumstances in which the contract is to be assigned, novated or otherwise dealt with. The standard way of dealing with assignment, novation or other dealings is to prohibit them, either entirely or without the other parties' consent. This makes commercial sense as it ensures the parties know who they will be contracting with over the lifetime of their agreement. This is particularly important when the counterparty to the contract is material to the giving of the contract, which is especially the case in banking and finance agreements.⁶

The underlying benefit of the clause is that it is likely to protect parties against casual and unfounded allegations that assignments, or any other dealings, have been made. An “assignment, novation and other dealings” clause is evidence of the parties' intention that the contract was not intended to be assigned or novated unless done in accordance with the clause.

If you do *not* include an “assignment, novation and other dealings” clause in your contract, then the parties would be free to assign the benefit of the contract without consent which is consistent with general common law principles and statute.

As stated above, a contract may only be novated with the consent of all parties to the novation (ie both outgoing and incoming parties). Consent to a novation may be written, oral or “inferred by conduct” in accordance with general contract law principles. If you choose to include the sample boilerplate provision which deals with novation, parties are limited to providing their consent to any such novation in writing.

3.2 What are the sample boilerplate clauses?

There are two standard sample 'assignment, novation and other dealings' clauses:

- (a) **Option 1:** This is a standard “assignment, novation and other dealings” clause which incorporates the requirement for prior written consent. In this clause, you need to select whether such consent should be qualified by requiring consent not be unreasonably withheld or, on the other hand, unqualified by

⁶ Martin Lovell and Brian Vuong, 'Goodridge Appeal- Legal Principles Governing Assignment and Novation of Contracts' (March 2011) *Australian Banking & Finance Law Bulletin* 118.

allowing each party to exercise absolute discretion when providing consent. Opt for 'not to be unreasonably withheld' when acting for the party likely to need consent. Opt for "absolute discretion" when your client requires flexibility over the exercise of this right and concede that the right be available to both parties only when negotiation positions are evenly balanced.

- (b) **Option 2:** This alternative version of the "assignment, novation and other dealings" clause stipulates the circumstances when withholding consent will be reasonable. It should be used when acting for the party who is likely to require consent. It also adds certainty in the event of dispute over whether the party exercising the right has done so justifiably.

The meaning, effect and duration of a non-assignment/novation provision will depend on its terms. Where the sample clause requires consent to assignment and novation, but provides that consent may not be withheld unreasonably, there is no valid assignment or novation unless written consent has been granted or the court has declared that the consent has been unreasonably withheld/refused.⁷

3.3 *When, if ever, should I amend the clause?*

There may be times in which the sample boilerplate clause should be amended. As mentioned above, the *Goodridge* case held that it is possible to consent in advance to a novation, even where the identity of the new contracting party is unknown.

The *Goodridge* case provides both opportunities and challenges for drafters and reviewers of agreements:

- if you are acting for a party who wishes to take advantage of a flexible novation arrangement, then prospective consent from the other side will be something to include or pursue during negotiations. This might be particularly important if the existing commercial terms are favourable and you wish to avoid re-opening negotiations at the time of the novation. The remaining party may seek a guarantee by the outgoing party for the performance of the new entity
- if you are acting for a party who wishes to retain authority over any incoming contracting party, do not amend the boilerplate provision to include prospective agreement to novation. It will also be worth checking the "Interpretation" clause which may include language consistent with a prospective novation clause such as: *references to any party to this agreement includes references to its respective successors and permitted assigns*. The *Goodridge* case alerts lawyers to the importance of reviewing such boilerplate clauses with extra care

⁷ *CEP Holdings Ltd and CEP Claddings Ltd v Steni AS* [2009] EWHC 2447 See *Fulham Partners LLC v National Australia Bank Ltd* [2013] NSWCA 296 for discussion of "unreasonably withholding consent" and the factors that can legitimately be considered by a party whose consent is sought at paragraphs [38]-[59].

23 Boilerplate clauses

Introduction

This paper provides some common examples of boilerplate clauses (standard clauses) and explains why these clauses should, as a matter of good practice, be included in all contracts.

Example boiler plate clauses

Governing law

An example standard clause for specifying the governing law of a contract is:

This contract will be interpreted under and governed by the laws of [].

It is fundamental for the parties to agree on the governing law of a contract. This is because legal concepts and drafting will differ depending on the chosen governing law. For example, the treatment of liquidated damages and exclusion for consequential losses under English, New York, Hong Kong and Australian law is different to the treatment under the laws of the United Arab Emirates, India and many jurisdictions in Asia.

In the absence of a governing law clause, the courts will apply the rules of private international law to determine the governing law of the contract. That result may be contrary to the intention of the parties.

In general, courts will normally give effect to the agreed chosen law as the proper law unless the choice is not made in good faith or is made to avoid mandatory provisions of the law which would otherwise be the proper law of the contract. There is also a growing body of authority which suggests that the law chosen by the parties must have a substantial, though not necessarily predominant, connection with the contract.

Jurisdiction

An example standard clause for specifying the jurisdiction which the parties agree disputes will be heard is:

The parties submit to the [non-exclusive/exclusive jurisdiction] of the courts of [] and any courts that may hear appeals from those courts in respect of any proceedings in connection with this contract.

In most circumstances, the parties will agree to submit to the non-exclusive jurisdiction of a particular jurisdiction. This means that there is at least one jurisdiction where the parties have agreed that disputes can be heard. This provides certainty to the parties because unless the court itself decides that it has no jurisdiction to hear the dispute, the dispute can be heard in the jurisdiction chosen.

Unless there are compelling reasons to submit to an exclusive jurisdiction, it is preferable to nominate a "non-exclusive" jurisdiction. The main reason for this position is that when a dispute arises, a party may decide that it would, in fact, be preferable to commence the action in a different jurisdiction to the jurisdiction agreed as the exclusive jurisdiction. However, depending on the governing law, a party may be bound by the "exclusive" jurisdiction clause and be prohibited from bringing the action in a different jurisdiction. It is also important to consider whether a submission to the exclusive jurisdiction clause is valid in the chosen jurisdiction.

Entire agreement

An example standard entire agreement clause is:

This contract constitutes the entire agreement between the parties and sets out a full statement of the contractual rights and liabilities of the parties in relation to the works and no negotiations between them nor any document agreed or signed by them prior to the date of this contract in relation to the works is of any contractual effect.

The purpose of an entire agreement clause is to make it clear that the agreement between the parties in relation to the subject matter of the contract is completely dealt with in that contract and that any prior agreements or

negotiations in relation to that subject matter are superseded. For this reason, when using this clause care must be taken to ensure that all side letters or other arrangements and understandings between the parties are properly incorporated in the contract.

Although an entire agreement clause will usually bind the parties in accordance with its terms, its inclusion is not always determinative. For example, an entire agreement clause will not overcome the effect of pre-contract conduct or representations which is or are fraudulent. An entire agreement clause will also not prevent the implication of additional terms which are consistent with the express terms of the contract, unless the clause expressly provides that no implication should be made.

Interpretation

An example standard interpretation clause is:

In this contract, unless the contrary intention appears:

- a) A reference to this contract or another instrument*
- b) Includes any variation or replacement of either of them*
- c) The singular includes the plural and vice versa*
- d) A reference to a person includes a reference to the person's executors, administrators, successors, substitutes (including persons taking by novation) and assigns*
- e) If a period of time is specified and dates from a given day or the day of an actual event, it is to be calculated exclusive of that day*
- f) Where an expression is defined, another part of speech or grammatical form of that expression has a corresponding meaning*
- g) Headings are for reference only and do not form part of this contract*
- h) The words "including" and "include" mean "including, but not limited to"*

The purpose of an interpretation clause is to provide clear rules of interpretation which apply when interpreting the contract. These rules provide certainty and avoid the need for repetition throughout the contract. For example, the effect of paragraph (g) in the example clause is that the word "include" can be used without the need to state "include, but not limited to." The extent of the interpretation clause will depend on the specific circumstances of each project.

Severability

An example severability clause is:

If any provision of this contract is prohibited, invalid or unenforceable in any jurisdiction, that provision will, as to that jurisdiction, be ineffective to the extent of the prohibition, invalidity or unenforceability without invalidating the remaining provisions of this agreement or affecting the validity or enforceability of that provision in any other jurisdiction, unless it materially alters the nature or material terms of this contract.

This example clause reflects the common law position. It is included to try and ensure that an invalid clause does not render an entire contract invalid. However, if the severed clause is central to the commercial agreement between the parties severing may have unintended consequences. Therefore, this clause may not be appropriate for all contracts.

Counterparts

An example counterparts clause is:

This contract may be signed in any number of counterparts which, when taken together, will constitute one instrument.

The purpose of a counterparts clause is, as the clause suggests, to enable a contract to be signed in two different places and at two different times. Therefore, unless there is going to be a signing ceremony and all the parties are present to sign the contract at the same time a counterparts clause must be used. Each party should sign at least as many copies of the contract as there are parties, retain one and distribute the other copies to each of the other parties. Given the time taken to distribute hard copies it is common for faxed copies of the execution clauses to be distributed immediately following execution. However, to minimise the potential for disputes over execution and enforceability, parties must ensure that they receive an actual copy of the entire contract. This is because it is the entire contract that is the counterpart, not merely the execution clauses. If this issue is of concern the parties may wish to make receipt of all the counterparts a condition precedent to commencement of the contract. However, this is not common practice.

Notices

A typical notices clause is:

N.1 Method of Service

- a) Unless otherwise stated in this contract, all notices to be given under this contract must be in writing and sent by personal delivery, courier or facsimile to the address of the relevant party provided that:
- b) Any notice sent by personal delivery must be acknowledged as having been received by the receiving party by stamping a copy of that notice with an acknowledgement of receipt stamp which specifies the time and date of receipt.
- c) Any notice sent by courier will be deemed (in the absence of evidence of earlier receipt) to have been delivered three days after dispatch and in proving the fact of dispatch, it is sufficient to show that the envelope containing that notice was properly addressed and conveyed to the courier service for delivery by courier.
- d) Any notice sent by facsimile is deemed to have been delivered on the date of its transmission, if it is a business day, on receipt by the sender of a delivery confirmation report.
- e) Either party may by three days' notice to the other party change its delivery address, facsimile address or addressee for receipt of those notices.

N.2 Next Business Day

If a notice delivered by hand or sent by facsimile is delivered or sent (as the case may be) after 5:00pm on a day, the notice will be deemed to have been received on the next business day.

N.3 Notices

In this contract, notices include any approvals, consents, instructions, orders, directions, statements, requests and certificates or other communication to be given under this contract.

There are two main rationales for including a notices clause. The first is to establish the valid means of giving notices and the second is to deem when those notices have been delivered. The second is particularly important given the deadlines that are often included in project documents for the giving of certain notices.

You will note that the example clause does not include the giving of notices by email (see PwC Paper for more information on this issue).

In addition, for some types of agreements and in some jurisdictions, the notices clause may have to be modified to ensure the giving or receipt of a notice does not create a nexus for stamp duty purposes.

Clause N.3 is not necessary for all agreements. It is most relevant to construction type agreements where there will be a plethora of communication.

Non-waiver/exercise of rights

An example clause is:

A party may exercise a right, power or remedy at its discretion, and separately or concurrently with another right, power or remedy. A single or partial exercise of a right, power or remedy by a party does not prevent a further exercise of that or of any other right, power or remedy. Failure by a party to exercise or delay in exercising a right, power or remedy does not prevent its exercise. A party is not liable for any loss caused by the exercise or attempted exercise of, failure to exercise, or delay in exercising the right, power or remedy.

This clause is included to ensure that a party is not deemed or implied to have given up its rights. Rights can only be waived if done so explicitly. This is important because, in the absence of this clause, equity will often imply consent from a course of conduct. This clause only applies to rights specifically provided for in the contract. Therefore, for example, in the case of email notices, discussed above, it is open to a court to imply consent into a course of conduct because the contract is silent on that issue.

Conclusion

The above clauses and explanations are examples only. Whilst they are boilerplate clauses their inclusion should, nonetheless, be considered on a contract-by-contract basis to ensure they are relevant.

24 Concurrent delay

Introduction

The claiming and granting of extensions of time in large infrastructure projects is often a complicated and fractious process. One common reason for this is the issue of concurrent delay.

A concurrent delay occurs when two or more independent causes of delay overlap in time. Importantly, it is the causes of the delays, rather than the delays themselves, that must overlap. In our experience, this distinction is often not made in the drafting process, resulting in a lack of certainty and, in some instances, disputes. More problematic is when the contract is silent on the issue of concurrent delay and the parties assume that the silence operates to their benefit. As a result of conflicting case law in Australia (see below), it is difficult to determine who, in a particular fact scenario, is correct. This can also lead to protracted disputes and outcomes contrary to the intention of the parties.

This paper considers the significance of addressing the issue of concurrent delay in construction contracts and the various approaches that may be taken.

Significance of concurrent delay

Any complex project may involve a number of different causes of delay, whether they be caused by the Owner, the Contractor, or a neutral event beyond the control of either party. The most obvious causes of delay that may overlap with delay(s) caused by the Contractor are the acts or omissions of an Owner.

An Owner often has obligations to provide certain materials, equipment or infrastructure to enable the Contractor to complete its works. The timing for the provision of that material, equipment or infrastructure (and the consequences for failing to provide it) can be affected by a concurrent delay.

For example, on gas plant projects, an Owner often has a contractual obligation to ensure there is a pipeline available to connect to the plant by the time the Contractor is ready to commission the plant. Since the construction of a pipeline can be expensive, the Owner is likely to want to incur that expense as close as possible to the date that commissioning is due to commence (particularly where funded through debt finance). For this reason, if the Contractor is in delay, the Owner is likely to further delay incurring the expense of building the pipeline. In the absence of a concurrent delay clause, this action by the Owner in response to the Contractor's delay could entitle the Contractor to an extension of time.

Examples of conflicting case law

Although a detailed consideration of the relevant case law is beyond the scope of this article, it is worth noting at the outset that the law in Australia regarding the treatment of concurrent delay remains uncertain.

What is clear, however, is that (a) the fundamental issue for consideration is usually causation and (b) concurrent delay disputes give rise to a host of complex factual determinations about the cause, nature, extent and interrelationship of the overlapping causes of delays.

In the 1992 New South Wales Supreme Court decision of *Thiess Watkins White Construction Ltd v Commonwealth*¹ (**Thiess**), causation was illustrated by Giles J as the following:

To take a simple example, if an Owner-caused delay of 5 days commencing on day 15 means that a Contractor which would have commenced the works on day 20 still has 5 days work to do, and there is a neutral delay on day 23, I see no difficulty in concluding that the time based costs incurred on day 23 were caused by the original delay

¹ *Thiess Watkins White Construction Ltd v Commonwealth* (1992) 14 BCL 61.

Theiss is authority for the position that a Contractor should be granted an extension of time where the initial delay caused by the Owner is prolonged due to a neutral event. In 1994 the Supreme Court of Queensland came to the opposite conclusion in its decision *Armstrong Construction v Council of the Shire of Cook*². Here, the Contractor initially encountered a delay caused by a latent condition, this delay extended due to inclement weather. White J held that the Contractor was entitled to compensation for delay and disruption arising from encountering the latent condition, but not for the 'flow on effect' caused by the neutral event.

In light of the above contradicting authorities, it is difficult to confidently predict how a court will resolve disputes where one of the concurrent delays is attributable to a "neutral" event (ie one caused by a third party or an event beyond the control of either party) rather than attributable to the Owner or Contractor.

In any event, the case law indicates that a "common sense" approach (since the High Court decision of *March v E and MH Stramare*³) will be adopted when causation is in issue. In essence, this means that "causation" is a question of fact to be answered by reference to common sense and experience. Moreover, in the event of a concurrent delay dispute, the courts will favour an event-by-event approach, based on the relevant facts of each case.

As such, in the absence of express terms in a construction contract dealing with concurrent delay, parties face an inherently uncertain legal outcome if a dispute arises. That is one reason why international standard forms of contract have attempted to address this important issue.

Accordingly, it is critical, from both the Owner's and the Contractor's perspective, to include express terms in the contract which clearly articulate who bears the risk in circumstances where concurrent delays arise.

Approaches for dealing with concurrent delays

The issue of concurrent delay is dealt with differently in the various international standard forms of contract. Importantly, it is not possible to argue that one approach is definitely "right"; instead, the preferred approach for each project will depend on a number of factors, such as which side of the table you are sitting and the extent to which the project will be financed through limited or non-recourse project financing (where Lenders require greater outcome certainty in terms of the time and price to complete the works).

In general, there are three main approaches for dealing with the issue of concurrent delay. They are:

Option One: Contractor has no entitlement to an extension of time if a concurrent delay occurs.

Option Two: Contractor has an entitlement to an extension of time if a concurrent delay occurs.

Option Three: Causes of delay are apportioned between the parties and the Contractor receives an extension of time equal to the apportionment (for example, if the concurrent causes of a 10-day delay are apportioned 60:40 Owner: Contractor, the Contractor would receive a six-day extension of time).

Each of these approaches is discussed in more detail below.

Option One: Contractor not entitled to an extension of time for concurrent delays

A common, Owner-friendly, concurrent delay clause for Option One is the following:

If more than one event causes concurrent delays and the cause of at least one of those events, but not all of them, is a cause of delay which would not entitle the Contractor to an extension of time under [EOT Clause], then to the extent of the concurrency, the Contractor will not be entitled to an extension of time.

We have bolded the most relevant words.

² *JW Armstrong Constructions Pty Ltd v Council of the Shire of Cook* (unreported, Supreme Court of Queensland, White J, 25 February 1994).

³ *March v E and MH Stramare* (1991) 171 CLR 506.

Nothing in the clause prevents the Contractor from claiming an extension of time pursuant to the general extension of time clause, and, from an Owner's perspective, express terms addressing the Prevention Principle must also be included in the contract. What the clause does do, however, is remove the Contractor's entitlement to an extension of time when there are two or more causes of delay and at least one of those causes would not entitle the Contractor to an extension of time under the general extension of time clause.

For example, if the Contractor's personnel were on strike and, during that strike, the Owner failed to approve drawings, then, in accordance with the contractual provisions, the Contractor would not be entitled to an extension of time for the delay caused by the Owner's failure to approve the drawings.

The operation of this concurrent delay clause is best illustrated diagrammatically using the following three examples

Example 1: No overlap and Contractor entitled to an extension of time for Owner-caused delay



In this example, the two-week Contractor-caused delay and the one-week Owner-caused delay do not overlap, so the Contractor would only be entitled to a one-week extension of time for the non-concurrent, Owner-caused delay. Therefore, at the end of the Owner Delay Event, the Contractor will remain in two weeks' delay (assuming the Contractor has not, at its own cost and expense, accelerated the works to mitigate the impact of the delay).

Example 2: Overlap but Contractor not entitled to an extension of time for Owner-caused delay



In this example, the Contractor would not be entitled to an extension of time because of the Owner-caused delay and the Contractor-caused delay overlap. This is where the concurrent delay clause comes into operation. Under the example clause above, the Contractor is not entitled to an extension of time to the extent of the concurrency. As a result, at the end of the Contractor Delay Event, the Contractor would be in two weeks' delay (again, assuming no action is taken by the Contractor to accelerate the works to mitigate the delay).

Example 3: Overlap and Contractor entitled to an extension of time for a part of the Owner-caused delay



In this example, the Contractor would be entitled to a one-week extension of time because the delays only overlap for one week. Therefore, the Contractor is entitled to an extension of time for the period when they do not overlap (ie when the extent of the concurrency is zero). As a result, after receiving the one week extension of

time, the Contractor would be in one week's delay, again, assuming no action is taken by the Contractor to accelerate the works to mitigate the delay).

From an Owner's perspective, Option One seems both logical and fair. For example, if the Owner Delay Event was a delay in the approval of drawings and the Contractor Delay Event was the entire workforce being on strike, arguably the Contractor should not receive an extension of time. The delay in approving drawings does not actually delay the works because the Contractor could not have used the drawings given that its workforce was on strike. In this example, the Contractor would suffer no real detriment from the Owner-caused delay. Conversely, if the Contractor did receive an extension of time it would effectively receive a windfall gain.

However, the suitability or fairness of this option will obviously depend on which side of the table you are sitting. In the above example, a Contractor may argue that it should receive an extension of time on the basis that, regardless of the strike, the Contractor could not have completed the works in the specified time due to the Owner's failure to approve the drawings. The opposing argument that the Owner would raise is that the Contractor should not be entitled to an extension of time in these circumstances as it could not, in any event, have complied with its obligation to complete the works by the specified time.

In our experience, the greater the number of obligations the Owner has under the contract, the greater the risk of concurrent delays and the more reluctant the Contractor will likely be to accept Option One. Therefore, it may not be appropriate for all projects.

It is also worth noting that the selection of Option One may ultimately be influenced by project finance considerations, such as the Lender's requirements for time and price certainty.

Option Two: Contractor entitled to an extension of time for concurrent delays

Essentially, Option Two is the opposite of Option One and is the position in many Contractor-friendly standard and bespoke forms of contract. These contracts also commonly include extension of time provisions to the effect that the Contractor is entitled to an extension of time for any cause beyond its reasonable control (including *force majeure* events), which, in effect, means there is no need for a concurrent delay clause.

As with Option One, the suitability of this option depends on which side of the table you are sitting. This option is less common than Option One, particularly on project finance transactions, but is nonetheless sometimes adopted (when the Contractor has a superior bargaining position vis-à-vis the Owner or when the Owner has extensive obligations under the contract and is not prepared to pay the risk premiums sought by the Contractor to take the corresponding concurrent delay risk). Where an Owner agrees to adopt this option, it is often on the basis that the Contractor will not be entitled to receive delay costs for the concurrent delay.

Option Three: Responsibility for concurrent delays is apportioned between the parties

Option Three, the apportionment approach, is a middle-ground position that has been adopted in some of the standard-form contracts. For example, the Australian Standards construction contracts (AS4000 and AS4902) adopt the apportionment approach. The AS4000 clause states:

34.4 Assessment

When both non-qualifying and qualifying causes of delay overlap, the Superintendent shall apportion the resulting delay to WUC according to the respective causes' contribution.

In assessing each EOT the Superintendent shall disregard questions of whether:

- a) WUC can nevertheless reach practical completion without an EOT; or*
- b) the Contractor can accelerate,*

but shall have regard to what prevention and mitigation of the delay has not been effected by the Contractor.

We appreciate the intention behind the clause and the desire for both parties to share responsibility for the delays they cause. However, we have some concerns about this clause and the practicality of the apportionment

approach in general. It is easiest to demonstrate our concerns with an extreme example: what if the "qualifying" cause of delay was the Owner's inability to provide access to the site and the "non-qualifying" cause of delay was the Contractor's inability to commence the works because it had been black-banned by the unions? How should the causes be apportioned between the Owner – and Contractor-caused delays? In this example, it is easy to conceive either cause as 100% responsible for the delay.

In our view, such an example (where both parties are at fault) has two possible outcomes. Either:

- the delay is split down the middle and the Contractor receives 50% of the delay as an extension of time; or
- the delay is apportioned 100% to the Owner and the Contractor therefore receives 100% of the time claimed as an extension of time.

The delay is unlikely to be apportioned 100% to the Contractor because a judge or arbitrator will likely feel that such an apportionment is "unfair", especially where there is a potential for significant liquidated damages liability. We appreciate that the above is not particularly rigorous legal reasoning; however, the apportionment approach does not lend itself to rigorous analysis. The inherent difficulty with Option Three lies in an attempt to find a commercial, "common sense" solution to the apportionment approach in general. Without additional express terms in the contract which clearly articulate who bears the risk of particular foreseeable delays, Option Three may fail to provide necessary certainty to either contracting party. Where the project is funded through limited or non-recourse project financing, the Lenders are also unlikely to accept the apportionment approach due to their desire for time and price certainty.

In addition, Option Three is only likely to be suitable if the party undertaking the apportionment is independent from both the Owner and the Contractor. Increasingly, this is not the case on large-scale infrastructure projects. Each party also needs to ensure it has the necessary technical and programming expertise and records throughout the performance of the works to support its position in terms of arguing how the "respective causes contribution" should be apportioned under Option Three.

Conclusion

A concurrent delay clause should be included in all construction contracts. Remaining silent on the issue may lead to disputes. Which option is adopted will depend on a number of factors including (a) the size and nature of the project, (b) the extent of the Owner's involvement in delivery of the works and its corresponding obligations under the contract, (c) the requirements of Lenders for project finance transactions and (d) the relative bargaining positions of the contracting parties.

Consideration should also be given to the Contractor's entitlement (if any) to delay costs or whether the parties should bear their own costs, in circumstances where the parties agree the Contractor will be entitled to an extension of time for concurrent delays.

25 Consents and approvals boilerplate clause

Need to know

A consents and approvals clause is a manner and form provision in the sense that it establishes the process and manner by which consent or approval may be given under a contract.

Key considerations when drafting this clause include:

- the standard for providing the consent or approval (ie good faith, honesty, reasonableness etc)
- the timing for providing it (ie specific time stipulation, reasonable time etc)
- any limitations to providing it (ie conditional, unconditional, absolute discretion etc).

Issues between parties relating to this clause most often arise where the clause states that consent must “*not be unreasonably withheld*” (or a similar phrase). The meaning of this phrase will always depend on the particular contract and circumstances, including the nature and object of the contract and the purpose of the clause.

Typically the grounds for withholding consent under such a clause will not be “*unreasonable*” if they relate to, and are not extraneous to, the objects of the contractual relationship, or to the rights, benefits or obligations of the affected party under the contract. If, however, consent is withheld for arbitrary, capricious, dishonest or extraneous reasons, then this withholding is likely to be “*unreasonable*”.

The sample clauses

Option 1 – Consents and approvals – absolute discretion – neutral drafting

Except as expressly provided in this [deed/agreement], a party may conditionally or unconditionally in its absolute discretion give or withhold any consent or approval under this [deed/agreement].

Option 2 – Consents and approvals – not unreasonably withheld – drafting in favour of party seeking consent

Except as expressly provided in this [deed/agreement], a party may conditionally or unconditionally give or withhold any consent or approval under this [deed/agreement], but that consent is not to be unreasonably delayed or withheld.

1 What is this clause and why is it used?

Contracts often require one party to obtain the consent or approval of another party to the contract before taking a particular step. A consents and approvals clause is used to clarify and govern the manner by which a party can give or withhold consent or approval under the contract.

1.1 Why is the clause important?

In addition to providing clarity about the process of giving/receiving consent, a consents and approvals clause either safeguards against consent being capriciously withheld or reserves a party’s right to withhold it in their absolute discretion. Including the clause in your contract mitigates the risk of arguments being raised about implied terms and standards relating to the provision of consent or approval.

1.2 What is typically included?

A consents and approvals clause typically specifies the standard of behaviour to be applied to the decision-making process including:

- whether there is a prohibition on a party acting unreasonably (ie “... *consent must not be unreasonably withheld*”. If this phrase is included in the contract “*unreasonable behaviour*” may be challenged. If, however, it is not included a party has no general obligation to behave reasonably)
- whether the discretion is absolute (ie consent is provided “*in [Party X’s] absolute discretion*”).

A consents and approvals clause may also include:

- specific details about the decision-making process, including which factors the party giving consent may or must take into account and whether reasons are required to support their decision
- the nature of the consent (ie whether it is conditional)
- the form of the consent (ie whether it is required to be in writing)
- the duration for determining whether to provide consent and the consequence, if any, of not providing it within a required timeframe
- implications, if any, of further performance of the contract if consent is not obtained
- representations or warranties that consent has already been obtained, is obtainable or is unnecessary, in specified circumstances.

2 How effective is it?

A consents and approvals clause is effective from an evidentiary perspective. It demonstrates the parties' intention about the process that should be applied when deciding whether consent or approval shall be provided under the contract.

2.1 Consent “not to be unreasonably withheld”

Disputes about the meaning of this clause most commonly arise where the consent or approval must “*not be unreasonably withheld*.”

Consent or approval clauses that include this phrase are most often disputed in leasing contracts and other real property transactions. There has, however, been judicial support for extending those authorities to a wider commercial context. Recent appellate authorities emphasise that the meaning of the phrase (“*not be unreasonably withheld*” and those like it), depends in each case on the particular contract and circumstances, including the nature and object of the contract and the purpose of the clause. These authorities are discussed briefly below.

Leading High Court authority

The leading High Court authority is *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd (Secured Income)*.¹ In *Secured Income*, a contract for the sale of land provided that all leases of the premises after the contract's execution (prior to settlement) must be approved by the purchaser, where such approval must not be “*capriciously or arbitrarily withheld*”.

Mason J (with whom Gibbs, Stephen and Aickin JJ agreed) held that “arbitrarily” connotes “unreasonably” in the sense that what was done was done “without reasonable cause,” and doubted whether “capriciously” added anything further.² On the issue of what constituted “*unreasonableness*” in this context, his Honour adopted an earlier statement of Walsh J that “the reason for refusal must be something affecting the subject matter of the contract which forms the relationship between the landlord and the tenant, and not something extraneous and dissociated from the subject matter of the contract.”³

¹ *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* [1979] HCA 51; (1979) 144 CLR 596; 26 ALR 567 (**Secured Income**).

² *Ibid*, 578.

³ *Secured Income*, citing *Colvin v Bowen* (1958) 75 WN (NSW) 262, at [264].

Secured Income principles extended to commercial contexts

In *Cathedral Place Pty Ltd v Hyatt of Australia Ltd*,⁴ Nettle J held that “logic dictates” that the approach taken to consents to assignments of leases in cases such as Secured Income should be extended to a hotel manager’s consent to the assignment of the hotel Owner under a hotel management agreement.⁵ However, his Honour emphasised that the considerations which may relevantly be taken into account when reasonably withholding consent under such a provision will always depend on the particular contract.⁶

This approach was endorsed in *EDWF Holdings 1 Pty Ltd v EDWF Holdings 2 Pty Ltd (EDWF)*,⁷ which concerned a clause in a joint venture agreement. The clause provided that prior written consent to a change in control of a participant was required, with such consent not to be unreasonably withheld.

Buss JA (with whom Owen and Newnes JJA agreed) held that it was “essential to exercise caution in reviewing authorities decided in different contractual settings.” His Honour contrasted the nature of a joint venture transaction with that of a grantor/grantee of a right under a contract or a lessor/lessee relationship, which relationships do not involve the common pursuit of a venture, and in which the fundamental rights and interests of the parties in respect of the subject matter of the transaction will usually be opposed.⁸

Buss JA held that, in general, a joint venturer would not be acting unreasonably in withholding its consent if the grounds were held honestly, related to the objects of the joint venture or the rights of a party to it, were permissible under the joint venture agreement and were not unreasonable. If any of those factors was not satisfied then, in general, the joint venturer would be acting unreasonably.⁹

Subsequently, in *Fulham Partners LLC v National Australia Bank Ltd*,¹⁰ Basten JA (with whom Bergin CJ in Eq and Barrett JA agreed) considered whether the refusal to agree to an assignment of an agreement to supply consultancy services was unreasonably withheld. His Honour cited the test in Secured Income, but also noted the importance of the context. His Honour found that the considerations raised in refusing consent were all concerned with the status, both legally and financially, of the proposed assignor and assignee. His Honour held that these reasons were legitimate grounds on which to reasonably withhold consent because they did not relate to matters extraneous to the agreement and were not collateral or improper considerations.¹¹

While the court emphasised that the question of “reasonableness” must be determined by reference to the particular contract, the following principles were also useful in determining the “reasonableness” of the withholding. Namely, that:

- it is a question of fact whether the withholding is “reasonable” and the expression should be given a broad and common sense meaning¹²
- the “unreasonableness” of the withholding is determined objectively having regard to all the circumstances of the case, including the reasons given (or not given) to support the withholding¹³
- it is objectively unreasonable to withhold consent for the purpose of achieving an objective that is “a collateral advantage outside the terms of the contract”¹⁴.

4 [2003] VSC 385.

5 Ibid, [18].

6 Ibid, [25].

7 *EDWF Holdings 1 Pty Ltd v EDWF Holdings 2 Pty Ltd* [2010] WASCA 78 (EDWF).

8 Ibid, [113]. The distinction in this context is discussed at some length by Bryson J in *Noranda Australia Ltd v Lachlan Resources NL* (1988) 14 NSWLR 1, [21].

9 EDWF, [115].

10 *Fulham Partners LLC v National Australia Bank Ltd* [2013] NSWCA 296.

11 Ibid, [89], [96]-[97].

12 *Re Idoport Pty Ltd (In Liquidation) (Receivers Appointed)* [2012] NSWSC 524 (*Re Idoport*), [50].

13 Ibid, [51].

In *St Barbara v Hockley [No 2]*,¹⁵ Beech J applied the approach outlined in EDWF above, but emphasised that the proper construction of the relevant contract was of “central significance” in determining whether the grounds for withholding consent relate to the pursuit of the objects of the contract (ie and are reasonable), or whether they are extraneous (ie and are unreasonable).¹⁶

Critically, the party alleging “unreasonableness” has the onus of proof and must demonstrate that the withholding was “objectively unreasonable”.¹⁷

It is worth noting, however, that facts not known to a party refusing consent, but existing at the time of refusal, may be used at a later time to support the “reasonableness” of their decision to withhold.¹⁸ Equally, facts existing at the time consent was refused, but not actually or constructively known to the party refusing consent, may also be relied on to establish that a reason for the refusal was “unreasonable”.¹⁹

2.2 Other issues with “unreasonable withholdings”

Should an “unreasonably withheld” stipulation be express?

Yes. Often in leases and other real property transactions (ie where consent is required), there is an implication that consent must not be unreasonably withheld. To avoid uncertainty, particularly if a party has “absolute discretion” to decide whether it will provide consent, it is prudent to expressly state that the consent may “not be unreasonably withheld”.²⁰ Courts are otherwise reluctant to imply this qualification into commercial contracts.

Prescribed instances of “unreasonableness”

In *Lockrey v Historic Houses Trust of New South Wales*²¹ the NSW Court of Appeal gave effect to a consent provision that set out express examples in which consent could be deemed unreasonable.²² In that case, the lessor refused to grant consent for an assignment of a lease and, because the situation was covered by the contract it was unnecessary for the Court to determine the “reasonableness” of the refusal.

This demonstrates that one way to effectively rule out any ambiguity surrounding “reasonableness” is to expressly prescribe circumstances or provide examples in the contract where conduct would be deemed “unreasonable”.

2.3 Other issues with “absolute discretion”

The phrase “absolute discretion” must be construed in light of the contract as a whole

In *Railways, Commissioner for v Avrom Investments Pty Ltd*,²³ the court held that the words “absolute discretion” must be read in light of the contract as a whole. In that case, although the lessor had an “absolute discretion” to approve or disapprove plans for a hotel on land subject to a lease, it was held that the discretion was qualified by subsequent wording in the contract that required the lessor to exercise its discretion “reasonably”.²⁴

14 Ibid, [53].

15 [2013] WASC 358.

16 Ibid, [39].

17 *Fulham Partners LLC v National Australia Bank Ltd* [2013] NSWCA 296, [59].

18 Secured Income, [581-2].

19 *St Barbara Ltd v Hockley [No 2]* [2013] WASC 358, at [158]-[182].

20 Mark Anderson and Victor Warner, *A-Z Guide to Boilerplate and Commercial Clauses* (2nd ed, 2006), p 147.

21 (2012) 84 NSWLR 114.

22 See also *Esso Australia Resources Pty Ltd v Southern Pacific Petroleum NL (Receivers and Managers Appointed)* [2004] VSC 477.

23 [1959] 2 All ER 63.

24 bid.

Relationship between clauses conferring “absolute discretion” and good faith

Generally, if a consent power is exercised for an improper purpose, arbitrarily, capriciously or unreasonably, the exercise of that power is deemed invalid.²⁵ There are, however, some exceptions to the rule.

For instance, Hammerschlag J held, in *Solution 1 Pty Ltd v Optus Networks Pty Ltd*²⁶, that an implied term of good faith was inconsistent with the contract in question (ie which contained an express termination for convenience provision that allowed Optus to terminate the contract for “any reason and at any time” in its “absolute discretion”). In that case the court held, unless expressly excluded or inconsistent with other terms of the contract, parties are under an implied obligation to act in good faith when exercising their contractual powers.²⁷ The court held that Optus was under no obligation to act in good faith in exercising the right to terminate and if there was such an obligation that it had not been breached. This case suggests that including explicit wording about the exercise of discretions and rights in a contract may preclude the implied obligation to act in good faith.²⁸

3 Drafting and reviewing the sample clauses

3.1 Should I always include a consents and approvals clause, and what happens if I don't?

It is prudent to always include a consents and approvals clause in a contract, particularly where certain matters expressly require prior consent or approval. This ensures that the parties' intentions about the process that should be applied to the giving/withholding of consent or approval under the contract is clear.

3.2 About the sample clauses

There are two sample clauses.

Consents and approvals – absolute discretion

This clause is drafted from a neutral position. It states:

Except as expressly provided in this [deed/agreement], a party may conditionally or unconditionally in its absolute discretion give or withhold any consent or approval under this [deed/agreement].

Consents and approvals – not unreasonably withheld

This clause is drafted in favour of the party likely to rely on/require the consent:

Except as expressly provided in this [deed/agreement], a party may conditionally or unconditionally give or withhold any consent or approval under this [deed/agreement], but that consent is not to be unreasonably delayed or withheld.

3.3 When, if ever, should I amend the sample clauses?

These clauses may be amended to suit the particular circumstances of your client. This can be done by setting out the specific grounds on which consent or approval may be withheld, or by setting out the circumstances where consent or approval is not required.²⁹

²⁵ *Burger King Corp v Hungry Jack's Pty Ltd* [2001] NSWCA 187 at [362].

²⁶ [2010] NSWSC 1060; *Sundararajah v Teachers Federation Health Limited* [2011] FCA 1031 at [69]-[81] per Foster J. See also *Hampton v BHP Billiton Minerals Pty Ltd [No 2]* [2012] WASC 285.

²⁷ *Solution 1 Pty Ltd v Optus Networks Pty Ltd* [2010] NSWSC 1060, at [61]. See also *Vodafone Pacific Ltd v Mobile Innovations Ltd* [2004] NSWCA 15, at [191].

²⁸ Hoffman B, *20 years on from Renard Constructions – is the contractual duty of good faith any clearer?*, Australian Construction Law Bulletin, April 2012, p 25.

²⁹ *Esso Australia Resources Pty Ltd v Southern Pacific Petroleum NL (Receivers and Managers Appointed)* [2004] VSC 477, [43].

26 Counterparts boilerplate clause

Need to know

This clause permits the execution of multiple copies of the same agreement or deed. It is prudent to include this clause if parties wish to execute multiple copies of the same agreement or deed in counterparts (ie because not all parties can sign in the same place and at the same time).

The sample clause

This [deed/agreement] may be executed in any number of counterparts, and this has the same effect as if the signatures on the counterparts were on a single copy of this [deed/agreement]. Without limiting the foregoing, if the signatures on behalf of one party are on different counterparts, this shall be taken to be, and have the same effect as, signatures on the same counterpart and on a single copy of this [deed/agreement].

1 What is this clause and why is it used?

The purpose of a counterparts clause is to facilitate commercial arrangements where it may not be practical for every party to sign every copy of an agreement or deed, and to enable each party to retain an executed copy of the agreement which may then be produced as an original if required for evidentiary purposes or, in the case of real estate transactions, stamp duty.

A counterpart of a document is a copy. It is usually created:

- (a) to accommodate situations where parties are unable to execute a single document at the same time or place – because they may be, for example, located in different cities, countries, time zones or otherwise unavailable at the time of signing
- (b) so that each party may retain their own original.

Using a counterparts clause clarifies that:

- multiple copies of the same agreement or deed, known as counterparts, may be executed by the parties
- each signed copy will be treated as an original
- together the counterparts will comprise a single legal instrument.

The result is that each party retains an ‘original’ of the same agreement, executed by all parties, once the counterparts are exchanged.¹

¹ *Sindel v Georgiou* (1984) 154 CLR 661.

2 How effective is it?

2.1 Counterparts clauses are generally effective

A counterparts clause ensures that the intention of the parties to sign an agreement using counterparts is clear.

However, exchange of counterparts, whether there is a counterparts clause or not, will normally be enough to form a contract given that exchange generally constitutes acceptance.² Therefore, the inclusion of a counterparts clause is not strictly necessary.

Decisions involving counterpart clauses consistently apply the seminal case of *Sindel v Georgiou*,³ which provides authority for the principle that a legally binding contract can be formed by the exchange of written documents, or 'counterparts,' each of which is considered an original.

As each counterpart may be treated by the court as an original document,⁴ and as one deed or contract, the court is able to look at each counterpart to ascertain the proper construction of the contract.⁵ It is therefore unnecessary to state that each counterpart when executed is an original, although to do so might be said to clarify the intention of the parties.

Barrett J in *Investmentsource Corporation Pty Ltd v Knox*⁶ affirmed that swapping counterparts is a well-recognised method of exchanging contracts, particularly in conveyancing transactions. His Honour also said:

*"I am satisfied that the absence of a 'counterparts clause' (ie a provision expressly recognising that several parts may be executed are together to make up the agreement) does not detract from the reality that a contract was formed by the exchange."*⁷

It is now well established that the exchange of counterpart identical contracts brings a binding contract into existence in land transactions.⁸ The practice of exchange is also commonly followed in general commercial transactions⁹ either to create a binding contract or to formalise contracts already binding.¹⁰ It is also now recognised that any non-material discrepancy between the counterparts may be remedied through rectification and that a discrepancy does not defeat the intention of the parties to be bound in committing to an exchange.¹¹

The principal document and counterparts need *not* be executed at the same time to be effective.¹² When all parties execute each document, each document is considered equally to be the principal (except in the context of leases where the principal lease executed by the lessor and retained by the lessee will be presumed to be the correct version as explained below).¹³

If using a counterpart, it is important to ensure that there are no rules affecting the execution of the instrument for other purposes, for example copies for stamping or registration (see further discussion below).

² *Investmentsource Corporation Pty Ltd v Knox* [2002] NSWSC 710.

³ (1984) 152 CLR 661.

⁴ *Colling v Treweek* (1827) 6 B&C 394.

⁵ *Matthews v Smallwood* [1910] 1 Ch 777.

⁶ [2002] NSWSC 710.

⁷ *Ibid* [27].

⁸ *Harrison v Battye* [1974] 3 All ER 830; [1975] 1 WLR 58 at 60 per Lord Denning MR (Cairns and Sir Erich Sachs JJ concurring). See also *Iannello v Sharpe* (2007) 69 NSWLR 452; [2007] NSWCA 61 per Hodgson, Santow and Basten JJA and *Adicho v Dankeith Homes Pty Ltd* [2012] NSWCA 316 per Meagher JA at [17] (Sackville and Tobias AJJA agreeing) and the authorities there cited including *Sindel v Georgiou* (1984) 154 CLR 661.

⁹ Butterworths Encyclopaedic Australian Legal Dictionary, Exchange of Contracts.

¹⁰ Which will depend on when the parties intend to be bound: see *Masters v Cameron* [1954] HCA 72; (1954) 91 CLR 353.

¹¹ *Sindel v Georgiou* (1984) 154 CLR 661.

¹² *Fryer v Coombs* (1840) 113 ER 468.

¹³ *Matthews v Smallwood* [1910] 1 Ch 777.

Other considerations in relation to formation where counterparts are used include:

- when assessing whether there is a material difference between two counterparts, the court can consider the cumulative effect of the differences between the documents¹⁴
- in order for the exchange of documents to successfully create a binding agreement, all substantial respects of the exchange must be correctly carried out.¹⁵

2.2 What happens if I don't use it?

Provided there is an exchange of the counterparts (or other clear communication of acceptance), execution can be achieved without an express counterparts clause. However, in the property context, most States and Territories have standard-form contracts for the sale of land which prescribe distinct procedures for the exchange of documents which must be followed.¹⁶

2.3 Counterpart clauses and deeds

Parties will ordinarily be bound upon their due execution of a deed. This means that a party signing an intended counterpart will be bound without exchange of counterparts and without execution by all other parties.¹⁷ Risks associated with this can be managed through:

- the use of an escrow deed, so that the delivered deed is only to take effect upon the happening of a specified event or upon condition that it is not to be operative until some condition is performed¹⁸
- by expressly noting in the instrument that the deed is not delivered (and will not be binding on the parties) until all parties have executed it, including all signatories required for execution by a company.

2.4 Position where inconsistency between counterparts

Where the counterparts are not identical and a dispute arises as to which version of the agreement is binding or, indeed, whether a binding agreement exists at all, the case law presupposes that a principal agreement is distinguishable from the counterparts and in this case:

- with respect to leases, the principal agreement will prevail unless there is an obvious mistake
- discrepancies may be remedied through rectification since the parties' intention to be bound is demonstrated in the exchange,¹⁹ (although the remedy of rectification is not a pre-requisite for finding that a contract is binding)²⁰
- where the discrepancy is material, it will be impossible to establish a meeting of the minds sufficient to form a contract.²¹

If the original and counterpart are inconsistent, the original document prevails unless there is an obvious mistake or ambiguity when both copies are compared.²² Formerly, the view was that each counterpart must be

¹⁴ *Zaccardi v Caunt* (2008) 15 BPR 28,403.

¹⁵ *Lee v Ross* (2003) 11 BPR 20,975.

¹⁶ *Investmentsource Corporation Pty Ltd v Knox* [2002] NSWSC 710.

¹⁷ An intention to be bound by the deed will sufficiently constitute "delivery" even though the deed is not physically delivered: see *400 George Street (Qld) Pty Ltd and Ors v BG International Ltd* [2010] QCA 245.

¹⁸ See eg *Mirzikinian v Tom & Bill Waterhouse Pty Ltd* [2009] NSWCA 296 at [39].

¹⁹ *Sindel v Georgiou* (1984) 154 CLR 661.

²⁰ *Zaccardi v Caunt* (2008) 15 BPR 28,403.

²¹ *Matthews v Smallwood* [1910] 1 Ch 777; this appears to be so even if the difference is not discovered until much later and parties have assumed that there was a binding contract (*Andruce Pty Ltd v Bray* (1970) 2 NSW 525).

²² *Burchell v Clark* (1876) 2 CPD 88.

identical at exchange to be valid, but it is now acknowledged that a discrepancy may be remedied through rectification and it does not defeat the intention of the parties to be bound in committing to an exchange.²³

Rectification reforms the document not the contract made and, as such, it applies generally to documents, contractual or otherwise.²⁴ It is an equitable remedy associated with mistake. The object of the order given by the court is that an instrument is rectified or reformed so that the common mistake in it will be eliminated.²⁵ The decision of *Hayward v Planet Projects Pty Ltd*²⁶ provides an example of the application of principles of rectification involving a counterpart and the surrounding case law.

Where the respective contractual documents do not perfectly correspond, it is a matter of objectively construing documents to determine whether a binding agreement can be inferred despite the lack of consistency between the formal parts.²⁷ If there is a manifest discrepancy between the principal document and the counterpart, the principal document will prevail unless both are considered “principal” documents or duplicates, in which case both are equal in effect and the court will need to determine what the true agreement was and in doing so the counterpart may inform the decision.²⁸ Allsop P in *Zaccardi v Caunt*²⁹ considered counterparts that differed in a material respect. His Honour stated that the correct interpretation of *Sindel* on this point is that the availability of rectification is not a pre-requisite to find that the contract is actually binding.

Where a party remains unaware of a material discrepancy between the counterparts, it is impossible to suggest that an adequate meeting of the minds ever occurred, and therefore no contract could be formed.³⁰

See below for how, practically, to manage the risk of inconsistency between documents, especially in a digital environment.

2.5 Counterparts and the requirement for “exchange” in land transactions

In NSW, contracts for the sale of real estate have been held to be presumed to be non-binding without an exchange of written contracts.³¹ This follows ordinary conveyancing practice in NSW and a similar presumption may arise in other Australian jurisdictions.

2.6 Counterparts and special rules for leases

Where duplicate copies of a lease are executed, the document executed by the lessor and retained by the lessee is the original and the other copy retained by the lessor is a counterpart,³² although each duplicate is as effective as the other.³³ The counterpart, as an inferior reference in this case, must yield to the principal document in any case of inconsistency between them.³⁴ However, the counterpart can still be used to correct any ambiguity in the principal instrument.³⁵

²³ *Sindel v Georgiou* (1984) 152 CLR 661.

²⁴ *United States v Motor Trucks Ltd* [1924] AC 196.

²⁵ *Halsburys' Laws of Australia* [110-5565].

²⁶ [2000] NSWSC 1105.

²⁷ *Sindel v Georgiou* (1984) 154 CLR 661.

²⁸ *Lidsdale Nominees Pty Ltd v Elkharadly* [1979] VicRp 10; [1979] VR 84 at 86; *Burchell v Clark* (1876) 2 CPD 88 at 94.

²⁹ (2008) 15 BPR 28,403.

³⁰ *Longpocket Investments Pty Ltd v Hoadley* (1985) 3 BPR 9606 and *De Jong v Carpenter* (1982) 2 BPR 9524.

³¹ *Hearse v Staunton* [2010] NSWSC 954 (affirmed by *Hearse v Staunton* [2011] NSWCA 139).

³² *Matthew v Smallwood* [1910] 1 Ch 777 at 783-4.

³³ *Lidsdale Nominees Pty Ltd v Elkharadly* [1979] VicRp 10; [1979] VR 84 at 86; *Colling v Treweek* (1827) 6 B&C 394 at 398.

³⁴ *Butterworths Encyclopaedic Australian Legal Dictionary*, Counterpart

³⁵ *Matthews v Smallwood* [1910] 1 Ch 777.

2.7 Counterparts and special rules for dutiable property

In order to be used in law or equity or to be admissible as evidence in a court, an *original* document relating to dutiable property and/or a dutiable transaction must be marked (stamped) by the relevant authority in the applicable State or Territory.³⁶ In this context:

- dutiable property is defined differently between the States and Territories but generally includes land, shares, business assets and units in a trust³⁷
- a dutiable transaction is again variously defined but generally refers to the transfer of dutiable property or some interest such as a partnership interest.

In general terms, if a dutiable transaction is evidenced with a document and also a duplicate or counterpart for another party to retain, the counterpart is considered the inferior copy for the purpose of duties. The general rules are as follows:

- a duplicate or counterpart is not usually stamped and an additional nominal duty is payable on the counterpart when it is proved to the satisfaction of the stamping authority in the relevant State or Territory that the proper duty has been paid on the original instrument of which it is the duplicate or counterpart.
- secondary evidence will not ordinarily be received of the contents of an unstamped document when the original is in existence.³⁸ There are some exceptions to this rule (eg s 304 of the *Duties Act 1997* (NSW) permits unstamped documents to be admitted into evidence where the person producing the document is not liable for payment of the duty and identifies the party liable).

It has been observed that where there are two or more counterparts, double stamp duty will not be required on the executing instrument, and in conveyances, duty is only payable on the document that the parties have determined will be the principal instrument for stamping purposes.³⁹

3 Drafting or reviewing the clause

3.1 About the sample clause

The sample clause is a standard clause and is representative of those widely used in contracts throughout Australia and other common law jurisdictions.

3.2 When can or should I amend the clause?

Counterparts clauses are fairly standard and neutral in effect and so there is normally no need to amend them.

4 Other practical considerations

4.1 Executing digital and non-digital agreements by counterparts

Counterparts of a contract should contain identical terms and identical attachments/annexures. Where non-dutiable property is concerned, to minimise the risk of inconsistency between final agreements, particularly in a digital environment, consider taking the following steps prior to execution:

- agree on a process for document control during negotiations and amendments

³⁶ *Duties Act 1997* (NSW) s299; s304; *Duties Act 2000* (Vic) s272; *Duties Act 2001* (QLD) s252(2); s258(2)(a), (c), s262(1)(a), (b), s455A(1)(b), s455(1)(c), s455(4), s487, s491(1), s492, s494, Sch 6; *Stamp Duties Act 1923* (SA) s22; *Stamp Act 1921* (WA) s27; *Duties Act 1999* (ACT) s250; *Duties Act 2001* (TAS) s246; *Duties Act 2008* (WA) s279.

³⁷ *Duties Act 1997* (NSW), s11; *Duties Act 2000* (Vic), s10; *Stamp Act 1921* (WA), s16; *Duties Act 2001* (Qld) s10; *Duties Act* (Tas) s9; *Stamp Duties Act 1923* (SA) s4; *Stamp Duty Act* (NT), s4; *Duties Act 1999* (ACT) s10.

³⁸ *Dent v Moore* (1919) 26 CLR 316.

³⁹ *Duties Act 1997* (NSW) s18.

- ensure that the final contract is clearly marked and dated as the final version for execution (eg “*Execution Version 16 September 2013*”)
- check that the copies of the agreement or deed exchanged by the parties are identical, including any annexures/attachments
- where the nature of delivery of the final version for execution is digital (eg by email or data exchange server):
 - consider encrypting the file to minimise the risk of modification, and ensure any email notification is sent to the addressee’s designated email address for that purpose; and
 - ensure the email itself clearly communicates that the attached or linked file is in the agreed final form for execution and designate the email address either for return of the executed counterpart or notification that the executed counterpart has been uploaded to the data exchange server.

4.2 “Split” executions

A “split” execution occurs when two people who are required to sign a deed or agreement on behalf of one party both sign on different copies of the same document, usually because they are in separate locations. For example, s127(1)(a) of the *Corporations Act 2001* (Cth) provides that a company may execute a document if it is signed by two directors. A statutory presumption of due execution will arise pursuant to s129(5) of that Act if the document appears to have been executed pursuant to s127(1).

There is an issue as to whether a split execution will fall within the references to “a document” and “the document” in s127 and s129 of the Act respectively given that the signatures are on separate copies of the document.

PwC’s position is that a split execution will fall within the statutory requirements. Although the matter is not free from doubt, that position reflects a purposive reading of the relevant sections, and is consistent with the only authority which currently addresses the issue.⁴⁰

To cover the situation where a party or parties will be executing by split execution, the firm recommends including the following wording (also included in the sample clause above): *Without limiting the foregoing, if the signatures on behalf of one party are on different counterparts, this shall be taken to be, and have the same effect as, signatures on the same counterpart and on a single copy of this [agreement/deed].*

⁴⁰ The only case to consider the issue is *Re CCI Holdings Ltd* [2007] FCA 1283.

27 Defects liability period – an introduction

Construction contracts usually include a defects liability period during which the Contractor is responsible for repairing or rectifying defects that appear in the works. The period usually commences upon practical completion of the works and runs for a specified time frame (sometimes also known as the maintenance period).

This paper discusses the main elements of a defects liability clause and the considerations for negotiating this clause from both an Employer's and a Contractor's perspective.

Purpose of a defects liability period

Under a construction contract, one of the Contractor's primary obligations is to carry out and complete the works to the standard set out in the contract. The defects liability period is intended to complement this liability by setting out how and when the Contractor must remedy defective work which becomes apparent during the defects liability period. In effect, the defects liability obligation recognises that defects will arise in the period following completion and includes the obligation to repair those defects in the general obligation to complete the works to the required standard.

The defects liability period provides a practical mechanism to the Employer for the repair or making good of defects which may not be apparent before completion, without resorting to dispute resolution. Making the Contractor responsible for carrying out the repairs is usually cheaper and more efficient than either the Employer repairing the defect itself or engaging a third party to repair the defect.

In most contracts, the Employer will retain either a proportion of the contract sum (cash) or a reduced performance bond as surety for performance of the Contractor's obligations during the defect liability period.

Elements of a defects liability clause

A defects liability clause will set out the length of the defects liability period, the scope of defects the Contractor is obliged to remedy and any part of the contract sum retained by the Employer as surety for the performance of the remedial work (although this may be dealt with in the general clause dealing with the provision of security).

A defects liability clause may also deal with the procedures for notifying the Contractor of the defects, the circumstances under which the defects liability period may be extended and any caps on such extensions to the defects liability period.

Length of the defects liability period

Typically, the defects liability period starts on the completion of the works, which in many contracts will be signalled by the Employer's representative's issue of a practical completion certificate. The actual period will vary depending on the nature of the contract; for straightforward building projects it is usually six or 12 months. For complex engineering projects such as a power station, it can be as long as 24 or 36 months. The defects liability clause may also provide for sectional completion, for example:

The defects liability period is the period of 12 months commencing on the date of practical completion. If the works are taken over by the Employer in sections, the defects liability period for each section must commence on the date of practical completion for that section.

However, sectional completion is to the Contractor's benefit. An Owner will not want sectional defects liability periods, but rather will want the period to commence on completion of the last section.

Scope of defects

A defects liability clause will require the Contractor to repair or make good defects which are the result of the Contractor's default. Contractors will generally seek to exclude liability for defects not owing to the Contractor's default, for example:

The Contractor is not responsible for the repair, replacement or making good of any defect or of any damage to the works arising out of or resulting from any of the following causes:

- (a) Any acts or omissions of the Employer, its employees, agents and Contractors (other than the Contractor).*
- (b) Improper operation or maintenance of the works.*
- (c) Use and operation of the works outside the specification.*

However, some clauses will require the Contractor to make good defects irrespective of the cause of the defect, with appropriate reimbursement where the Contractor is not in default. This facilitates quick repairs of the works by the party most familiar with the works and, therefore, best able to undertake the repairs.

In some cases, the Contractor may have an absolute liability to make good or repair the defects at its own cost. An example of this is the following clause:

If during the defects liability period any defect is found, the Contractor must, promptly and at its cost repair, replace or otherwise make good (in consultation with the Employer) the defect as well as any damage to the facility caused by the defect. . . The Contractor will bear all incidental costs, including any costs of removal associated with the repair, replacement or making good of the defect or damage.

Defects are generally regarded to include any deficiency in the quality of the works including defects due to faulty material or workmanship. This may extend to design where it is part of the Contractor's responsibilities (for example, in EPC Contracts).

The defects liability period usually does not include an obligation to repair defects which occur as a result of fair wear and tear. However, for the avoidance of doubt it is prudent, from a Contractor's perspective, to expressly specify this in the defects liability period clause. For example, by adding "normal wear and tear" to the general exceptions clause.

Contractor's right to remedy works and notifications

Another important consideration is determining whether the Contractor has an exclusive right to remedy defects which appear during the defects liability period.

From the Contractor's perspective, it is beneficial to have the exclusive right to remedy the defects during the defects liability period as the costs of remedying the defects will be cheaper than paying the Employer the cost of another Contractor performing such works. If the Contractor has an exclusive right to repair defects, an Employer who proceeds to remedy the works without offering the Contractor the opportunity to do so will be in breach of the contract.

Of course, the clause may provide for circumstances where the Employer has the right to engage another Contractor to remedy the defects at the cost of the Contractor, for example:

If the Contractor fails to commence the work necessary to remedy the defect or any damage to the facility caused by the defect within a time agreed with the Employer under clause [], the Employer may proceed to do the work, or engage another party to do the work and the costs, including incidental costs, incurred by the Employer as a result will be a debt due and payable to the Employer on demand and may be deducted from any payments otherwise due from the Employer to the Contractor. The Employer may also have recourse to the security and retention provided under this contract.

The Employer is generally required to give the Contractor notice of the defects as soon as practicable, stating the nature of the defect and supporting evidence.

Australian courts appear to favour an approach that places a heavy burden upon the Owner to comply with the contractual bargain and to follow the procedures prescribed under the contract with respect to notification of defects once they have been identified, and subsequently allowing the Contractor to rectify the defects.¹

Extension of defects liability period

It may be beneficial for the Employer to be able to extend the defects liability period especially where substantial defects occur. This can be achieved by using the following clause:

Where the Employer, acting reasonably, considers that substantial repair, replacement or making good is made under clause [], then subject to clause [], the defects liability period will be extended by a period equivalent to the defects liability period, from the date of that repair, replacement or making good but only in respect of that part of the works so repaired, replaced or made good.

The Contractor should seek to ensure that the defects liability period is capped by the inclusion of this provision:

*Despite clause [], the total defects liability period must not extend beyond [24] months after the date of practical completion. The position under English law is that where the contract is silent on the extension of the defects liability period, the Contractor's liability continues until it is barred by the *Limitation Act 1980* (six to 12 years). Under English law, the Contractor may still be liable after a defects liability period ends, under other express terms, including a guarantee, warranty or indemnity.²*

Common law rights

Unless express words are used, a defects liability clause will generally not affect the parties' remedies under common law. For example, an Employer can sue the Contractor for damages for defects which appear during or after the defects liability period, though its damages may be limited – if the Employer has acted unreasonably – to the cost of the Contractor performing the remedial works.

Nonetheless, the Employer should make this position clear by adopting the following wording:

The rights of the Employer under this clause [] are in addition to and do not limit any other rights which the Employer has under this contract or under any law.

It should be noted however, that the courts require strict compliance with the procedural steps and notice provisions in the contract relating to defects before an Employer can claim damages for defects. The court held that a "wider common law right" to engage others and then to claim the costs incurred as damages for breach of contract should not fly in the face of those obligations.³

Conclusion

This paper is intended to provide a brief overview of the defects liability period and examples of typical clauses. Subsequent updates will deal more closely with specific issues or problems which may arise, particularly where defects liability clauses are poorly drafted.

¹ *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd* (1994) 13 BCL 378; *Bitannia Pty Ltd v Parkline Constructions Pty Ltd* (2010) 26 BCL 335.

² *Adams v Richardson & Starling Ltd* [1969] 1 WLR 1645.

³ *Turner Corporation Ltd (Receiver and Manager Appointed) v Austotel Pty Ltd* (1994) 13 BCL 378.

28 Email and contractual notices

Introduction

It is common practice for contracts to include a clause which specifies the requirements for the delivery and receipt of contractual notices. An example of a standard notices clause is as follows:

Unless expressly stated otherwise in this agreement, all notices, certificates, consents, approvals, waivers and other communications in connection with this agreement must be:

- (a) *in writing*
- (b) *signed*
- (c) *left at the address, sent by prepaid ordinary post, sent by fax, or given in any other way permitted by law.*

They take effect from the time they are received unless a later time is specified.

The rapid development of the use of email has led to uncertainty regarding the legal status of contractual notices sent by email. This update considers the current legal position under English, Hong Kong and Australian law in relation to email notices.

Legislation

Email notices have unique limitations – both legal and technological. The uncertainty in this area and the rapid speed of technological development means there is little case law on the status of email notices. For this reason, legislation has been passed in many jurisdictions to deal specifically with the particular issues arising from notices sent by email.

The United Nations Commission on International Trade Law (UNCITL) published its Model Law on Electronic Commerce in 1996. This established a guiding set of minimalist rules, which many countries have now adapted to their needs.

The relevant legislation is the *Electronic Communications Act 2000* in the United Kingdom, the *Electronic Transactions Ordinance (Cap 553) 2000* in Hong Kong and the *Electronic Transactions Act 1999* in Australia. The purpose of each statute is to place electronic messages on par with other methods of communication, so that actions will not be invalidated or discriminated against merely because they were conducted electronically. Each statutory regime is facilitative, rather than restrictive.

Importantly, each of the statutes based on the guidelines of the UNCITL Model Law are "opt-in" statutes. That is, they do not apply unless the parties agree to conduct transactions electronically. However, consent does not have to be express – it can be implied from the conduct of the parties.¹

¹ *Brogden v Metropolitan Railway Co* (1877) 2 App Cas 666; *Malthouse v Adelaide Milk Supply Co-operative Ltd* [1922] SASR 572.

Legal issues

Several legal issues which arise in relation to notices sent by email are set out below.

Is email "writing"?

For a notice to be effective under the example standard clause, it must be in writing. At common law "writing" means any method of transcribing or reproducing the written word and may be ink, pencil or otherwise. The question of whether email falls into this category is not within the scope of this update because under the new legislation in England, Hong Kong and Australia, electronic messages are deemed to be "writing".²

Electronic signatures

For a notice to be effective under the example standard clause, it must also be signed. As technology is undergoing rapid change in the field of electronic signatures, and because all business needs differ, several jurisdictions adopt the minimalist approach which dictates that the reliability of the electronic signature must be appropriate given regard to the circumstances. This means that it will be up to the courts to determine on a case-by-case basis whether the signature is valid.

For example, section 7 of the *Electronic Communications Act 2000* (UK) utilises a broad definition. It states that an electronic signature is:

so much of anything in electronic form as –

- (a) is incorporated into or otherwise logically associated with any electronic communication or electronic data*
- (b) purports to be so incorporated or associated for the purpose of being used in establishing the authenticity of the communication or data, the integrity of the communication or data, or both.*

Australia also follows this approach, stating that an electronic signature is valid if sent by means appropriate in the circumstances, and for which the identity of the sender and their consent to the communication is verified.³ Both the English and the Australian statutory regimes leave room for businesses to utilise the technology most applicable to their needs, without placing an onerous standard for electronic signatures across the board. It is also deliberately flexible to allow room for future technological developments.

As a comparison, section 2 of Hong Kong's *Electronic Transactions Ordinance* is more definitive of what will constitute an electronic signature, defining them as:

generated by the transformation of the electronic record using an asymmetric cryptosystem and a hash function such that a person having the initial untransformed electronic record and the signer's public key can determine:

- (c) whether the transformation was generated using the private key that corresponds to the signer's public key*
- (d) whether the initial electronic record has been altered since the transformation was generated.*

This definition may prove to be restrictive upon a party's choice of technology in the future.

² *Electronic Transactions Act 1999* (Cth) s 9; *Electronic Communications Act 2000* (UK) c 7, s 8; *Electronic Transactions Ordinance* (Hong Kong) cap 553, s5.

³ *Electronic Transactions Act 1999* (Cth) s 10(b).

Ongoing obligations

If parties to a contract make express provision to allow for email notices, it is likely that the courts will hold them to a fairly high standard if the context of the situation and the conduct of the parties showed a reliance on this form of communication.

For example, Canadian common law has interpreted the agreement between the parties as to the method of communication strictly, holding the parties to their intention under the contract. In *Kanitz v Rogers Cable Inc.*,⁴ the Ontario Superior Court of Justice found that the plaintiffs had an obligation to continually check the defendant's web site (upon which the user agreement between the parties was updated from time to time), because the user agreement expressly allowed for this eventuality. Further, the court stated that parties who wish to conduct their business electronically must also bear the risks of doing so.⁵

Silence on the use of email

If a contract is silent on the issue of notices by email, the question is then: Does a notice sent by email satisfy the requirements for a valid notice set out in the contract? This question was considered most recently in *Kavia Holdings Pty Ltd v Suntrack Holdings Pty Ltd.*⁶ Where the provisions of the contract in question required that all notices:

- "shall be in writing"
- "may be given to or served upon a party"
- "may be signed on behalf of the party giving the same by a director, manager, secretary or acting secretary of such party".

The court considered that the relevant notice, which was sent by email, satisfied these requirements because the mandatory requirement as to writing was satisfied and the two permissive requirements were also met by transmission of the email and inclusion of the sender's name and email address, noting that:

*Any other conclusion would produce a capricious and commercially inconvenient result that might have wide-reaching and unintended consequences in modern day trade and commerce.*⁷

This decision is consistent with *Metacorp Australia Pty Ltd v Andeco Construction Group Pty Ltd*⁸ where the Victorian Supreme Court also considered permissive notice clauses and deemed the service of a notice by email valid.

Technological limitations

At present, there are several technological drawbacks inherent in electronic communication which a contracting party should be aware of before it agrees to be bound by email notices, including:⁹

- email address may be obtained without proof of identity
- emails may be sent from another person's computer without their permission
- it is not possible for the sender to ascertain with any confidence whether the recipient has read the message, even with delivery or read receipt notification

4 (2002) 21 BLR (3d) 104.

5 Ibid, [32] (Nordheimer J).

6 [2011] NSWSC 716

7 *Kavia Holdings Pty Ltd v Suntrack Holdings Pty Ltd* [2011] NSWSC 716.

8 (2010) 30 VR 141.

9 See also I Briggs and S Brumpton, 'Embrace E-construction with care!' (2001) 13(4) *Australian Construction Law Bulletin* 25, 29.

- changes may be made to the email prior to or after receipt without detection
- there are confidentiality concerns if access is gained to the email or to the server by an unintended party
- unencrypted email is relatively insecure, meaning that email recipients must be wary of the identity of the sender in the absence of a digital signature.

These limitations may assist a party to deny that it had received the relevant notice. If email message confirmations are not sufficiently reliable, a party binding itself to a deemed delivery provision bears the risk that it may be taken to have received a message that it has not in fact received.

Proving email notices in court

Under the *Civil Evidence Act 1995* (UK), electronic evidence may be admitted in court subject to proof as to the reliability of that evidence,¹⁰ particularly of the operation of the system used to record and store the electronic evidence.¹⁰ This circumvents the practical difficulties of proving the contents and service of an email notice in court. Section 9 of Hong Kong's *Electronic Transactions Ordinance* recognises the admissibility of electronic records in Hong Kong courts. In Australia, several statutory provisions overcome the common law evidentiary rules against admitting electronic records as evidence.¹¹

Despite these statutory provisions for admission of electronic evidence, parties may need to call experts to give evidence on the operation of their IT systems, and in particular that the data so received was adequately managed and secure.

Conclusion

Given the importance of contractual notices and the issues raised in this update, we recommend that as a general rule email should not be used for the delivery of contractual notices (as opposed to normal day-to-day communications).

However, this position should be reviewed on a case-by-case basis, taking into account the circumstances of the parties and the continual development in email security and reliability.

¹⁰ *Civil Evidence Act 1995* (UK) c 39, ss 8-9. Section 8 states that copies of a document are admissible; section 9 provides that documents which form part of the records of a business are automatically admissible.

¹¹ *Uniform Evidence Act 1995 (Cth)* ss 48, 69, 146, 147; *Electronic Transactions Act 1999* (Cth) s 11.

29 Export credit financing

Introduction

This update provides an introduction to export credit financing and the role it and export credit Financiers play in infrastructure projects. At its most basic level, export credit financing is financing provided by sovereign governments to promote the sale and export of products manufactured by resident companies.

Export credit financing is often used to fund infrastructure projects (especially those in the developing world) in conjunction with, or as an alternative to, more traditional project financing.

It enables SponsorSponsors and project companies to obtain more flexible (and often cheaper) financing arrangements. In addition to financing, export credit Financiers may also provide insurance, particularly political risk insurance that is either unobtainable or prohibitively expensive in the commercial market place.

The largest export credit agencies (**ECAs**) are those in the United States, Japan and Western Europe (for example, France and the United Kingdom). This paper examines the typical contents of an MOU and the practical and legal implications which arise as a result of entering into an MOU.

Generally, ECAs provide financing to two groups:

- manufacturers in their home country
- purchasers of the equipment manufactured by companies in their home country.

Financing for manufacturers

This update focuses on ECA financing for purchasers of equipment, however, we note the usual types of facilities provided to manufacturers are:

- working capital facilities
- loan guarantees.

Financing for purchasers

ECA financing support to purchasers has three basic forms:

- direct finance
- guarantees
- insurance (both commercial risk and political risk).

Direct financing means that the ECA lends money directly to the purchaser of the equipment. In respect of guarantees, there are many forms. One of the most common is a credit guarantee facility under which ECAs provide guarantees to Lenders in their home jurisdiction for loans to foreign banks which are then on lent to foreign purchasers of home jurisdictions goods or services.

The common feature of these types of support is they will only apply to the home country portion of the goods being financed.

Therefore, if a product contains parts manufactured in multiple places it may not be suitable for ECA financing. However, some ECAs, for example the United States' ECA, the Export and Import Bank (USEXIM), will finance goods not entirely manufactured in the United States providing the goods are shipped from the US to the foreign purchaser. There are, however, strict rules as to what foreign manufacture content applies for

USEXIM financing and what does not. Therefore, if this will be relevant to your project you should seek specific advice on this point.

Insurance provided by ECAs can cover both commercial risk and political risk. Political risk covers events like war, expropriation, rescission of licences and imposition of foreign exchange controls. The use of this insurance is discussed in more detail below.

Features of eca financing

Many ECAs also have specific project financing programs which are tailored to suit the requirements of project companies and commercial Lenders. These programs combine the basic forms of financing described above into packages which meet specialised requirements of a limited recourse project financing. The repayment schedule will be tailored to the expected cash flow of the project and should not, in most cases, require repayments to be made until the end of construction. Note, there are limitations on the maximum average loan period which are usually determined based on a location of the project.

For example, the British ECA, the Export Credits Guarantee Department (**ECGD**), will provide direct finance to the Project Company as well as providing credit support. ECGD will provide guarantees to the commercial Lenders of up to 100% of the outstanding principal and interest. Similar facilities are available from USEXIM and COFACE, the French ECA.

If applying for finance under an ECA project finance program, you can expect the ECA to undertake a similar type of due diligence process as commercial Lenders. However, the support provided by an ECA is generally provided on more favourable financial terms than that provided by commercial Lenders. As a result, there will be additional requirements that will have to be satisfied which commercial financing does not require.

ECA financing can also be used to support commercial finance and attract finance that would otherwise be unavailable. In effect, the commercial Lenders rely on the sovereign guarantees provided by the ECAs to support the borrowings of the Project Company. For example, political risk insurance provided by an ECA often forms a crucial part of the credit support package provided to commercial Lenders. As a result, if a project is expropriated prior to the loans being repaid, the ECA will repay up to 100% of the outstanding principal and interest.

Difficulties may arise if financing is sought from two or more ECAs because they often have conflicting rules. For example, USEXIM requires all lending documents to be governed by New York Law whereas ECGD (as well as many of the commercial Lenders) are likely to prefer English Law.

As a result of the strict rules about what does and does not qualify for ECA financing, it is vital that Sponsors and project companies who wish to utilise ECA financing make provision for those rules from the outset. For example, the content requirements may impact on the choice of the construction Contractor. In addition, a Project Company may be willing to accept a higher contract price if as a result of contracting with a certain party or by stipulating certain items of plant and equipment the overall financing will be cheaper.

It is common for EPC Contracts to contain local content requirements that oblige the Contractor to source materials from the country where the project is being constructed. Similar provisions will be required if ECA financing is used to ensure the Project Company continues to qualify under the rules of the relevant ECA.

ECA financing is often used in collaboration with other non-commercial Lenders, for example, the Asian Development Bank and European Bank for Reconstruction and Redevelopment which further decreases the financing costs but can increase complexity, particularly given there are often differing requirements between the ECAs and the banks.

Political and environmental considerations

Increasingly, ECAs have been targeted by environmental activists and other organisations concerned with debt burdens of developing countries. ECAs have been accused of lending money without consideration for environmental or social issues in the countries where the projects to which they lend are located.

Therefore, many ECAs are now undertaking environmental analysis of large scale projects before they agree to lend. In addition, USEXIM is subject to congressional oversight. As a result, there are limitations, both of an environmental and political nature, in relation to the projects USEXIM will finance.

30 Force majeure clauses

Introduction

Force majeure clauses are almost always included in project agreements. However, they are rarely given much thought until one or more parties seek to rely on them. However, in the current global environment it is appropriate to examine their application.

What is force majeure?

Force majeure is a civil law concept that has no real meaning under the common law. However, *force majeure* clauses are used in contracts because the only similar common law concept – the doctrine of frustration – has limited application, because for it to apply the performance of a contract must be radically different from what was intended by the parties. In addition, even if the doctrine does apply, the consequences are unlikely to be those contemplated by the parties. An example of how difficult it is to show frustration is that many of the leading cases relate to the abdication of King Edward VII before his coronation and the impact that had on contracts entered into in anticipation of the coronation ceremony.

In circumstances where a Project Company wants to minimise any opportunity for extension of time claims, it could consider not including a *force majeure* clause and instead rely on the doctrine of frustration. However, before making a determination to rely on frustration, a Project Company must consider how frustration is applied in the relevant jurisdiction and, in particular, whether the common law application has been altered by legislation.

Given *force majeure* clauses are creatures of contract, their interpretation will be governed by the normal rules of contractual construction. *Force majeure* provisions will be construed strictly and in the event of any ambiguity the contra proferentem rule will apply. Contra proferentem literally means "against the party putting forward". In this context, it means that the clause will be interpreted against the interests of the party that drafted it. The parties may contract out of this rule.

The rule of ejusdem generis, which literally means "of the same class", may also be relevant. In other words, when general wording follows a specific list of events, the general wording will be interpreted in light of the specific list of events. In this context it means that when a broad "catch-all" phrase, such as "anything beyond the reasonable control of the parties", follows a list of more specific *force majeure* events, the catch-all phrase will be limited to events analogous to the listed events.

Importantly, parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions.

General force majeure provisions

Traditionally, *force majeure* clauses, in referring to circumstances beyond the control of the parties, were intended to deal with unforeseen acts of God or of governments and regulatory authorities. More recently, *force majeure* clauses have been drafted to cover a wider range of circumstances that might impact on the commercial interests of the parties to the contract. It is now quite common for *force majeure* clauses to deal not only with impossibility of performance, but also with questions of commercial impracticability.

By itself, the term *force majeure* has been construed to cover acts of God;¹ war and strikes,² even where the strike is anticipated; embargoes, refusals to grant licences;³ and abnormal weather conditions.⁴

1 *Matsoukis v Priestman & Co* [1915] 1 KB 681, 685-7.

2 *Lebeaupin v Richard Crispin* [1920] 2 KB 714, 719.

3 *Coloniale Import-Export v Loumidis Sons* [1978] 2 Lloyd's Rep 560.

4 *Toepfer v Cremer* [1975] 2 Lloyd's Rep 118.

The underlying test in relation to most *force majeure* provisions is whether a particular event was within the contemplation of the parties when they made the contract. The event must also have been outside the control of the contracting party. Despite the current trend to expressly provide for specific *force majeure* events, case law actually grants an extensive meaning to the term *force majeure* when it occurs in commercial contracts.

There are generally three essential elements to *force majeure*:

- it can occur with or without human intervention
- it cannot have reasonably been foreseen by the parties
- It was completely beyond the parties' control and they could not have prevented its consequences.

For instance, Bailhache J. in *Matsoukis v Priestman*⁵ held that *force majeure* covered dislocation of business owing to a universal coal strike and access to machinery, but not bad weather, football matches or a funeral. In *Lebeaupin v Crispin*⁶ *force majeure* was held to mean all circumstances beyond the will of man, and which it is not in his power to control. Therefore, war, floods, epidemics and strikes are all cases of *force majeure*.

There is an important caveat to the above and that is parties cannot invoke a *force majeure* clause if they are relying on their own acts or omissions. Additionally, the *force majeure* event must be a legal or physical restraint and not merely an economic one.⁷

Circumstances beyond the control of the person concerned

The phrase "circumstances beyond the control of the person concerned" has not been subject to detailed examination by the courts. The courts simply assume that the phrase is given its common and everyday meaning. The phrase has been judicially held to refer to occurrences where neither the person concerned, nor any person acting on their behalf to do the act or take the step, could prevent.⁸ Recent practice has significantly expanded the scope of such clauses to cover a wider range of circumstances that might impact on the commercial interests of the parties to the contract.

Reynolds JA in *Caltex Oil v Howard Smith Industries Pty Ltd*⁹ stated that the phrase "other circumstances beyond the control of the parties" would include an industrial strike. Therefore, specific reference to "strikes" may be unnecessary in *force majeure* provisions where the above phrase appears, although it is still advisable to include it.

The Australian unreported case of *Asia Pacific Resources Pty Ltd v Forestry Tasmania (No. 2)*¹⁰ noted that as a general rule a party cannot invoke a *force majeure* clause due to "circumstances beyond the control of the parties" which, to the knowledge of the party seeking to rely upon the clause, were in existence at the time the contract was made. This case must be contrasted against *Reardon Smith Line Ltd v Ministry of Agriculture, Fisheries and Food*¹¹ which held that there was no settled rule of construction that prevents a party to a *force majeure* clause from relying on events in existence at the time the contract was entered into as events beyond that party's control.

5 [1915] 1 KB 681, 687.

6 [1920] 2 KB 714, 719.

7 *Yrazu v Astral Shipping Company* (1904) 20 TLR 153, 155; *Lebeaupin v Crispin* [1920] 2 KB 714, 721.

8 *Re Application by Mayfair International Pty Ltd* (1994) 28 IPR 643.

9 [1973] 2 NSWLR 98, 105.

10 [1973] 2 NSWLR 98, 105.

11 (1998) Aust Contract R 90-095; (Unreported, Supreme Court of Tasmania, Cox CJ, Underwood and Wright JJ, 5 May 1998).

Kerr J in *Trade and Transport Inc v Iino Kaiun Kaisha Ltd, The Angelia*¹² referred to *Reardon Smith*¹³ and then stated that ordinarily a party would be debarred from relying upon a pre-existing causes as an excepted peril if:

- (i) the pre-existing cause was inevitably doomed to operate on the contract
- (ii) the existence of facts that show that the excepted cause is bound to operate is known to the parties at the time of contract, or at least to the party who seeks to rely on the exception.

His Honour then added as an alternative to (ii);

- (iii) if the existence of such facts should reasonably have been known to the party seeking to rely upon them and would have been expected by the other party to the contract to be so known.

Given the above, it seems that causes beyond the control of the parties that were known at the date of contracting may excuse performance only where they were of a temporary nature and are not doomed to operate on the contract.

Several recent Australian cases have considered, however, that performance that becomes uneconomical will not be a circumstance beyond the control of a party to a contract. Spiegelman CJ in *Gardiner v Agricultural and Rural Finance Pty Ltd*¹³ citing *Hyundai Merchant Marine Co Ltd v Dartbrook Coal (Sales) Pty Ltd*¹⁴ stated that commercial impracticability may not be sufficient.

The way forward

If a Project Company decides it wants to include a *force majeure* provision in its project agreements, the best way to limit the application of that clause is by defining a closed list of events that constitute *force majeure* for that contract. In other words, it should not include the catch all "any event beyond the reasonable control of the parties including...". Given *force majeure* is a creation of contract, the courts are unlikely to expand on the definition given by the parties.

Obviously, this restricted approach is most appropriate when the counterparty has time-critical obligations, eg: in an Engineering, Procurement and Construction contract. However, where it is the Project Company that has time-critical obligations, eg in an offtake agreement, the Project Company should adopt a more encompassing definition, including the traditional catch-all phrase.

¹² [1962] 1 QB 42.

¹³ [2007] NSWCA 235.

¹⁴ (2006) 236 ALR 115.

31 *Force majeure* clauses – Revisited

Introduction

Although *force majeure* clauses in project agreements are common, the amount of time spent negotiating those clauses is often minimal. Generally, the assumption appears to be that the risk will not affect us or the *force majeure* clause is merely a legal necessity and does not impact on our risk allocation under the contract. Both of these assumptions are inherently dangerous and, particularly in the second case, incorrect.

This paper follows from the previous article on *force majeure* clauses and considers the drafting of those clauses.

Risk allocation

The appropriate allocation of risk in project and construction agreements is fundamental to negotiations between the Project Company and its Contractors. Risks generally fall into the following categories:

- risks within the control of the Project Company
- risks within the control of the Contractor
- risks outside the control of both parties.

The negotiation of the allocation of many risks that are beyond the control of the parties (eg, latent site conditions and change of law) is usually very detailed, to ensure that it is clear which risks are borne by the Contractor. The same approach should be adopted in relation to the risks arising from *force majeure* events.

Operation of *force majeure* clauses

There are two aspects to the operation of *force majeure* clauses:

- the definition of *force majeure* events; and
- the operative clause, which sets out the effect on the parties' rights and obligations if a *force majeure* event occurs.

Definition

The events that trigger the operative clause must be clearly defined. Given the common law meaning of the term *force majeure* is not certain and is open to interpretation of the courts, it is in the interests of both parties to ensure that the term *force majeure* is clearly defined.

The preferred approach for a Project Company is to define *force majeure* events as being any of the events in an exhaustive list set out in the contract. In this manner, both parties are aware of which events are *force majeure* events and which are not. Clearly, defining *force majeure* events makes the administration of the contract and, in particular, the mechanism within the contract for dealing with *force majeure* events simpler and more effective.

Operative clause

An operative clause will act as a shield for the party affected by a *force majeure* event because that party can rely on the clause as a defence to a claim that it has failed to fulfil its obligations under the contract.

An operative clause should also specifically deal with the rights and obligations of the parties if a *force majeure* event occurs and affects the project. This means the parties must consider each of the events that it intends to include in the definition of *force majeure* events and then deal with what the parties will do if such an event occurs.

Drafting force majeure clauses

Definition

An example of an exhaustive definition of *force majeure* is:

An event of force majeure is an event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent provided that event or circumstance is limited to the following:

- (a) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), acts of terrorism, civil war, rebellion, revolution, insurrection of military or usurped power, requisition or compulsory acquisition by any governmental or competent authority*
- (b) ionising radiation or contamination, radioactivity from any nuclear fuel or nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component*
- (c) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds*
- (d) earthquakes, flood, fire or other physical natural disaster, but excluding weather conditions regardless of severity*
- (e) strikes or industrial disputes at a national level, or strikes or industrial disputes by labour not employed by the affected party, its subContractors or its suppliers, and which affect an essential portion of the works, but excluding any industrial dispute which is specific to the performance of the works or this contract.*

The list of events to be included in this type of definition is a matter for negotiation between the parties and, as noted above, ought to be exhaustive. In general, it is preferable for a Project Company to have a short list of events since the Contractor is the party most likely to be affected by *force majeure* events. The actual process of negotiating this list must clearly identify the risk allocation between the parties.

Operative clause

An example of an operative clause is:

- [].1 Neither party is responsible for any failure to perform its obligations under this contract if it is prevented from, or delayed in, performing those obligations by an event of force majeure.*
- [].2 Where there is an event of force majeure, the party prevented from, or delayed in, performing its obligations under this contract must immediately notify the other party giving full particulars of the event of force majeure and the reasons for the event of force majeure preventing that party from, or delaying that party in, performing its obligations under this contract and that party must use its reasonable efforts to mitigate the effect of the event of force majeure upon its or their performance of the contract and to fulfill its or their obligations under the contract.*
- [].3 Upon completion of the event of force majeure the party affected must, as soon as reasonably practicable, recommence the performance of its obligations under this contract. Where the party affected is the Contractor, the Contractor must provide a revised programme rescheduling the works to minimise the effects of the prevention or delay caused by the event of force majeure.*

[].4 *An event of force majeure does not relieve a party from liability for an obligation which arose before the occurrence of that event, nor does that event affect the obligation to pay money in a timely manner which matured prior to the occurrence of that event.*

[].5 *The Contractor has no entitlement to, and the Project Company has no liability for:*

(a) *any costs, losses, expenses, damages or the payment of any part of the contract price during an event of force majeure*

(b) *any delay costs in any way incurred by the Contractor due to an event of force majeure.*

In addition to the above clause, it is important to appropriately deal with other issues that will arise if a *force majeure* event occurs. For example, it is common practice for a Contractor to be entitled to an extension of time if a *force majeure* event impacts on its ability to achieve timely completion of the works. For this reason, *force majeure* is usually referred to in the extension of time mechanism as an event which will entitle the Contractor to an extension of time.

Another key clause that relates to *force majeure* type events is the Contractor's responsibility for care of the works and the obligation to reinstate any damage to the works prior to completion. A common example clause is:

[].1 *The Contractor is responsible for the care of the site and the works from when the Project Company makes the site available to the Contractor until 5.00pm on the date of practical completion.*

[].2 *The Contractor must promptly make good loss from, or damage to, any part of the site and the works while it is responsible for their care.*

[].3 *If the loss or damage is caused by an event of force majeure, the Project Company may direct the Contractor to reinstate the works or change the works. The cost of the reinstatement work or any change to the works arising from a direction by the Project Company under this clause will be dealt with as a variation except to the extent that the loss or damage has been caused or exacerbated by the failure of the Contractor to fulfill its obligations under this contract.*

[].4 *Except as contemplated in clause [].3, the cost of all reinstatement works will be borne by the Contractor.*

Conclusion

It is important for a Project Company and its Contractors to carefully consider the definition of *force majeure* and how an event of *force majeure* will affect their rights and obligations under the contract.

The drafting of *force majeure* definitions and operative clauses (including related clauses) should clearly define the risk allocation between the parties. The above example clauses have been used to demonstrate some options available for dealing with events of *force majeure*. The specific issues that need to be considered when drafting *force majeure* clauses will depend on a variety of factors, such as:

- the desired allocation of risks between the parties
- the geographical location of the project
- other project specific factors.

32 Further assurances boilerplate clause

Need to know

A further assurances clause evidences the agreement of the contracting parties to do everything necessary to complete the transactions contemplated by the contract. There is some debate about whether such a clause is necessary, given the implied "duty" to cooperate. However, as the application of the implied duty of cooperation is dependent on the individual circumstances of each case, it is currently recommended that a further assurances clause be included in contracts. A further assurances clause may indicate, for example, that the parties' intentions support the implication of a term requiring good faith performance.

However, given the Courts' willingness to imply a duty of cooperation, if the parties do not wish for additional steps to be taken (ie apart from those expressly identified in the contract), then a further assurances clause should not be included and should be replaced with a clause stating that no additional steps are required.

The sample clauses

Option 1 – general

Except as expressly provided in this [deed/agreement], each party must, at its own expense, do all things reasonably necessary to give full effect to this [deed/agreement] and the matters contemplated by it.

Option 2 – execute specific agreements/procurement etc

Except as expressly provided in this [**deed/agreement**], each party must, at its own expense, do all things reasonably necessary to give full effect to this [**deed/agreement**] and the matters contemplated by it, including:

- (a) executing or ensuring the execution of documents;
- (b) ensuring that relevant third parties do all things reasonably necessary to give full effect to this [deed/agreement] and the matters contemplated by it; [and]
- (c) [**insert any other relevant class of action appropriate for the transaction**].

1 What is this clause and why is it used?

A further assurances clause is used to evidence the agreement of the contracting parties to do everything necessary to complete the transactions contemplated by the contract.

This clause is useful as parties may have to do further acts in order to give effect to the agreement, eg executing other documents or having to procure third parties to perform certain obligations. It also provides a "catch all" should detail be omitted in the description of a party's obligations.

This clause was traditionally used in sale of land transactions to ensure that a vendor was bound to do such further acts as were required to perfect the purchaser's title to the property. In modern real property transactions, further assurances clauses are probably not strictly necessary in those jurisdictions which imply covenants as to title: for example, section 78 of the *Conveyancing Act 1919* (NSW) expressly imposes an obligation equivalent to a further assurances clause on the transferor to do all things necessary to perfect title in the property being transferred.¹

However, the principles developed in the context of "further assurances" clauses for the sale of land are still relevant for other types of transactions, and nowadays further assurances clauses can be found in a broad range

¹ See also: *Conveyancing Act 1919* (ACT) s 78, *Conveyancing Act 1951* (ACT) s 3; *Law of Property Act 1936* (SA) s 42; *Conveyancing and Law of Property Act 1884* (Tas) s 7; *Property Law 1958* (Vic) s 76; *Property Law Act 1969* (WA) s 45. There are no equivalent provisions in the Northern Territory or in Queensland.

of commercial contracts. They may be particularly helpful in the sale of a business (where assignments of contracts are to take place) or where intellectual property rights are to be transferred.

2 How effective is it?

2.1 Further assurances clauses are generally effective

It is clear from the case law that courts enforce further assurances clauses.² However, their interpretation or enforcement is:

- **Limited to the extent of the contract:** Further assurances clauses will not be interpreted as requiring an act by one party that confers rights or disadvantages on the other that goes beyond what has been contracted for – see *Carlton & United Breweries v Tooth & Co*³ and *Daniels v Pynbland*.⁴ More recent case law has confirmed this principle in holding that the clause "*cannot operate upon some subject matter wider than that delineated by the deed itself*".⁵
- **Not vitiated by faulty provisions:** The requirement to execute documents which are the subject of further assurances clauses is not vitiated by faulty provisions within the document. Whether a document contains a faulty provision is "beside the point" when it comes to the application of a further assurances clause.⁶

It is also apparent that further assurances clauses work in conjunction with other principles of contract law, in particular:

- the implied duty to co-operate
- potentially, the implied term of good faith (and reasonableness) in performance.

2.2 Duty to cooperate and further assurances clauses

It is arguable (see below) that the general duty to cooperate removes the need for a further assurances clause. For the reasons set out below, this is not a recommended path. This part discusses the implication of the duty to cooperate.

Courts have shown a willingness to imply the duty to cooperate into an agreement where there is no express intention contained within that agreement which would contradict it and so will impose an obligation on each party to do all that is reasonably necessary to secure performance of the contract.⁷ In the seminal case of *Mackay v Dick*,⁸ it was held:

"[Where] it appears that both parties have agreed that something shall be done, which cannot effectually be done unless both concur in doing it, the construction of the contract is that each agrees to do all that is necessary to be done on his part for the carrying out of that thing, though there may be no express words to that effect."

² See for example the consideration of the law applicable to further assurance clauses in *Carlton & United Breweries v Tooth & Co* (1986) 7 IPR 581 at 584 per Young J, and on appeal *Castlemaine Tooheys Ltd and anor v Carlton and United Breweries Ltd and anor sub nom Tooth & Co Ltd v Carlton and United Breweries* (1987) 10 NSWLR 468 at 482-484 and *Fox Entertainment Pty Ltd v Centennial Park and Moore Park Trust* [2004] NSWSC 214.

³ (1986) 7 IPR 581 at 584 per Young J, and on appeal *Castlemaine Tooheys Ltd and anor v Carlton and United Breweries Ltd and anor sub nom Tooth & Co Ltd v Carlton and United Breweries* (1987) 10 NSWLR 468 at 482-484.

⁴ (1985) 4 BPR 9716.

⁵ *Fox Entertainment Pty Ltd v Centennial Park and Moore Park Trust* [2004] NSWSC 214 at 195

⁶ *Ibid* [193].

⁷ *Mackay v Dick* (1881) 6 App Cas 251, *Campbell v Backoffice Investments Pty Ltd* (2009) 238 CLR 304, *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* (1979) 144 CLR 596, 607-8, the Supreme Court of South Australia in *Alstom Ltd v Yokogawa Australia Pty Ltd & Anor (No 7)* [2012] SASC 49 affirmed that an implied term to "*do all that is necessary to be done ...to enable the other party to have the benefit of the contract is well recognised and not controversial*" in commercial contracts [568], *Butts v O'Dwyer* (1952) 87 CLR 267 (implied obligation on part of transferor to do all that was reasonable to ensure that consent obtained where contract to transfer land is subject to term that it is not to become effective unless consent obtained).

⁸ *Mackay v Dick* (1881) 6 App Cas 251 per Blackburn J at 263.

This implied duty was considered again in *Butt v M'Donald*⁹ and the principle stated by Griffith CJ was affirmed by the High Court in *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd*.¹⁰ That is:

"it is a general rule applicable to every contract that each party agrees, by implication, to do all such things as are necessary on his part to enable the other party to have the benefit of the contract."

*Campbell v Backoffice Investments Pty Ltd*¹¹ affirmed the principle in MacKay although it was pointed out that a duty to cooperate cannot be implied where it is *"at odds with the terms upon which the parties have expressly agreed"*.¹²

It is clear that an implied duty to cooperate will not apply in all cases and its application will be dependent on the individual circumstances of a case.¹³

2.3 Further assurances and the implication of a duty of good faith

It has been suggested in commentary that "if the further assurances clause is expressed in strong terms and imposes an express obligation on the parties to do whatever is necessary to give each other the full benefit of the contract, it provides valuable support for any argument based on a duty of good faith and reasonableness".¹⁴

While "breach of the duty of cooperation will frequently occur by reason of a failure to act in good faith.... a good faith duty is more general than a requirement of cooperation, and it is not a necessary incident of contracts that each party must consider the interests of the other when performing the contract".¹⁵ The status of good faith within the Australian law of contract is uncertain and the subject of much controversy.

3 Drafting and reviewing the clause

3.1 Should I always include it, and what happens if I don't?

In light of the willingness of the courts to imply a duty to cooperate and the further development of the implied duty of good faith, it may be that further assurances clauses will not be a necessary or useful feature of future agreements.

In *1144 Nepean Highway Pty Ltd v Abnote Australasia Pty Ltd (formerly known as Leigh Mardon Australasia Pty Ltd)*,¹⁶ it was stated that in those circumstances the further assurances clause *"add[ed] little or nothing to the obligations already imposed by virtue of the agreement itself and its implied terms"*.

Further assurances clauses are also rarely contested or controversial so their value is not tangible. However, as the application of the implied duty of cooperation is dependent on the individual circumstances of each case, it is recommended that contracts continue to contain a further assurances clause. If the further assurances clause is not included, parties will need to rely on the implied duty of cooperation.

9 (1896) 7 QJL 68, 70-1.

10 (1979) 144 CLR 596, 607.

11 (2009) 238 CLR 304.

12 Ibid [168].

13 See, eg *Himbleton Pty Ltd v Kumagai (NSW) Pty Ltd* (1991) 29 NSWLR 44 at 60 per Giles J (duty did not require party to ensure that exercise of put option became binding where this would have amounted to warranty that Foreign Investment Review Board approval would be obtained), *RDJ International Pty Ltd v Preformed Line Products (Australia) Pty Ltd* (1996) 39 NSWLR 417 at 421 per Young J (duty does not require person to interrupt business activities merely because it sees the other getting into difficulties). See also *GR Securities Pty Ltd v Baulkham Hills Private Hospital Pty Ltd* (1986) 40 NSWLR 631 at 635 per McHugh JA (with whom Kirby P and Glass JA agreed), CA; *Council of the City of Sydney v Goldspar Australia Pty Ltd* (ACN 002 705 991) (2006) 230 ALR 437 at 497, [2006] FCA 472 at [162] per Gyles J (difficulty in 'giving content' to the obligation).

14 Joshua Thomson, Leigh Warnick and Ken Martin, Thomson Reuters, *Commercial Contract Clauses Online* (at October 2012) [60840]. The commentary is in relation to *Shell (Petroleum Mining) Co Ltd v Todd Petroleum Mining Co Ltd* [2008] 2 NZLR 418, which concerned a dispute over a contract that included an express assurances clause. There the New Zealand Court of Appeal considered conduct of the breaching party was wrongful even without resort to that clause. The Court did not expressly refer to good faith and reasonableness.

15 Carter on Contract online at [30-020].

16 (2009) 26 VR 551 [38].

3.2 What are the sample boilerplate clauses?

There are two variations on the further assurances boilerplate clause. The first (above as Option 1) contains a general obligation "...to do all things reasonably necessary to give full effect...". The second (Option 2) specifically refers to agreement on further execution and procurement. It may be desirable to include this second variation to avoid any disagreement as to the scope of the clause.

3.3 When, if ever, should I amend the clause?

- **To add the words "or desirable"**: One variation on the wording of the further assurances clause is to include the words "*or desirable*", ie each party must do all things reasonably necessary or desirable to give full effect to the agreement¹⁷.

Depending on the interests of the party, the addition of the words "or desirable" could be advantageous as it could result in more acts falling within the requirements of the further assurances clause. Conversely, because of the subjective and ambiguous nature of the word "desirable", this would not be a favourable addition for a party who wanted to limit its obligations. As a general rule, and due to their ambiguous nature, we do not recommend that you include these words.

- **To make the clause the responsibility of only one party**: In some circumstances, for example where only one party is to benefit from a transaction or it is conventional in that type of transaction for a particular party to be responsible and pay for the costs of carrying out further assurances tasks, it will be appropriate for the clause to be drafted so that it is given by one party only.
- **To cover the issue of costs**: There may be considerable costs involved in complying with a further assurances clause. Consider if each party will bear its own costs or if the costs will be borne by one party (for example the party which is to benefit from the further assurances tasks).
- **To cover the issue of requests**: Consider whether one party must request the other party to undertake the further assurances tasks. Consider how costs will be borne if requests are made.
- **To cover timing**: Consider whether the performance of the further assurances tasks are time sensitive. If so, consider adding words such as "promptly", "within [*insert number*] days of being requested by [*insert name*]" etc.

4 Other Practical Considerations

Do you need a power of attorney?

Where particular actions are to be taken by one party at some time in the future, the other party may require that the first party give it an irrevocable power of attorney as security for its undertaking to perform those acts. The power of attorney enables the other party to perform those acts in the name of the first party in the event of the first party's failure to do so within a certain time.

¹⁷ *Alstom Ltd v Yokogawa Australia Pty Ltd and Anor (No 7)* [2012] SASC 49; *1144 Nepean Highway Pty Ltd v Abnote Australasia Pty Ltd (formerly known as Leigh Mardon Australasia Pty Ltd)* (2009) 26 VR 551.

33 Interpretation boilerplate

Need to know

An interpretation clause is used to express the rules which the parties wish to apply to the interpretation of their deed or agreement. The sample interpretation clause provided below is a standard boilerplate interpretation clause containing rules of interpretation that are fairly typical of those in most commercial contracts. However, certain options must be selected or adjustments made in each case. These are explained further below.

Sample clause

1.1 Interpretation

In this [**deed/agreement**] the following rules of interpretation apply unless the contrary intention appears:

- (a) headings are for convenience only and do not affect the interpretation of this [**deed/agreement**]
- (b) the singular includes the plural and vice versa
- (c) words that are gender neutral or gender specific include each gender
- (d) where a word or phrase is given a particular meaning, other parts of speech and grammatical forms of that word or phrase have corresponding meanings
- (e) the words “such as”, “including”, “particularly” and similar expressions are not used as, nor are intended to be interpreted as, words of limitation
- (f) a reference to:
 - (i) a person includes a natural person, partnership, joint venture, government agency, association, corporation, trust or other body corporate
 - (ii) a party includes its agents, successors and permitted assigns
 - (iii) a document includes all amendments or supplements to that document
 - (iv) a clause, term, party, schedule or attachment is a reference to a clause or term of, or party, schedule or attachment to this [**deed/agreement**]
 - (v) this [**deed/agreement**] includes all schedules and attachments to it
 - (vi) a law includes a constitutional provision, treaty, decree, convention, statute, regulation, ordinance, by-law, judgment, rule of common law or equity [*or a rule of an applicable Financial Market*] and is a reference to that law as amended, consolidated or replaced
 - (vii) a statute includes any regulation, ordinance, by-law or other subordinate legislation made under it
 - (viii) an agreement other than this [**deed/agreement**] includes an undertaking, or legally enforceable arrangement or understanding whether or not in writing
 - (ix) a monetary amount is in Australian dollars and all amounts payable under or in connection with this [**deed/agreement**] are payable in Australian dollars
- (g) an agreement on the part of two or more persons binds them [*jointly and not severally/severally and not jointly/jointly and each of them severally*]
- (h) no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [**deed/agreement**] or any part of it
- (i) when the day on which something must be done is not a Business Day, that thing must be done on the [**following/preceding**] Business Day
- (j) in determining the time of day where relevant to this [**deed/agreement**], the relevant time of day is:
 - (i) for the purposes of giving or receiving notices, the time of day where a party receiving a notice is located
 - (ii) for any other purpose under this [**deed/agreement**], the time of day in the place where the party required to perform an obligation is located
- (k) a day is the period of time commencing at midnight and ending immediately before the next midnight is to occur [*and*]

- (i) if a period of time is calculated from a particular day, act or event (such as the giving of a notice), it is to be calculated exclusive of that day, or the day of that act or event [and/]

[Optional]

- (m) If there is any conflict between the body of this [deed/agreement] and its schedules [and/or] attachments [or] [**specify any related documents eg Statement of Work, special conditions, specifications etc**], [the terms of the main body of this [deed/agreement] will prevail/the schedules or attachments will prevail in the following order: **[specify order]**]

1 What is this clause and why is it used?

Most commercial contracts include an interpretation clause that sets out the rules of construction that the parties intend to apply to the contract. The clause can often be the place to look for significant concepts in a legal document.¹ While there is temptation to simply cut and paste, the provisions of this clause are often material to the contract. Hidden issues may arise if this clause is not properly reviewed.

The purpose of this clause is generally:

- to provide certainty of understanding when interpreting the contract, to avoid a court interpreting the contract in a way that is inconsistent with the parties' intentions
- to avoid repetition of information when drafting a contract, making it easier to read.²

Interpretation clauses in commercial contracts tend to be reasonably standardised, although important choices need to be made within parts of the clause in each particular case (these are discussed in section 3 below). Each firm will have their own version but the content, wording and topics addressed are often similar. Interpretation clauses are not often the subject of negotiation and are ordinarily less tailor-made than other clauses that relate to the core of the contract.³

The sample interpretation clause is a standard "boilerplate" clause; that is, it is a clause of the type that will ordinarily be inserted into most commercial contracts with minimal alteration other than selecting appropriate options where the clause provides for this. The rules of interpretation contained in the sample clause are fairly typical of those in most commercial contracts. However, the interpretation clause should be read together with the draft contract before finalisation to ensure that the contract has been drafted in accordance with the rules contained in that clause, and to ensure that its application does not cause any part of the contract to have an ambiguous or unintended meaning. Areas of particular consideration are set out in section 3 below.

2 Using the sample interpretation clause

2.1 What does the sample interpretation clause do?

In summary, the sample interpretation clause operates by:

- (a) expressly stating how the parties intend particular grammatical conventions (adopted in the document) should be interpreted. For example, an interpretation provision which states that "*the singular includes the plural and vice versa*" avoids the need to draft the document by including references to both singular and plural versions of each noun;
- (b) by setting out the breadth with which particular concepts are intended to be treated by the parties. For example, the inclusion of the phrase "*a document includes all amendments or supplements to that document*" obviates the requirement to state this repeatedly throughout the document (or to repeat such a rider in the definitions section for every defined document); and

¹ *Springrange Pty Ltd v Australian Capital Territory & ACT Planning and Land Authority* [2010] ACTCA 17 at [29].

² cf *AIB Group (UK) Ltd v Martin* [2002] 1 All ER 353 at [8] per Lord Millett.

³ Fontaine M and De Ly F, *Drafting International Contracts, an analysis of contract clauses*, Koninklijke Brill, the Netherlands, 2009.

- (c) by altering, confirming or clarifying certain common law construction principles which might apply to the interpretation of the contract, and seeks to achieve a level of certainty among the parties about the rules which a court should apply when interpreting the contract. For example, the inclusion of the phrase, "*no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [deed/agreement] or any part of it*", excludes the contra proferentem rule (ie that in the event of ambiguity, a contract, or clause in a contract, should be construed against the draftsman or interests of the party who provided the wording).

2.2 How effective is it?

Parties may include their own interpretation rules in a contract which courts will give effect to when construing the contract.⁴ Contracting out of the common law rules of interpretation is also permissible provided clear words are used.⁵

A limitation on the effectiveness of the sample interpretation clause is that it is expressed only to apply "*unless the contrary intention appears*". Accordingly, if the contract is drafted in such a way that it appears that the parties intended a provision to be interpreted in a way that is inconsistent with the interpretation clause, then that interpretation will prevail.⁶ You should consider this limitation when drafting a contract.

2.3 Should I always include it, and what happens if I don't?

If this clause or parts of it are not included, the parties may not obtain the benefits described above. In practice, nearly all sample deeds or agreements will include an interpretation clause in substantially the same form as the boilerplate clause. If not, a court will simply interpret the contract without the benefits described above.

3 Drafting and reviewing the clause

Drafting notes for each particular sub-clause of the sample interpretation clause are set out below.

- (a) headings are for convenience only and do not affect the interpretation of this [**deed/agreement**]

Sub-clause (a) provides that headings are not to be used for the interpretation of the agreement.⁷ Headings are often used in contracts to summarise provisions and to assist with finding clauses and navigation generally (such as by using a table of contents).⁸ This sub-clause negates the common law principle of construction that catchwords or identifiers inserted for convenience (including headings) may be given due weight, although cannot prevail over the express words of a clause or create ambiguity where none otherwise exists.⁹

The effect of this sub-clause is to give *no weight* to headings when interpreting the contract.

⁴ An objective approach is adopted in determining the rights and liabilities of parties to a contract. The meaning of the terms of a commercial contract is to be determined by what a reasonable businessperson would have understood those terms to mean: see the authorities set out in *Electricity Generation Corporation v Woodside Energy Ltd* [2014] HCA 7 at [35]. Most of the cases noted in this paper are examples of a court applying this process by giving effect to an interpretation clause.

⁵ *Cody v J H Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629 per Starke J citing *Thorman v Dowgate Steamship Company Ltd* [1910] 1 KB 410; cf contracting out of the provisions of a *statute* which is generally not effective, even in the absence of an express statutory prohibition on such an agreement (*Caltex Oil (Australia) Pty Ltd v Best* (1990) 170 CLR 516 at 521-522). Courts will give effect to the principle that it is not permissible to do indirectly what it prohibited directly, and will not permit the use of contractual devices to avoid statutory obligations (*Bank of NSW v Commonwealth* (1948) 76 CLR 1 at 349-350).

⁶ For examples of such a case see *MSW Property Pty Ltd v Law Mortgages Queensland Pty Ltd* [2003] QCA 487 and *Unsworth v Debsan Pty Ltd* [2014] WASC 46.

⁷ For an example of such a provision being applied to exclude a heading being taken into account on the question of interpretation, see *Orleans Investments Pty Ltd & Anor v MindShare Communications Ltd* [2009] NSWCA 40 at [67]-[68].

⁸ Fontaine M and De Ly F, *Drafting International Contracts, an analysis of contract clauses*, Koninklijke Brill, the Netherlands, 2009 at p 151.

⁹ See eg *Cott UK Ltd v F E Barber Ltd* [1997] 3 All ER 540 at 545 (g to j). That case has not been cited on this point in Australia. However, the principle is sound, and cases make it clear that headings will be taken into account unless the parties have provided otherwise: see eg *Australian Olive Holdings Pty Ltd v Huntley Management Limited* [2010] FCAFC 76 at [62](h) and *Central Petroleum Ltd v Century Energy Services Pty Ltd* [2011] WASC 211 at [41]. Similarly, *Acts Interpretation Act 1901* (Cth), s13(1) provides headings will be taken into account as a matter of construction.

If your contract relies on headings to clarify certain parts of the contract, you should remove this sub-clause from the interpretation clause or, alternatively, amend the contract so that it no longer relies on headings for clarification or interpretation.

- (b) the singular includes the plural and vice versa
- (c) words that are gender neutral or gender specific include each gender

A provision that the singular includes the plural and vice versa is commonly included in interpretation clauses (as is a provision to support gender neutral drafting).¹⁰ The purpose of each sub-clause is to avoid clumsy drafting (eg expressions such as "*his or her*") and to avoid restrictive interpretations being adopted because an expression in the contract is confined to a singular, plural or particular gender when this is not intended.

- (d) where a word or phrase is given a particular meaning, other parts of speech and grammatical forms of that word or phrase have corresponding meanings;

This sub-clause mirrors a provision in the various *Interpretation Acts* relating to statutes.¹¹ The object of this sub-section is to ensure consistency between defined terms and other parts of general speech or grammatical forms of the defined word or phrase so that a court does not attribute different meanings to those derivatives.¹² This sub-clause also removes the need to specifically define all other "*parts of speech or grammatical forms*" of a defined word or phrase in the contract.

When drafting a contract, consideration should be given to any words that are not themselves defined, but which form part of general speech or another grammatical form of a defined word or phrase. If not a court is likely to interpret those non-defined words in-line with the definition of the associated defined word in the contract (particularly if you incorporate the phrase in sub-clause (d) above).¹³

- (e) the words "such as", "including", "particularly" and similar expressions are not used as, nor are intended to be interpreted as, words of limitation

This sub-clause prevents the use of the *noscitur a sociis* principle of interpretation (ie where a phrase in the contract employs a number of concepts that may to some extent overlap). The *noscitur a sociis* principle provides that the meaning of a word can be gathered from its associated words, meaning that a general word may be confined to mean something analogous to more specific words which are linked with it.¹⁴ For example, by using one of the connecting words stated in this sub-clause ("such as", "including", "particularly" or similar expressions).¹⁵

There is ongoing debate about whether this rule of construction has much or any continued applicability given modern principles of interpretation. Given parties can contract out of this rule,¹⁶ the usual course in commercial contracts is to expressly exclude it by using a clause such as this one. This avoids any doubt about

10 *Phoenix Commercial Enterprises Pty Ltd v City of Canada Bay Council* [2010] NSWCA 64 at [210].

11 see eg s 18A *Interpretation Act 1901* (Cth).

12 cf *Redland Shire Council v Stradbroke Rutile Pty Ltd* [1974] HCA 4 per Menzies J albeit discussing a different section of another Act; see *Jankovic v Minister of Immigration, Local Government and Ethnic Affairs* [1994] FCA 1316 at [21].

13 for an example of such a provision being used as an aid to interpretation see *Healthscope Limited v Symbion Health Limited* [2008] NSWSC 893 at [77] and [103], and on appeal *Healthscope Limited v Symbion Health Limited* [2009] NSWCA 191 at [38]-[60].

14 *Lend Lease Real Estate Investments Ltd & v GPT RE Ltd* [2006] NSWCA 207 at [30].

15 cf the *ejusdem generis* rule of interpretation, which is a sub-rule of *noscitur a sociis*. The *ejusdem generis* rule states that where there are general words following particular or specific words the general words should be confined to things of the same kind as those specified: see *Cody v JH Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629. Here, the sub-clause is directed to phrases where the general words come first.

16 *Cody v JH Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629 per Starke J.

the rule's operation and also avoids the need to repeat concepts or provide clarification using the phrase "including, but not limited to".¹⁷

- (f) a reference to:
- (i) a person includes a natural person, partnership, joint venture, government agency, association, corporation, trust or other body corporate;
 - (ii) a party includes its agents, successors and permitted assigns;
 - (iii) a document includes all amendments or supplements to that document;
 - (iv) a clause, term, party, schedule or attachment is a reference to a clause or term of, or party, schedule or attachment to this [**deed/agreement**];
 - (v) this [**deed/agreement**] includes all schedules and attachments to it;
 - (vi) a law includes a constitutional provision, treaty, decree, convention, statute, regulation, ordinance, by-law, judgment, rule of common law or equity [*or a rule of an applicable Financial Market*] and is a reference to that law as amended, consolidated or replaced;
 - (vii) a statute includes any regulation, ordinance, by-law or other subordinate legislation made under it;
 - (viii) an agreement other than this [**deed/agreement**] includes an undertaking, or legally enforceable arrangement or understanding whether or not in writing; and
 - (ix) a monetary amount is in Australian dollars and all amounts payable under or in connection with this [**deed/agreement**] are payable in Australian dollars;

Sub-clause (f) gives defined and, in many cases, extended meanings to matters referred to in the contract. For example sub-clause (f) (ii) provides that a reference to a party includes a party's "successors and permitted assigns".¹⁸ As with many commercial agreements, the generic concept of a "person" is used as a convenient means of referring to any legal entity, natural or otherwise.¹⁹ However, the following matters should also be considered:

- sub-clause (f) (vi) extends the definition of a law to that law as "amended, consolidated or replaced". While such a clause is common, changes to the law after a deed or agreement are entered into may impact the parties rights and obligations and, therefore, this should be considered before this sub-clause is included
- the default currency in sub-clause (f) (ix) is Australian dollars. You should alter this where the transaction requires it (ie if you are dealing with a different currency).

- (g) an agreement on the part of two or more persons binds them [jointly and not severally/severally and not jointly/jointly and each of them severally]

Sub-clause (g) requires the drafter to select whether agreements on the part of two or more persons will bind them jointly (and not severally), severally (and not jointly), or jointly and severally. The distinction between these concepts has been described by Moynihan J as follows:

*A joint promise by two or more persons creates a single obligation incumbent upon both or all. A joint and several promise creates both a joint obligation on all and a number of several obligations respectively incumbent on each of the parties. The several obligations are not cumulative so that performance by one is performance by all.*²⁰

¹⁷ It may be that the words do not suggest a limitation in any event (for example in *Pepper v. A-G (Qld) [No 2] [2008] QCA 207* at [28] it was held that the phrase "in particular" was not an expression of limitation) but the sub-clause removes any doubt.

¹⁸ see *Rushton (Qld) Pty Ltd & Ors v Rushton (NSW) Pty Ltd & Ors* [2003] QSC 8 for an example of such a successors and assigns provision being applied.

¹⁹ *Australian Encyclopaedia of Forms & Precedents*, Commentary to Boilerplate Clauses at [63-20].

²⁰ *Re Broons* [1989] 2 Qd R 315 at 316; cited with approval by Reeves J in *Karingbal Traditional People Aboriginal Corporation v Santos GLNG Pty Ltd* [2011] FCA 1456.

As stated above, solely several obligations are cumulative. They arise where two or more persons make separate promises to another person (whether under the same contract or different contracts). That is, payment or the fulfilment of the first promisor's obligations will not discharge payment or the fulfilment of the second promisor's obligations.

- (h) no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [**deed/agreement**] or any part of it [**]; and/.]**

This sub-clause is intended to negate at least one perceived view of the *contra proferentem* rule of construction. The Latin maxim "*verba cartarum fortius accipiuntur contra proferentem*" (*contra proferentem*) translates as "*the words of documents are to be taken strongly against the one who puts [them] forward*".²¹

There are inconsistent lines of authority on exactly what construing a document *contra proferentem* means.²² Many cases state the rule as requiring an ambiguous term to be interpreted against the party who drafted it.²³ However, another view is that a promise should be construed contrary to the interests of the person who makes it, irrespective of who the drafter may have been.²⁴ Sub-clause (h) operates to prevent the document from being construed against the party who drafted it or part of it.

Courts generally regard the *contra proferentem* rule as a rule of last resort; that is, it should be used only if an ambiguity remains after the application of all other rules of contractual interpretation.²⁵ Clauses like sub-clause (h) are frequently included in commercial contracts because it is desirable to exclude the possibility of a provision of a contract being determined against the party who drafted it (ie particularly in circumstances where both parties are legally represented and where both parties have had the opportunity to review the contract and suggest amendments in negotiating its final form).

- (i) when the day on which something must be done is not a Business Day, that thing must be done on the [**following/preceding**] Business Day;
- (j) in determining the time of day where relevant to this [**deed/agreement**], the relevant time of day is:
- (i) for the purposes of giving or receiving notices, the time of day where a party receiving a notice is located
 - (ii) for any other purpose under this [**deed/agreement**], the time of day in the place where the party required to perform an obligation is located; [**and]**
- (k) a day is the period of time commencing at midnight and ending immediately before the next midnight is to occur; [**and]**
- (l) if a period of time is calculated from a particular day, act or event (such as the giving of a notice), it is to be calculated exclusive of that day, or the day of that act or event [**]; and/.]**

Each of these sub-clauses clarify exactly when a particular day specified in the contract should fall to avoid uncertainty. Sub-clause (i) provides that if the day an act must be done is not a Business Day (as defined in the Dictionary), you must choose whether it is done on either the following or preceding Business Day. The appropriate selection may depend on the transaction (eg standard practice for banking transactions is for obligations to fall due on the following Business Day unless the following Business Day falls into the next calendar month, in which case the obligation falls due on the preceding Business Day).

²¹ *North v Marina* [2003] NSWSC 64 per Campbell J at [58].

²² *Rava v Logan Wines & Anor* [2007] NSWCA 62 at [51].

²³ *North v Marina* [2003] NSWSC 64 at [71]; his Honour cites the cases to which he refers at [60] and [61].

²⁴ That view was embraced in *Commonwealth of Australia v Aurora Energy Pty Ltd* [2006] FCAFC 148 per North and Emmett JJ.

²⁵ See *Rava v Logan Wines & Anor* [2007] NSWCA 62 at [55], *MLC Limited v O'Neill* [2001] NSWCA 161 at [20] (Mason P, with whom Handley and Hodgson JJA agreed); *Ingham v ACN 000 333 844 Ltd (In Liq)* (formerly known as *Australian Casualty & Life Ltd*) & Ors [2006] NSWCA 63 at [6] (Giles JA with whom Handley and Santow JJA agreed) and further authorities cited in *North v Marina* [2003] NSWSC 64 at [77]. In *McCann v Switzerland Insurance* [2000] HCA 65 Kirby J said (at [74]) this was "because it is widely accepted that it is preferable that judges should struggle with the words actually used as applied to the unique circumstances of the case and reach their own conclusions by reference to the logic of the matter, rather than by using mechanical formulae."

Sub-clause (j) provides rules that deal with the situation where parties are in different time zones. This avoids a court having to construe the contract to determine which time zone is the one intended by the parties, if necessary, applying common law principles to compute the time.²⁶ Sub-clauses (j)(i) and (j)(ii) deal with giving or receiving notices in this context, and should be checked against any Notices clause in the contract to ensure consistency.

[Optional]

(m) If there is any conflict between the body of this [deed/agreement] and its schedules [and/or] attachments [or] [**specify any related documents eg Statement of Work, special conditions, specifications etc**], [the terms of the main body of this [deed/agreement] will prevail/the schedules or attachments will prevail in the following order: [**specify order**]].

This optional ranking clause allows the parties to determine the order in which the terms of particular documents will prevail in the event of a conflict with the contract. It can be used where there is a conflict between the body of the contract and its schedules (etc), or where the contract conflicts with another specified and/or related document.

²⁶ See *White Cliffs Opal Mines Ltd v Miller* (1904) 4 SR (NSW) 150 for an example of the problems that can arise in the absence of an express clause about time zones.

34 Interpretation boilerplate clause

Need to know

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Sample clause

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- (d) where a word or phrase is given a particular meaning, other parts of speech and grammatical forms of that word or phrase have corresponding meanings
- (e) the words "such as", "including", "particularly" and similar expressions are not used as, nor are intended to be interpreted as, words of limitation
- (f) a reference to:
 - (i) a person includes a natural person, partnership, joint venture, government agency, association, corporation, trust or other body corporate
 - (ii) a party includes its agents, successors and permitted assigns
 - (iii) a document includes all amendments or supplements to that document
 - (iv) a clause, term, party, schedule or attachment is a reference to a clause or term of, or party, schedule or attachment to this [**deed/agreement**]
 - (v) this [**deed/agreement**] includes all schedules and attachments to it
 - (vi) a law includes a constitutional provision, treaty, decree, convention, statute, regulation, ordinance, by-law, judgment, rule of common law or equity [*or a rule of an applicable Financial Market*] and is a reference to that law as amended, consolidated or replaced
 - (vii) a statute includes any regulation, ordinance, by-law or other subordinate legislation made under it
 - (viii) an agreement other than this [**deed/agreement**] includes an undertaking, or legally enforceable arrangement or understanding whether or not in writing
 - (ix) a monetary amount is in Australian dollars and all amounts payable under or in connection with this [**deed/agreement**] are payable in Australian dollars
- (g) an agreement on the part of two or more persons binds them [**jointly and not severally/severally and not jointly/jointly and each of them severally**]
- (h) no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [**deed/agreement**] or any part of it
- (i) when the day on which something must be done is not a Business Day, that thing must be done on the [**following/preceding**] Business Day
- (j) in determining the time of day where relevant to this [**deed/agreement**], the relevant time of day is:
 - (i) for the purposes of giving or receiving notices, the time of day where a party receiving a notice is located
 - (ii) for any other purpose under this [**deed/agreement**], the time of day in the place where the party required to perform an obligation is located

- (k) a day is the period of time commencing at midnight and ending immediately before the next midnight is to occur [**and**]
- (i) if a period of time is calculated from a particular day, act or event (such as the giving of a notice), it is to be calculated exclusive of that day, or the day of that act or event [**and**/]

[Optional]

- (m) If there is any conflict between the body of this [*deed/agreement*] and its schedules [*and/or*] attachments [*or*] [**specify any related documents eg Statement of Work, special conditions, specifications etc**], [*the terms of the main body of this [deed/agreement] will prevail/the schedules or attachments will prevail in the following order: [specify order]*]

1 What is this clause and why is it used?

Most commercial contracts include an interpretation clause that sets out the rules of construction that the parties intend to apply to the contract. The clause can often be the place to look for significant concepts in a legal document.¹ While there is temptation to simply cut and paste, the provisions of this clause are often material to the contract. Hidden issues may arise if this clause is not properly reviewed.

The purpose of this clause is generally:

- to provide certainty of understanding when interpreting the contract, to avoid a court interpreting the contract in a way that is inconsistent with the parties' intentions
- to avoid repetition of information when drafting a contract, making it easier to read.²

Interpretation clauses in commercial contracts tend to be reasonably standardised, although important choices need to be made within parts of the clause in each particular case (these are discussed in section 3 below). Each firm will have their own version but the content, wording and topics addressed are often similar. Interpretation clauses are not often the subject of negotiation and are ordinarily less tailor-made than other clauses that relate to the core of the contract.³

The sample interpretation clause is a standard "boilerplate" clause; that is, it is a clause of the type that will ordinarily be inserted into most commercial contracts with minimal alteration other than selecting appropriate options where the clause provides for this. The rules of interpretation contained in the sample clause are fairly typical of those in most commercial contracts. However, the interpretation clause should be read together with the draft contract before finalisation to ensure that the contract has been drafted in accordance with the rules contained in that clause, and to ensure that its application does not cause any part of the contract to have an ambiguous or unintended meaning. Areas of particular consideration are set out in section 3 below.

2 Using the sample interpretation clause

2.1 What does the sample interpretation clause do?

In summary, the sample interpretation clause operates by:

- (a) expressly stating how the parties intend particular grammatical conventions (adopted in the document) should be interpreted. For example, an interpretation provision which states that "*the singular includes the plural and vice versa*" avoids the need to draft the document by including references to both singular and plural versions of each noun;
- (b) by setting out the breadth with which particular concepts are intended to be treated by the parties. For example, the inclusion of the phrase "*a document includes all amendments or supplements to that*

¹ *Springrange Pty Ltd v Australian Capital Territory & ACT Planning and Land Authority* [2010] ACTCA 17 at [29].

² cf *AIB Group (UK) Ltd v Martin* [2002] 1 All ER 353 at [8] per Lord Millett.

³ Fontaine M and De Ly F, *Drafting International Contracts, an analysis of contract clauses*, Koninklijke Brill, the Netherlands, 2009.

document" obviates the requirement to state this repeatedly throughout the document (or to repeat such a rider in the definitions section for every defined document); and

- (c) by altering, confirming or clarifying certain common law construction principles which might apply to the interpretation of the contract, and seeks to achieve a level of certainty among the parties about the rules which a court should apply when interpreting the contract. For example, the inclusion of the phrase, "*no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [deed/agreement] or any part of it*", excludes the contra proferentem rule (ie that in the event of ambiguity, a contract, or clause in a contract, should be construed against the draftsman or interests of the party who provided the wording).

2.2 How effective is it?

Parties may include their own interpretation rules in a contract which courts will give effect to when construing the contract.⁴ Contracting out of the common law rules of interpretation is also permissible provided clear words are used.⁵

A limitation on the effectiveness of the sample interpretation clause is that it is expressed only to apply "*unless the contrary intention appears*". Accordingly, if the contract is drafted in such a way that it appears that the parties intended a provision to be interpreted in a way that is inconsistent with the interpretation clause, then that interpretation will prevail.⁶ You should consider this limitation when drafting a contract.

2.3 Should I always include it, and what happens if I don't?

If this clause or parts of it are not included, the parties may not obtain the benefits described above. In practice, nearly all sample deeds or agreements will include an interpretation clause in substantially the same form as the boilerplate clause. If not, a court will simply interpret the contract without the benefits described above.

3 Drafting and reviewing the clause

Drafting notes for each particular sub-clause of the sample interpretation clause are set out below.

- (a) headings are for convenience only and do not affect the interpretation of this [*deed/agreement*]

Sub-clause (a) provides that headings are not to be used for the interpretation of the agreement.⁷ Headings are often used in contracts to summarise provisions and to assist with finding clauses and navigation generally (such as by using a table of contents).⁸ This sub-clause negates the common law principle of construction that catchwords or identifiers inserted for convenience (including headings) may be given due weight, although cannot prevail over the express words of a clause or create ambiguity where none otherwise exists.⁹

The effect of this sub-clause is to give *no weight* to headings when interpreting the contract.

⁴ An objective approach is adopted in determining the rights and liabilities of parties to a contract. The meaning of the terms of a commercial contract is to be determined by what a reasonable businessperson would have understood those terms to mean: see the authorities set out in *Electricity Generation Corporation v Woodside Energy Ltd* [2014] HCA 7 at [35]. Most of the cases noted in this paper are examples of a court applying this process by giving effect to an interpretation clause.

⁵ *Cody v J H Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629 per Starke J citing *Thorman v Dowgate Steamship Company Ltd* [1910] 1 KB 410; cf contracting out of the provisions of a *statute* which is generally not effective, even in the absence of an express statutory prohibition on such an agreement (*Caltex Oil (Australia) Pty Ltd v Best* (1990) 170 CLR 516 at 521-522). Courts will give effect to the principle that it is not permissible to do indirectly what it prohibited directly, and will not permit the use of contractual devices to avoid statutory obligations (*Bank of NSW v Commonwealth* (1948) 76 CLR 1 at 349-350).

⁶ For examples of such a case see *MSW Property Pty Ltd v Law Mortgages Queensland Pty Ltd* [2003] QCA 487 and *Unsworth v Debsan Pty Ltd* [2014] WASC 46.

⁷ For an example of such a provision being applied to exclude a heading being taken into account on the question of interpretation, see *Orleans Investments Pty Ltd & Anor v MindShare Communications Ltd* [2009] NSWCA 40 at [67]-[68].

⁸ Fontaine M and De Ly F, *Drafting International Contracts, an analysis of contract clauses*, Koninklijke Brill, the Netherlands, 2009 at p 151.

⁹ See eg *Cott UK Ltd v F E Barber Ltd* [1997] 3 All ER 540 at 545 (g to j). That case has not been cited on this point in Australia. However, the principle is sound, and cases make it clear that headings will be taken into account unless the parties have provided otherwise: see eg *Australian Olive Holdings Pty Ltd v Huntley Management Limited* [2010] FCAFC 76 at [62](h) and *Central Petroleum Ltd v Century Energy Services Pty Ltd* [2011] WASC 211 at [41]. Similarly, *Acts Interpretation Act 1901* (Cth), s13(1) provides headings will be taken into account as a matter of construction.

If your contract relies on headings to clarify certain parts of the contract, you should remove this sub-clause from the interpretation clause or, alternatively, amend the contract so that it no longer relies on headings for clarification or interpretation.

- (b) the singular includes the plural and vice versa
- (c) words that are gender neutral or gender specific include each gender

A provision that the singular includes the plural and vice versa is commonly included in interpretation clauses (as is a provision to support gender neutral drafting).¹⁰ The purpose of each sub-clause is to avoid clumsy drafting (eg expressions such as "*his or her*") and to avoid restrictive interpretations being adopted because an expression in the contract is confined to a singular, plural or particular gender when this is not intended.

- (d) where a word or phrase is given a particular meaning, other parts of speech and grammatical forms of that word or phrase have corresponding meanings;

This sub-clause mirrors a provision in the various *Interpretation Acts* relating to statutes.¹¹ The object of this sub-section is to ensure consistency between defined terms and other parts of general speech or grammatical forms of the defined word or phrase so that a court does not attribute different meanings to those derivatives.¹² This sub-clause also removes the need to specifically define all other "*parts of speech or grammatical forms*" of a defined word or phrase in the contract.

When drafting a contract, consideration should be given to any words that are not themselves defined, but which form part of general speech or another grammatical form of a defined word or phrase. If not a court is likely to interpret those non-defined words in-line with the definition of the associated defined word in the contract (particularly if you incorporate the phrase in sub-clause (d) above).¹³

- (e) the words "such as", "including", "particularly" and similar expressions are not used as, nor are intended to be interpreted as, words of limitation

This sub-clause prevents the use of the *noscitur a sociis* principle of interpretation (ie where a phrase in the contract employs a number of concepts that may to some extent overlap). The *noscitur a sociis* principle provides that the meaning of a word can be gathered from its associated words, meaning that a general word may be confined to mean something analogous to more specific words which are linked with it.¹⁴ For example, by using one of the connecting words stated in this sub-clause ("such as"; "including", "particularly" or similar expressions).¹⁵

There is ongoing debate about whether this rule of construction has much or any continued applicability given modern principles of interpretation. Given parties can contract out of this rule,¹⁶ the usual course in commercial contracts is to expressly exclude it by using a clause such as this one. This avoids any doubt about the rule's operation and also avoids the need to repeat concepts or provide clarification using the phrase "*including, but not limited to*".¹⁷

¹⁰ *Phoenix Commercial Enterprises Pty Ltd v City of Canada Bay Council* [2010] NSWCA 64 at [210].

¹¹ see eg s 18A *Interpretation Act 1901* (Cth).

¹² cf *Redland Shire Council v Stradbroke Rutile Pty Ltd* [1974] HCA 4 per Menzies J albeit discussing a different section of another Act; see *Jankovic v Minister of Immigration, Local Government and Ethnic Affairs* [1994] FCA 1316 at [21].

¹³ for an example of such a provision being used as an aid to interpretation see *Healthscope Limited v Symbion Health Limited* [2008] NSWSC 893 at [77] and [103], and on appeal *Healthscope Limited v Symbion Health Limited* [2009] NSWCA 191 at [38]-[60].

¹⁴ *Lend Lease Real Estate Investments Ltd & v GPT RE Ltd* [2006] NSWCA 207 at [30].

¹⁵ cf the *eiusdem generis* rule of interpretation, which is a sub-rule of *noscitur a sociis*. The *eiusdem generis* rule states that where there are general words following particular or specific words the general words should be confined to things of the same kind as those specified: see *Cody v J H Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629. Here, the sub-clause is directed to phrases where the general words come first.

¹⁶ *Cody v J H Nelson Pty Ltd* [1947] HCA 17; (1947) 74 CLR 629 per Starke J.

¹⁷ It may be that the words do not suggest a limitation in any event (for example in *Pepper v. A-G (Qld)* [No 2] [2008] QCA 207 at [28] it was held that the phrase "in particular" was not an expression of limitation) but the sub-clause removes any doubt.

- (f) a reference to:
- (i) a person includes a natural person, partnership, joint venture, government agency, association, corporation, trust or other body corporate;
 - (ii) a party includes its agents, successors and permitted assigns;
 - (iii) a document includes all amendments or supplements to that document;
 - (iv) a clause, term, party, schedule or attachment is a reference to a clause or term of, or party, schedule or attachment to this [**deed/agreement**];
 - (v) this [**deed/agreement**] includes all schedules and attachments to it;
 - (vi) a law includes a constitutional provision, treaty, decree, convention, statute, regulation, ordinance, by-law, judgment, rule of common law or equity [*or a rule of an applicable Financial Market*] and is a reference to that law as amended, consolidated or replaced;
 - (vii) a statute includes any regulation, ordinance, by-law or other subordinate legislation made under it;
 - (viii) an agreement other than this [**deed/agreement**] includes an undertaking, or legally enforceable arrangement or understanding whether or not in writing; and
 - (ix) a monetary amount is in Australian dollars and all amounts payable under or in connection with this [**deed/agreement**] are payable in Australian dollars;

Sub-clause (f) gives defined and, in many cases, extended meanings to matters referred to in the contract. For example sub-clause (f)(ii) provides that a reference to a party includes a party's "*successors and permitted assigns*".¹⁸ As with many commercial agreements, the generic concept of a "*person*" is used as a convenient means of referring to any legal entity, natural or otherwise.¹⁹ However, the following matters should also be considered:

- sub-clause (f)(vi) extends the definition of a law to that law as "*amended, consolidated or replaced*". While such a clause is common, changes to the law after a deed or agreement are entered into may impact the parties rights and obligations and, therefore, this should be considered before this sub-clause is included
- the default currency in sub-clause (f)(ix) is Australian dollars. You should alter this where the transaction requires it (ie if you are dealing with a different currency).

- (g) an agreement on the part of two or more persons binds them [jointly and not severally/severally and not jointly/jointly and each of them severally]

Sub-clause (g) requires the drafter to select whether agreements on the part of two or more persons will bind them jointly (and not severally), severally (and not jointly), or jointly and severally. The distinction between these concepts has been described by Moynihan J as follows:

*A joint promise by two or more persons creates a single obligation incumbent upon both or all. A joint and several promise creates both a joint obligation on all and a number of several obligations respectively incumbent on each of the parties. The several obligations are not cumulative so that performance by one is performance by all.*²⁰

As stated above, solely several obligations are cumulative. They arise where two or more persons make separate promises to another person (whether under the same contract or different contracts). That is, payment or the fulfilment of the first promisor's obligations will not discharge payment or the fulfilment of the second promisor's obligations.

18 see *Rushton (Qld) Pty Ltd & Ors v Rushton (NSW) Pty Ltd & Ors* [2003] QSC 8 for an example of such a successors and assigns provision being applied.

19 *Australian Encyclopaedia of Forms & Precedents*, Commentary to Boilerplate Clauses at [63-20].

20 *Re Broons* [1989] 2 Qd R 315 at 316; cited with approval by Reeves J in *Karingbal Traditional People Aboriginal Corporation v Santos GLNG Pty Ltd* [2011] FCA 1456.

- (h) no rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of this [*deed/agreement*] or any part of it [**;** *and/.*]

This sub-clause is intended to negate at least one perceived view of the contra proferentem rule of construction. The Latin maxim “*verba cartarum fortius accipiuntur contra proferentem*” (contra proferentem) translates as “the words of documents are to be taken strongly against the one who puts [them] forward”.²¹

There are inconsistent lines of authority on exactly what construing a document *contra proferentem* means.²² Many cases state the rule as requiring an ambiguous term to be interpreted against the party who drafted it.²³ However, another view is that a promise should be construed contrary to the interests of the person who makes it, irrespective of who the drafter may have been.²⁴ Sub-clause (h) operates to prevent the document from being construed against the party who drafted it or part of it.

Courts generally regard the *contra proferentem* rule as a rule of last resort; that is, it should be used only if an ambiguity remains after the application of all other rules of contractual interpretation.²⁵ Clauses like sub-clause (h) are frequently included in commercial contracts because it is desirable to exclude the possibility of a provision of a contract being determined against the party who drafted it (ie particularly in circumstances where both parties are legally represented and where both parties have had the opportunity to review the contract and suggest amendments in negotiating its final form).

- (i) when the day on which something must be done is not a Business Day, that thing must be done on the [**following/preceding**] Business Day;
- (j) in determining the time of day where relevant to this [*deed/agreement*], the relevant time of day is:
- (i) for the purposes of giving or receiving notices, the time of day where a party receiving a notice is located
 - (ii) for any other purpose under this [*deed/agreement*], the time of day in the place where the party required to perform an obligation is located; [**and**]
- (k) a day is the period of time commencing at midnight and ending immediately before the next midnight is to occur; [**and**]
- (l) if a period of time is calculated from a particular day, act or event (such as the giving of a notice), it is to be calculated exclusive of that day, or the day of that act or event [**;** *and/.*]

Each of these sub-clauses clarify exactly when a particular day specified in the contract should fall to avoid uncertainty. Sub-clause (i) provides that if the day an act must be done is not a Business Day (as defined in the Dictionary), you must choose whether it is done on either the following or preceding Business Day. The appropriate selection may depend on the transaction (eg standard practice for banking transactions is for obligations to fall due on the following Business Day unless the following Business Day falls into the next calendar month, in which case the obligation falls due on the preceding Business Day).

Sub-clause (j) provides rules that deal with the situation where parties are in different time zones. This avoids a court having to construe the contract to determine which time zone is the one intended by the parties, if necessary, applying common law principles to compute the time.²⁶ Sub-clauses (j)(i) and (j)(ii) deal with giving

²¹ *North v Marina* [2003] NSWSC 64 per Campbell J at [58].

²² *Rava v Logan Wines & Anor* [2007] NSWCA 62 at [51].

²³ *North v Marina* [2003] NSWSC 64 at [71]; his Honour cites the cases to which he refers at [60] and [61].

²⁴ That view was embraced in *Commonwealth of Australia v Aurora Energy Pty Ltd* [2006] FCAFC 148 per North and Emmett JJ.

²⁵ See *Rava v Logan Wines & Anor* [2007] NSWCA 62 at [55], *MLC Limited v O'Neill* [2001] NSWCA 161 at [20] (Mason P, with whom Handley and Hodgson JJA agreed); *Ingham v ACN 000 333 844 Ltd (In Liq) (formerly known as Australian Casualty & Life Ltd) & Ors* [2006] NSWCA 63 at [6] (Giles JA with whom Handley and Santow JJA agreed) and further authorities cited in *North v Marina* [2003] NSWSC 64 at [77]. In *McCann v Switzerland Insurance* [2000] HCA 65 Kirby J said (at [74]) this was “because it is widely accepted that it is preferable that judges should struggle with the words actually used as applied to the unique circumstances of the case and reach their own conclusions by reference to the logic of the matter, rather than by using mechanical formulae.”

²⁶ See *White Cliffs Opal Mines Ltd v Miller* (1904) 4 SR (NSW) 150 for an example of the problems that can arise in the absence of an express clause about time zones.

or receiving notices in this context, and should be checked against any Notices clause in the contract to ensure consistency.

[Optional]

(m) If there is any conflict between the body of this [deed/agreement] and its schedules [and/or] attachments [or] [**specify any related documents eg Statement of Work, special conditions, specifications etc**], [the terms of the main body of this [deed/agreement] will prevail/the schedules or attachments will prevail in the following order: [**specify order**]].

This optional ranking clause allows the parties to determine the order in which the terms of particular documents will prevail in the event of a conflict with the contract. It can be used where there is a conflict between the body of the contract and its schedules (etc), or where the contract conflicts with another specified and/or related document.

35 *Legal risk in the tender process*

Introduction

This Update is intended to highlight some of the potential risks associated with the drafting of a request for tender (RFT) and the conduct of a tender process and to provide suggestions as to how those risks may be minimised.

Contractual analysis of the tender process

When inviting tenders, a party may inadvertently create legal obligations. That party may rely too heavily on the traditional contractual analysis of the tendering process, unaware that obligations to tenderers have been created. The traditional contractual analysis of the tendering process is that:

- the issue of a RFT by the party inviting tenders is no more than an invitation to treat, not an offer
- the submission of a tender in response to the RFT by a tenderer amounts to an offer by that tenderer
- no binding contract arises between the parties until a tender is accepted by the party inviting tenders.

If this traditional contractual analysis was applied strictly to the period up until a contract is awarded to a tenderer (the “pre-award period”), there would be no binding legal relationship between a party inviting tenders and a tendering party during the pre-award period. However, in certain circumstances, courts have been willing to impose binding legal relationships between the party inviting tenders and a tenderer during the pre-award period.

A binding legal relationship may arise during the pre-award period as a result of:

- process contracts: A contract arising in relation to the tender process before acceptance of a tender by the party inviting tenders
- negligence: There may be circumstances in which the party inviting tenders owes a duty of care to a tenderer
- estoppel: Which may arise from the conduct of, and/or representations made by, the party inviting tenders during the pre-award period
- statute: For example, in Australia remedies under the *Competition and Consumer Act 2010* may be available in relation to conduct of the party inviting tenders during the pre-award period. Under the Act, a person participating in trade or commerce must not engage in conduct that is, or is likely to be, misleading or deceptive.¹ If a party inviting tenders does not honour its representation that tender evaluation criteria will be complied with, it could be in breach of this requirement.

Process contracts

The courts of Australia, New Zealand, Canada and England have been increasingly willing to find that a process contract exists, binding the party inviting tenders to conduct the tender process during the pre-award period in a particular manner.

¹ *Competition and Consumer Act 2010* (Cth), sch 2, s18.

If a binding process contract exists, an unsuccessful tenderer may be entitled to any loss resulting from a breach of that process contract by the party inviting tenders. As such, a party issuing a RFT should carefully consider whether it intends that the tender process to form a binding legal relationship.

Risk management strategies

There are various alternative courses of action that a party inviting tenders may adopt, in respect of its tendering process, in order to manage the legal risks discussed above.

Binding process contract

A party inviting tenders may enter into an express contract with each tenderer in respect of the pre-award period. This would provide a level of certainty regarding the legal relationship between the party inviting tenders and each tenderer during the pre-award period by expressly stating the terms and conditions governing their relationship.

However, this approach would be impractical if each process contract had to be negotiated with each tenderer. Also, it could potentially increase the party inviting tenders' exposure to liability in the sense that there would be the potential for such process contracts to be breached in circumstances where a contractual relationship would not have otherwise been found, by a court, to exist.

In Australia, there have been a number of decisions that have determined that a process contract has existed between the Commonwealth and tenderers.

In *Hughes Aircraft Systems International v Airservice Australia*,² a process contract was found to arise out of a public tender for an air traffic system acquisition contract. The court implied terms of fair process and fair dealing.

This analysis was adopted in *Cubic Transportation Systems Inc v NSW*,³ where the court found that a process contract arose out of a tender and read down a clause in the conditions of tender purporting to exclude a process contract. On those facts, no breach of an implied term was found.

In *IPEX ITG Pty Ltd (in liq) v State of Victoria*,⁴ the court found that a process contract arose for a request for tender for system integration services. The court found that tender documents will determine if parties intend to be bound by a process contract. A process contract arose in this case because detailed process criteria timelines, which suggested promissory obligations, were used.

Parties inviting tenders should be aware that detailed processes in requests for tenders are more likely to give rise to process contracts.

Non-binding

Assuming that a party inviting tenders does not want to enter into an express process contract, that party must clearly delineate rights and liabilities in the RFT in order to address the uncertainties associated with the potential finding of a binding contractual relationship. Accordingly, the RFT should expressly exclude any intention for a binding contractual relationship between the parties to be formed during the pre-award period or, at least, limit the extent of any binding legal relationship. Suitable wording to make clear that the party inviting tenders has adequate time to review the tenders, but that no further legal relationship is intended to be formed, would be:

No binding legal relationship will exist between any tenderer and the Principal until the successful tenderer and the Principal execute the Contract...

² (1997) 146 ALR 1.

³ [2002] NSWSC 656

⁴ [2010] VSC 480.

Flexibility for party inviting tenders – What a RFT should allow for

Whether a party inviting tenders decides to create an expressly binding process contract or not, various waivers and conditions of tender should be included in an RFT, so that they form part of any process contract which the party inviting tenders intends entering or which is otherwise held to have been formed. These conditions primarily relate to:

- the ability of the party inviting tenders to accept non-conforming tenders
- the ability of the party inviting tenders to accept late tenders
- the ability of the party inviting tenders not to accept the lowest priced tender
- the ability of the party inviting tenders to vary the tender process
- any limitation of liability and exclusion of remedies, to the extent possible under law.

Form of tender

It is important that verification and sign-off procedures are implemented for RFTs issued by a party inviting tenders in order to minimise the risks associated with the possibility:

- that the RFT incorporates any misleading or deceptive statements
- of any negligent misstatements being held to have been made.

The party inviting tenders should include a disclaimer in the RFT requiring the tenderer to fully inform themselves of all matters relating to the tendered project. The following may be suitable:

The Tender Documents do not purport to contain all relevant information in relation to the Contractor's activities or the works, and are provided solely on the basis that a Tenderer will be responsible for making its own assessment of the matters referred to in the Tender Documents.

The Principal advises the Tenderer and the Tenderer agrees to verify all relevant representations, statements and information (including those contained or referred to in the Tender Documents or made orally during the course of any discussions with the Principal, its employees or agents). No person has been authorised to make any representation or warranty in connection with the Tender Documents and any such representation or warranty, if given or made, should not be relied on as having been authorised by the Principal.

The Tenderer is responsible for reviewing the Tender Documents (including all addenda) provided by or on behalf of the Principal to ensure that it has a complete copy of all documents.

The Principal and its directors, employees and agents do not make any representation or warranty (express or implied) as to the accuracy or completeness of the information provided to a Tenderer.

The suitability of this disclaimer should be considered in the circumstances of each project. In addition to the disclaimer, the Principal should require the tenderer to warrant in the form of tender that it has not relied on the information provided in the request for tender, and has independently assessed such information. The following may be suitable:

We warrant that we have not relied on information provided, or represented to be provided, by or on behalf of the Principal without independently verifying that information and independently satisfying ourselves of the adequacy, accuracy and correctness of the information.

Training

It may be desirable for the staff who are commonly involved in conducting the tender processes to undertake specific training to highlight the legal risks associated with tender processes. In particular, that training should focus on:

- the need to take care in dealing with tenderers to minimise the risk of liability arising through representations made to tenderers
- documentation requirements, including both the RFT and documentation provided during the pre-award period.

Conclusion

There are many risks associated with the drafting of RFTs and with the tender process. It should not be assumed that, prior to the execution of a project contract, no binding legal relationship exists. Obligations and liabilities can arise from a RFT. However, with careful drafting, the existence or scope of such obligations and potential liabilities can be minimised.

36 Letters of intent

Introduction

Ideally, construction work should not proceed on a project until a full and complete contract has been entered into by the parties. The benefits of entering into a formal contract are significant and include:

- certainty of rights and obligations
- certainty of price
- clear allocation of risk between the parties
- detailed description of the scope of works
- provision for the resolution of disputes between the parties
- provision for the termination of the agreement in clearly defined circumstances.

However, sometimes it is not practicable or commercially desirable to delay the commencement of construction until a contract has been signed. In these circumstances, the parties may wish to proceed on the basis of a letter of intent, sometimes referred to as a letter of agreement or letter of acceptance (LOI). This alert raises and comments on the critical issues for an Owner or Developer to consider if it is contemplating proceeding with construction before executing a contract with its Contractor (or design with its consultant).

The primary disadvantages for an Owner in relation to many LOIs are as follows:

- there is often uncertainty as to whether an LOI creates a binding agreement. As a result, the parties' rights and obligations in relation to carrying out the work and the payment for that work are not certain
- often there is little incentive for the Contractor to complete negotiations and execute a final contract, since the uncertainty referred to above will generally benefit the Contractor.

Nonetheless, a properly worded LOI is generally better than proceeding without any documentation, but it is no substitute for a complete contract.

Binding or non-binding?

The main issue to consider is whether the Owner wants to merely express an intent to enter into a contract or actually enter a contract for the commencement of certain works whilst the contract is finalised and executed.

If the Owner wants to express intent but not be bound by the LOI, then the LOI needs to clearly state that position. Specific legal advice should be sought on the content of any LOI before it is issued to a Contractor or consultant.

Although it is not strictly necessary if the LOI is clearly drafted, the following paragraph can be added to the LOI for certainty:

This non-binding letter of intent is simply a statement of the parties' present intentions with respect to its contents. Each party represents to the other that no reliance will be placed on this letter. This letter does not and is not intended to constitute a binding obligation.

In most circumstances the Owner's purpose with a LOI is to authorise certain works to commence before the contract is signed. In this case, the LOI is in fact a contract and therefore the usual pre-requisites for a contract must be present.

It is crucial that the LOI does accept the Contractor's or consultant's proposal or submission (usually as part of a tender process). This is important regardless of whether the letter is merely expressing intent to enter a contract or is a binding contract itself. By accepting a Contractor's proposal certain qualifications, exclusions or contractual terms that conflict with the Owner's requirements may be incorporated into the deal inadvertently.

Essential terms for a LOI

Payment and scope of the works

The critical portion of the LOI is that dealing with payment, the scope of the Contractor's works and the standard of performance required of the Contractor. In this regard, the LOI should cover the following.

- the basis upon which the Contractor is to be paid for work under the letter (eg cost plus margin, lump sum etc)
- timing and processes for the submission of invoices for payment (it may be appropriate for no payments to be made until the contract is signed – This can be a useful incentive for the Contractor to sign the contract)
- a cap on the amount payable to the Contractor under the letter, which can be extended at the discretion of the Owner (this is to avoid the risk of the Contractor incurring significant costs and then claiming for these costs)
- identify as precisely as possible the scope of the works to be carried out
- provision for the Owner's right to vary the scope of the works
- where appropriate, a completion date for the works
- a statement of the Contractor's standard of care to be adopted in performing the works
- a right of set-off for the Owner.

Termination

It is critical that the letter clearly sets out the circumstances under which the agreement contained in the LOI comes to an end. There are three ways for the agreement to end.

- The parties sign the formal contract.
- The parties do not sign a contract by an agreed date.
- The Owner elects to terminate the agreement.

Following termination under the second and third dot points above, the LOI should prescribe a procedure for the Contractor to stop work, make the site safe, vacate the site and return any equipment or documents provided to it by the Owner.

The LOI should state that the Contractor's entitlement to further payment following termination is limited to any amounts outstanding for work performed up to the date of termination. And in all cases payments under or in connection with the LOI should be subject to the overall cap.

Draft contract

If, at the time of entry into the LOI, a draft detailed contract is in existence, it is suggested that one of the following approaches is adopted.

- Attach the whole of the draft terms, and specify that even though they have not yet been agreed by the parties as forming the final contract, the full terms will be binding with respect to the whole of the works until the LOI is replaced by the final contract.

- Simply identify the relevant terms of the draft contract which have been finalised to date, for example, contractual conditions in relation to insurance, and intellectual property rights.

Intention to enter into a contract

Given the purpose of the LOI is to bridge the time between commencement of construction and execution of a final contract it should state that the intention of the parties is to enter into a formal contract and that the parties will use their best endeavours to execute the contract as soon as reasonably possible.

Whilst such a provision is unlikely to be legally enforceable, it provides an important indication of the parties' commercial intent for a more detailed discussion about agreements to enter into a formal contract. The LOI can be drafted such that it creates incentives for the Contractor to execute the final contract, for example, there should be no limitation of liability for the Contractor (also see the termination regime referred to below).

Retrospective effect of a contract

The LOI should also provide for the retrospective effect of the final contract. For example, by providing that:

If and when the contract is signed, the terms and conditions of the contract will retrospectively govern the work carried out by you pursuant to this letter. Any monies paid to you in respect of works performed pursuant to this letter shall form part of the contract sum under the contract.

It is also essential that a similar provision is included in the final contract.

Failure to enter into a contract

The LOI should provide that, if no contract is entered into, the LOI covers the whole of the works.

Other Terms

There are a number of other terms that should be included in the LOI. Ideally these terms should be the same as those contained in the draft contract attached to the LOI. These should cover the following topics:

- insurance (including a clear statement of what insurance the Contractor is required to effect and maintain)
- approvals (which party is to obtain)
- intellectual property
- sub contracting
- confidentiality
- governing law and language of the agreement
- dispute resolution.

Conclusion

Although a LOI should never replace a complete contract, a LOI covering the issues discussed above can significantly reduce the risks inherent in commencing construction in the absence of a full and complete contract between the parties.

37 Liquidated and unliquidated damages

Introduction

Liquidated damages clauses are used in many types of contracts, most frequently in IT and construction contracts.

A liquidated damages clause (or an agreed damages clause), is a provision in a contract that fixes the sum payable as damages for a party's breach. In comparison, unliquidated damages are damages for a party's breach which have not been pre-estimated.

The Principal function of a liquidated damages clause is to quantify the damages payable in the event of breach of the contract. The clause will only be relevant once liability is proven or admitted.

In an action for breach of contract, to recover damages beyond nominal damages, damage must either be proven or admitted. The advantage of a liquidated damages clause is that there is no need to prove the actual loss, because the clause stipulates a pre-assessment or pre-estimation of damages.¹

Some of the advantages of including a liquidated damages clause in a contract are that it:

- provides certainty to the parties
- facilitates the recovery of damages by avoiding the requirement of proof of loss
- simplifies the dispute resolution procedure
- may induce performance of the contract

Liquidated damages clauses regulate the rights of parties after a contract is breached, or alternatively quantify the party's secondary obligation to pay damages (which survives termination).² The use of 'nil' or 'n/a' for the rate of liquidated damages

Standard form construction contracts often require the insertion of a rate for liquidated damages. Parties sometimes insert 'NIL' or 'N/A' for this rate.³

The effect of inserting 'NIL' or similar words in liquidated damages clauses has been the subject of differing opinions.⁴

Australian law

In the Australian case of *J-Corp Pty Ltd v Mladenis*⁵ (J-Corp), the appellant builder entered into a lump sum building contract with the respondent Owners, under which the builder agreed to construct a house on the

¹ See *Boucaut Bay Co Ltd v Commonwealth* (1927) 40 CLR 98.

² *Robophone Facilities Ltd v Blank* [1966] 3 All ER 128.

³ *Silent Vector Pty Ltd t/as Sizer Builders v Squarcini* [2008] WASC 246, [98].

⁴ *J-Corp Pty Ltd v Mladenis (J-Corp)* (2010) 26 BCL 106, [61].

⁵ (2010) 26 BCL 106.

Owners' land for the sum of \$311,484.12.⁶ The contract was prepared by the builder and was a standard form of contract used by the builder.⁷

The liquidated damages clause of the contract provided that if the builder failed to complete works within specified time, the builder was liable to pay liquidated damages at rate of 'NIL DOLLARS (\$00.00)' per day for each day beyond the due date for practical completion, as follows:

If the Builder breaches sub-clause 11.1, it shall be liable to pay the Proprietor liquidated damages at the rate of NIL DOLLARS (\$00.00) per day for each day beyond the due date for practical completion until practical completion is deemed to have taken place.

The builder breached the contract failing to complete the works by the due date.⁸ The court had to decide whether the liquidated damages clause excluded the right to common law (unliquidated) damages for losses suffered by the Owner due to the builder's breach.

The court held that the use of 'NIL' did not exclude the Owner's right to claim unliquidated damages.⁹ The court took the following considerations into account:

- the common intention of the parties, by reference to what a reasonable person would understand the contract to mean¹⁰
- where parties enter building contracts, this purpose may include allocating risk for loss or damage¹¹
- 'NIL' can be used to limit the extent in damages of a party's liability¹²
- the amount for liquidated damages here was not so excessive as to constitute a penalty¹³
- there is a reason for keeping liquidated and unliquidated damages clauses separate, rather than assuming that 'NIL' applies to both. Liquidated damages provisions relieve the Owner of proving actual damage, so in the absence of a liquidated damages clause the Owner may only have the potentially costly and time-consuming remedy of unliquidated damages¹⁴

The court emphasised that 'clear words' are required to rebut the presumption that a contracting party does not intend to abandon a common law breach of contract remedy.¹⁵ The clause here did not contain clear words to express the intention that the Owner could not claim unliquidated damages; it only provided that no liquidated damages could be claimed.¹⁶ This case followed the reasoning of *Silent Vector Pty Ltd T/as Sizer Builders v Squarcini*.¹⁷

Like in *J-Corp*, the issue was whether a liquidated damages clause in a contract operated to exclude unliquidated damages. In *Silent Vector* 'N/A' was inserted as the rate for 'liquidated damages per day'. Like in *J-*

6 (2010) 26 BCL 106, [13].

7 Ibid.

8 Ibid, [21].

9 Ibid, [60].

10 Ibid, [33].

11 Ibid, [6].

12 Ibid, [36].

13 Ibid, [35].

14 Ibid, [48-49].

15 *Gilbert-Ash (Northern) Ltd v Modern Engineering (Bristol) Ltd* [1974] AC 689, 717-718; see also *Concut Pty Ltd v Worrell* (2000) 176 ALR 693; *Waterways Authority of New South Wales v Coal And Allied (Operations) Pty Ltd* [2007] NSWCA 276, [44].

16 *J-Corp Pty Ltd v Mladenis (J-Corp)* (2010) 26 BCL 106, [47].

17 *Silent Vector Pty Ltd t/as Sizer Builders v Squarcini* [2008] WASC 246.

Corp, the court decided that the Principal could claim unliquidated damages for delay, because 'N/A' indicated the parties intention that only the entire liquidated damages clause would not apply.

The recent cases of *Andrews v Australia and New Zealand Banking Group Ltd*¹⁸ and *Re Pioneer Energy Holdings Pty Ltd*¹⁹ significantly expanded the penalty doctrine in Australia, together holding that:

- equity may hold that a provision is a penalty even if it is not triggered by a breach of contract
- provisions requiring compensation to be provided by one party to another should be proportionate to the potential loss suffered
- express agreement between parties that compensation is reasonable will not necessarily oust the doctrine of penalties
- provisions that incentivise parties to meet deadlines and carry out their obligations, as opposed to compensating a party where another party does not fulfil stipulated obligations, are more likely to be enforceable as such provisions may avoid the issue of penalties altogether.

English law

In the leading English case of *Temloc Ltd v Errill Properties Ltd*,²⁰ unliquidated damages were excluded by the use of '£ Nil' as the rate of liquidated damages.

The contract outlined the following regarding damages for non-completion:

Damages for non-completion

If the Contractor fails to complete the Works by the Completion Date then the Architect shall issue a certificate to that effect.

*Subject to the issue of a certificate ...the Contractor shall ...pay or allow to the Employer the whole or such part as may be specified in writing by the Employer of a sum calculated at the rate stated in the Appendix as liquidated and ascertained ...*²¹

The court decided that the liquidated damages clause was an exhaustive agreement for the treatment of damages. As the parties agreed that damages for late completion were to be liquidated damages, it could not have been intended that the Principal should also be allowed unliquidated damages.²²

Drafting liquidated damages clauses

The presumption is that parties in building contracts are entitled to all remedies for breach as would arise by operation of law.

There is no general rule about the use of 'NIL' in a liquidated damages clause. The effect of 'NIL' will depend on the proper construction of the contract as a whole.

In Australia the courts have recommended that parties should be careful to delete, amend or add clauses to such contracts in a consistent and clear manner.²³

18 (2012) 247 CLR 205.

19 [2013] NSWSC 1134.

20 (1987) 39 BLR 30.

21 Ibid, 34.

22 Ibid, 39.

23 *Silent Vector Pty Ltd t/as Sizer Builders v Squarcini* [2008] WASC 246, [99].

Parties who wish to exclude liability for unliquidated damages need to state this clearly and unequivocally in the contract. Parties should include a clear statement that the liquidated damages provided for under the contract are the sole remedy available for delays in completion of the works and the parties agree that general damages are not available to the Principal in the event of delay by the Contractor for such delay.

Further reading

- Michael Hollingdale, 'Designing and enforcing liquidated damages clauses to maximise recovery' (2005) 21 *Building and Construction Law* 412.
- Trevor Thomas, 'Nil liquidated damages: An exhaustive remedy for delay under a construction contract' (2008) 24 *Building and Construction Law* 82.

38 Material adverse change clauses

What is a mac clause?

Material Adverse Change (**MAC**) clauses are most commonly used in acquisitions and project financing transactions. MAC clauses are a common means of allocating the risks presented by adverse business or economic developments occurring between the signing and the closing of an acquisition agreement.

A MAC clause aims to give the buyer the right to terminate the agreement before completion, or to provide a basis for renegotiating the transaction, if events occur that are seriously detrimental to the target assets/company.

In the context of project financings, MAC clauses are inserted into facility and security documents to give the Lenders specific rights. For example, financial close is likely to be contingent on there being no event of default including a MAC. Lenders will generally also be entitled to exercise remedies relating to project accounts or other collateral security if an event of default or MAC arises during the project.

This paper examines the typical contents of an MOU and the practical and legal implications which arise as a result of entering into an MOU.

Why has there been a focus on mac clauses recently?

The events of 11 September 2001 and the downturn in the global economy have led to an increased awareness both within and outside the US of the efficacy of MAC clauses in protecting buyers and Lenders in uncertain economic environments.

Sample mac clauses

Acquisitions

MAC clauses may take the form of:

- a condition to completion
- a warranty that no MAC has occurred since the relevant accounting date.

Typically, in the second situation, the buyer will try to negotiate that the warranty is repeated at completion and give itself the ability to terminate the agreement if the warranty, when repeated on completion, is not true. If the buyer is relying on external finance, the MAC clause should match the finance terms.

Below are sample MAC clauses in transactions that we have advised on.

Example 1

Completion of this agreement is conditional on the Investors jointly completing due diligence investigation of the Company and that investigation not revealing any fact or matter that would have a Material Adverse Effect on the Company.

Material Adverse Effect means any event, condition or change which materially and adversely affects or could reasonably be expected to materially and adversely affect the assets, liabilities, financial results of operations, financial conditions, Business or prospects of the Company.

Example 2

Completion is conditional on the Vendors providing the Purchaser with the management accounts for the month ended [date] for the Group Companies and the Purchaser being reasonably satisfied, following a

reasonable review that those accounts show no material adverse change in the financial performance of the Business for that month, in particular when compared with the [date] budget for the other Group Companies and forecast for the Company, and comparable prior year management account result.

Project financings

MAC clauses are normally found in a representation and warranty by the borrower as to the absence of any material adverse change and as an event of default triggered by a material adverse change. Where the financing involves multiple drawdowns, the Lender generally requires the MAC representation and warranty to be repeated by the borrower at the time of each drawdown. A Lender may also want to insert a MAC clause as a separate condition precedent to drawdown.

Below are examples taken from project financing transactions we have advised on:

Example 1 – Definition

Material Adverse Event means something which, in the opinion of the Facility Agent, materially adversely affects:

- *the Company's ability to comply with its obligations under any Transaction Document or to carry on its business as it is being conducted at the time immediately preceding the event*
- *the value of the Secured Property; or*
- *the rights of the Financier under a Transaction Document.*

Example 2 – Condition precedent

A Financier is not obliged to provide any drawdown until the Facility Agent is satisfied that there has been no change in:

- *the commercial, operational or economic viability of the Project from that contemplated in the Plan or Feasibility Study*
- *the business, condition (financial or otherwise), operations, **performance or assets of the Company, which is, or is likely to be, a Material Adverse Event.***

Case law

A MAC clause in an agreement will be interpreted in accordance with contract law. The intention of the parties will be considered by looking at the agreement as a whole and a MAC clause will be enforceable if it is clear that it unequivocally expresses the intention of the parties.

MAC clauses have mostly been considered by US courts, and have rarely been interpreted by UK or Australian courts. While the US decisions relate to US law and are fact and language specific, they can provide guidance on how other jurisdictions may interpret MAC clauses.

IBP, Inc. v Tyson Foods, Inc. et al., C.A. No. 18373 (Del. Ch. June 18, 2001)

Tyson wanted to terminate its agreement to acquire IBP citing material adverse change. The MAC asserted was IBP's poor earnings performance over two quarters and a small asset write down. The Court held that a material adverse effect had not occurred and ordered the parties to complete the transaction.

The decision indicates that a broadly drafted MAC clause is best read as a backstop protecting the buyer from the occurrence of unknown events that substantially threaten the overall long-term earnings potential of the target in a durationally significant manner.

It also indicates that it is difficult to use a MAC clause as protection from the consequences of a problem disclosed to the buyer. The onus is on the buyer to consider what the ramifications of the disclosure might be because the buyer is treated as being on notice of the reasonably foreseeable consequences of that problem.

Esplanade Oil & Gas, Inc. v Templeton Energy Income Corp., 889 F.2d 621 (5th Cir. 1989)

An ambiguous provision was contained in an agreement to purchase oil and gas properties where a condition precedent stated that 'there shall occur no adverse material change' to the property. The buyer asserted that as result of a fall in world oil prices a material adverse change had occurred. The Court applied a literal interpretation and held that the MAC clause referred to the physical state of the properties, the validity of the leases and the seller's ownership interest in them, rather than their value

Pan Am Corp. v Delta Air Lines Inc., 175 B.R. 438, 514 (S.D.N.Y. 1994)

During the bankruptcy case of Pan Am, Delta and Pan Am entered into negotiations for Delta's investment in Pan Am II (the proposed survivor of Pan Am following the contemplated reorganisation). A condition of the investment was that there be "no material adverse change in the business, financial position, results of operation or prospects of [Pan AM or Pan Am II]". Before closing, passenger sales declined, expenses increased and revenue forecasts plummeted. The Court found that these results reflected a material adverse change.

Summary and recommendations

The following points can be made about MAC clauses:

- Case law on MAC clauses is extremely fact and language specific, making court decisions on these clauses difficult to predict
- Abroad MAC clause may not always provide the protection the buyer or Lender is seeking.
- Unless drafted to cover objectively identifiable facts, for example a 10% fall in market share, there can be difficulties in seeking to enforce a MAC clause.
- In terminating the agreement pursuant to a general MAC clause, a buyer runs the risk of being sued for wrongful repudiation of the contract. Similarly, a Lender who incorrectly invokes a MAC clause will be liable for damages suffered by the borrower.
- A general MAC clause should be relied upon to give leverage in renegotiating the contract rather than as a means to terminate the contract. For instance, if a buyer has a strong claim for invoking a MAC clause before completion, the parties can renegotiate the purchase price downwards. The seller may prefer to close the transaction at a lower price rather than sue the buyer for damages. Uncertainty as to whether a MAC has occurred is also more often than not a strong incentive for borrowers and Lenders to reach an understanding rather than to seek judicial redress.
- Where a buyer or Lender wishes to protect itself from a specific event, *this should be inserted as a separate condition rather than seeking to rely on a general MAC clause.*

39 Memorandum of understanding

Introduction

At the outset of a project (and often throughout a project), parties often look to record the basic terms of a transaction, in advance and in anticipation of more detailed terms and conditions.

This preliminary agreement comes in many forms and is commonly referred to as a memorandum of understanding (**MOU**), a heads of agreement, or a term sheet.

This paper examines the typical contents of an MOU and the practical and legal implications which arise as a result of entering into an MOU.

Purpose of an MOU

An MOU can be useful in giving commercial certainty (even if not a legally binding agreement). An MOU can serve a number of purposes, including:

- providing a framework for negotiations
- having parties decide on a general commitment to the particular project
- giving focus to the key commercial terms (permitting key commercial terms to be negotiated in principle without the need to settle detailed/legal aspects)
- assisting parties in raising funds or outlining the project details to third parties
- allowing for regulatory processes to be initiated, including merger clearance or FIRB approvals.

However, entering into an MOU may not be appropriate in certain circumstances. It may limit flexibility in future negotiations or distract the parties from negotiating a more complete agreement. There is also a risk that the parties inadvertently enter into an MOU that amounts to a legally binding arrangement when this is not intended or the parties breach competition rules without appropriate clearances or approvals in place. Whether an MOU or any preliminary agreement is legally binding depends on its terms.

Contents of an MOU

Every MOU is, by definition, unique to the particular project. There are, however, terms and conditions that are commonly found in an MOU. These are usually included to provide the basic legal framework and confirm the legal relationship between the parties, particularly in relation to the time between the execution of the MOU and the execution of the long form agreement. Terms can be binding or non-binding in a legal sense.

Common terms include:

- identification of the parties to the project
- statements in relation to the legal status of the MOU eg whether it is binding or which components are binding
- key commercial terms, including conditions to completion
- due diligence arrangements and processes
- an agreement to negotiate in 'good faith' along with project timing and key deliverables (binding)

- standstill/‘lock-out’/exclusivity arrangements (binding)
- confidentiality (if not already provided for in a confidentiality agreement) and terms in relation to announcements (binding)
- allocation of costs of preparation and negotiations (binding)
- governing law and jurisdiction (binding).

Of the terms above, the final 5 items (listed as ‘binding’) are often intended to legally bind the parties.

Binding or non-binding?

Apart from the key terms noted above, it is not usual for an MOU to be binding on the parties. There is a myriad of case law relating to the enforceability of MOUs, where one party may renege on a commitment or not follow through on the project. The drafting of MOUs is critical.

The preeminent case relating to enforceability is the High Court decision in *Masters v Cameron*.¹ In essence, the case confirms that MOUs will fall into one of three categories.

Further case law in Australia² has suggested there is a fourth category, beyond those identified in *Masters v Cameron* (which may be considered as another example of a Category One or Category Two situation). Each of these categories are set out below:

- **Category One (binding on the parties):** The parties have agreed to the terms and intend to be bound, but also intend to restate their agreement in a more complete or precise manner
- **Category Two (binding on the parties):** The parties have agreed to the terms but performance is conditional on an event, such as the execution of a formal agreement
- **Category Three (not binding on the parties):** The parties’ intention is to not agree or finalise the terms until they execute a formal agreement
- **Category Four (binding on the parties):** The parties intend to be bound by the terms, but also accept that a further more formalised contract will be put in place in substitute for the original agreement.

While Category Four may be simply a variation on Category One or Two, the categorisation is an indication of the courts willingness to find a binding arrangement despite the circumstances not aligning precisely with Category One or Two. Precise drafting is essential to achieving the intended outcome of whether an arrangement is binding or not.

At the time of drawing up the MOU, it is important for the parties to decide whether they wish to be bound by the terms of the MOU. This is a decision that will change from project to project. However, it is common practice for an MOU to be part binding and part non-binding.

The question as to whether an MOU is binding is essentially one of formation principles found in contract law.

A contract will be binding if there is consideration, intention to be legally bound (often evidenced by an offer and acceptance) and certainty of the terms. For an MOU, the intention of the parties at the time of signing the MOU and certainty of terms are particularly important.

¹ (1954) 91 CLR 353.

² See, for eg *Baulkham Hills Private Hospital Pty Ltd v GR Securities Pty Ltd* (1986) 40 NSWLR 622.

Intention to create binding obligations

Historically there is a strong presumption that commercial parties intend to create a legally binding contract if the terms of are certain, clearly defined and supported by consideration.³ However, more recent authority, such as *Ermogenous v Greek Orthodox Community of SA Inc*,⁴ instead stresses the focus on an objective assessment of the parties' intentions in the particular transaction. In this judgment it was stated that:

"To be a legally enforceable duty there must, of course, be identifiable parties to the arrangement, the terms of the arrangement must be certain, and, unless recorded as a deed, there must generally be real consideration for the agreement. Yet "[t]he circumstances may show that [the parties] did not intend, or cannot be regarded as having intended, to subject their agreement to the adjudication of the courts"."⁵

Ultimately the court looks to the objective intention of the parties (looking to what a reasonable person would understand by what the parties have documented), to identify whether or not there was the requisite intent to contract in any given context.⁶ In this regard:

- if the parties do not wish to be bound by the MOU (or any terms within it), then the parties should state clearly and unambiguously their intention not to be bound
- the terms of the agreement will be assessed objectively, and intention will be assessed by the content not the title or label of the document (ie just because the document is entitled MOU or similar, it may still be construed as binding)
- given this is a question of whether a contract has been formed, extrinsic evidence is admissible when determining whether a contract has been formed (as contrasted with the assessment made where the issue is construction or interpretation of a contract).

Using words such as "subject to contract", "subject to board approval", and "subject to formal agreement" are not always construed to indicate an intention not to be bound immediately by a document. Accordingly, it is advisable to include a clause in any MOU which clearly states which provisions of the MOU are binding and which are not. A suggested clause would be:

Except for the provisions of clauses [...], this MOU does not constitute or create, and shall not be deemed to constitute, any legally binding or enforceable obligations on the part of any party.

The requirement of certainty

The courts do not require commercial documents to be drafted with strict precision to be enforceable, provided the intention of the parties is clear. For an MOU to have legal effect, the essential terms must be sufficiently clear and certain. For example, terms such as "usual terms" or "fair and equitable price" may be too vague and, depending on the circumstances, the court may not be able to give meaning to them, rendering the MOU unenforceable.

As mentioned earlier, it is important to understand that under Australian law, an MOU may still have legal effect even though it contains uncertain terms or the words "subject to contract". However, if this creates sufficient uncertainty in the document, the MOU will not give rise to contractual obligations.⁷

If terms that objectively seem important to the particular arrangement have not been included, it is unlikely the MOU would be binding⁸ If however all the terms are agreed to at the time of the MOU, except for uncertainties

³ *Edwards v Skyways* [1964] 1 All ER 494.

⁴ (2002) 209 CLR 95.

⁵ (2002) 209 CLR 95, [24] (Gaudron, McHugh, Hayne and Callinan JJ).

⁶ *Gate Gourmet Australia Pty Ltd (In Liq) v Gate Gourmet Holding AG* [2004] NSWSC 149, 213 (Einstein J).

⁷ *LMI Australasia v Baulderstone Hornibrook* [2001] NSWSC 886.

⁸ *British Steel Corp v Cleveland Bridge Engineering Co* [1984] 1 All ER 504.

which are anticipated (such as the name of a purchaser to be finalised in a formal contract), the MOU will be binding.⁹

Agreements in relation to negotiations

As mentioned above, an MOU can be expressed to be non-binding as to some of the terms (typically the commercial terms) and binding as to others (terms such as confidentiality and governing law).

For this reason, it is possible to include in an otherwise non-binding MOU, legally effective terms which create some sort of obligation on the parties to continue the negotiation process.

These may include:

- agreement to negotiate in good faith
- standstill/“lock-out” agreement
- confidentiality obligations.

Agreements to negotiate in good faith

An MOU often contains a statement to the effect that the parties undertake to negotiate in good faith with a view to finalising the terms of a formal agreement to be entered into between them. For example, a standard clause would be:

The parties agree that during the negotiation period described in [], they will negotiate with each other in good faith in order to endeavour to reach the concluded arrangements described in [].

Such a clause would have symbolic significance, however, may not be enforced without further detail as to what is required by the parties during the negotiation. ¹¹Even with enforceable negotiation clauses damages for breach will be minimal (and not amount to the loss of the bargain for the project itself).¹⁰

Standstill agreements: 'lock-out' clauses

Similar to an “agreement to negotiate in good faith”, the purpose of a “lock-out” clause in an MOU is to provide an incentive to the parties to continue the negotiation process.

A “lock-out” clause is essentially a negative covenant where the party bound by the clause agrees not to negotiate with third parties. In other words, a “lock-out” clause locks the party out of negotiation with third parties. It does not, however, in a legal sense oblige the party to complete the transaction.

A narrow form of a “lock-out” clause is called a “no-shop” clause. The essential effect of a “no-shop” clause is to restrict one party from soliciting third party offers. The party, however, can entertain an offer by a third party if the approach is unsolicited. A wide form of a standstill agreement is called a “no-talk” clause.

A 'no-talk' clause is basically an agreement not to negotiate with a third party even where the approach is unsolicited.

There are two essential elements to a “lock-out” clause:

- good consideration
- length of “lock-out” is restricted to a definite period of time.

⁹ *Damon Compania Naviera SA v Hapag-Lloyd International SA* [1985] ANZ ConvR 333.

¹⁰ In *Coal Cliff Collieries v Sijehama* (1991) 24 NSWLR 1, Kirby P acknowledged that, in some circumstances, a promise to negotiate in good faith will be enforceable.

A “lock-out” clause may not be binding if the length of the “lock-out” clause reaches a point where the agreement falls foul of the restraint of trade doctrine or laws governing unconscionable conduct. In addition, a “lock-out” clause may give rise to issues concerning directors’ duties eg if restricting the company’s freedom to deal with other potential parties is not in the interests of the company.

Best or reasonable endeavours

An MOU often requires parties to undertake particular contractual obligations with “best endeavours” or “reasonable endeavours”. For example, the parties may agree to use their best (or reasonable) endeavours to obtain board approval. The issue of whether the parties should undertake best or reasonable endeavours is often a difficult issue raised during the negotiation of the terms of an MOU.¹¹ Please refer to Reasonable Endeavours – KaL FAQs for further information on these terms.

Conclusion

When entering into an MOU, it is important to be aware of the legal and practical implications. MOUs may unduly limit future negotiations and/or impose binding obligations on the parties.

From a legal perspective, the enforceability of an MOU largely depends on the circumstances of the negotiations and the language of the terms agreed by the parties. Whether the language indicates an intention to create legal obligations is key.

The nature and extent of remedies available when there is a breach of an MOU will depend on which terms are legally enforceable (or whether there are other potential causes of action available including misrepresentation, misleading or deceptive conduct or estoppel). If terms are found to be binding, normal contractual or equitable remedies will flow (including damages and specific performance).

From a practical perspective, although an MOU may help to secure some form of commitment of the parties to the negotiation process, its ability to secure certainty in relation to commercial terms and conditions may be more moral than legal.

¹¹ See, for eg *Electricity Generation Corporation v Woodside Energy Ltd* [2014] 88 ALJR 447.

40 Performance bonds and bank guarantees

Introduction

There is a range of options available to protect Owners against the non-performance of a Contractor including:

- retention
- liquidated damages
- indemnity and set-off provisions
- parent company or shareholder guarantees
- performance bonds
- bank guarantees.

This update focuses on the use of performance bonds and bank guarantees.

What are performance bonds and bank guarantees?

Performance bonds and bank guarantees may be either conditional or unconditional. They are normally issued by banks or insurance companies.

What is the difference between conditional and unconditional performance bonds or bank guarantees?

A conditional bond or bank guarantee may only be called on actual proof of default and damage, such as an arbitration award or court judgment, and the payment will only cover the proven loss sustained by the Owner/Beneficiary up to the amount stated in the bond or bank guarantee.

An unconditional/demand bond or bank guarantee does not require any proof of default, and the Owner/Beneficiary will generally receive payment of the full amount upon the presentation of a written statement to the issuer stating that the Contractor has failed to perform. In the absence of fraud and, in certain jurisdictions (Singapore and some Australian states) unconscionable conduct, the issuer must pay upon the receipt of a demand provided the demand notice, and any other documents required by the bond or bank guarantee, are in order.

How do you distinguish conditional bonds or guarantees from unconditional bonds or guarantees in practice?

The distinction between conditional and unconditional bonds and bank guarantees is not always clear due to ambiguous drafting or the creation of hybrid bonds or bank guarantees.

Generally conditional bonds and bank guarantees can be identified by:

- wording which makes payment under the bond or bank guarantee conditional upon the proof of breach of the underlying contract (as opposed to mere notice of a breach) by the Contractor
- the existence of notice provisions as to the existence of a default or of the intention to claim, as conditions precedent to any call on the bond or bank guarantee

- the bond or bank guarantee being signed by the Contractor. Unlike the unconditional bond or bank guarantee, the conditional bond or bank guarantee depends on the obligations owed by the Contractor to the Owner under the contract, and the Contractor must be a party to it
- the absence of words typically found in unconditional bonds or bank guarantees such as “...on receipt of its first demand in writing...the bank/surety will fulfil its obligations under the bond or bank guarantee without any proof or conditions...”.

What are hybrid bonds and bank guarantees?

Hybrid bonds and bank guarantees arise where payment of a demand under what is essentially an unconditional bond or bank guarantee is made subject to conditions such as:

- the production of an architect/surveyor/engineer’s certificate stating its opinion that there is a breach of the contract and the amount stated in the demand is the appropriate compensation for the breach
- authentication of the signature of the Owner in the demand
- authentication of the signature of the architect/surveyor/engineer in the certificate.

Such conditions should be rejected by an Owner seeking an unconditional bond or bank guarantee. Issuers are unlikely to seek clarification of hybrids or vague wording during negotiation, because where a dispute arises, an unclear bond or bank guarantee is likely to be found to be conditional, which is in their own and their customers’ favour.

Further conditions to an unconditional performance bond or bank guarantee arise where the contract provides conditions to the payment of the demand (for example, that the Contractor is in breach and has failed to remedy the breach within X days after receiving notice from the Owner requiring him to do so). This type of clause creates obligations between the Owner and Contractor separate from the obligations between the Owner and the issuer of the bond or bank guarantee. This could lead to the Owner being in breach of contract by calling on the apparently unconditional bond or bank guarantee. To avoid this problem, it is in the Owner’s interests that the contract does not mention the performance bond or bank guarantee or any related conditions.

Bond or bank guarantee duration

Where a conditional bond or bank guarantee contains no express provision fixing the time of release, the bond or bank guarantee is usually released upon:

- the surety satisfying damages sustained by the Owner in the event of a default of the Contractor
- the determination of the contract due to the insolvency of the Contractor (subject to the maximum liability stated in the bond or bank guarantee)
- the performance of all the Contractor’s obligations under the contract.

Without an express time limit, it may be argued that the sureties’ liability continues until every single obligation of the Contractor under the contract is performed, or even continues indefinitely. In our experience, it is rare for bonds or bank guarantees not to include an expiry date.

Calling on an unconditional bond or bank guarantee

An Owner calling on an unconditional bond or bank guarantee simply gives a written demand to the issuer stating the Contractor’s failure to perform. In the case of a hybrid bond or bank guarantee, it must ensure it

complies with any other requirements or formalities. The English and Hong Kong courts and arbitrators applying the laws of those jurisdictions will generally only intervene if there is clear evidence of fraud.¹

In Singapore, and some jurisdictions in Australia, unconscionability has been established as a further ground upon which the courts or arbitrators will impose an injunction to prevent a call.

In Australia, the suggestion that unconscionable conduct could be a ground for a court to intervene in the call of a bond arose in obiter comments ²It was established as a ground to grant an injunction to prevent a call of a demand bond in the context of Section 51AA of the Trade Practices Act, which provides that 'a corporation must not, in trade or commerce, engage in conduct that is unconscionable within the meaning of the unwritten law, from time to time, of the States or Territories.'³

Arguably this Australian decision could be extended to find that it is unconscionable to call a performance bond when the work it secures has been substantially and properly performed and is a significant inroad into the autonomy of performance bonds, although this was not the intention of the legislature when drafting the Trade Practices Act.⁴

In contrast, the Singapore Court of Appeal made a clear and conscious decision that fraud or unconscionability are the sole criteria for deciding whether an injunction should be granted or refused. However, a high degree of strictness applies and mere allegations of fraud or unconscionability are insufficient to prevent a call.⁵ This clearly erodes the primacy of the principle of autonomy strictly adhered to by the English and Hong Kong courts in the absence of fraud.

In England the court will not normally grant an injunction restraining the enforcement of an unconditional bond unless there is fraud. However, the court will not entirely ignore the underlying contract.⁶ If the Contractor has lawfully avoided the underlying contract, or there is a failure of its consideration, the court might prevent a call on the bond.⁷

Calling on a conditional bond or bank guarantee

With a conditional bond or bank guarantee, enforcement is unlikely to be achieved quickly unless:

- the default of the Contractor is so obvious that it plainly cannot be disputed
- no defence or set-off is available to the Contractor/surety in answer to the call.

The difficulty with conditional bonds and bank guarantees is the need for proof of:

- actual default and damage suffered. A mere assertion of default and damage will not suffice⁸
- the actual amount of damages suffered.

Accordingly, it is not recommended legal proceedings be commenced to recover bond or bank guarantee money unless it is clear that the default and damage is undisputable.

1 *Bollere Furniture Ltd v Banque National de Paris* [1983] HKLR 78; *Bolivinter Oil SA v Chase Manhattan Bank* [1984] 1 All ER 351.

2 *Hortico (Australia) Pty Ltd v Energy Equipment Co (Australia) Pty Ltd* (1985) 1 NSWLR 545 (Young J); *Hughes Bros Pty Ltd v Telede Pty Ltd* [1991] 7 BCL 210 (Cole J).

3 *Olex Focas Pty Ltd v Skodaexport Co Ltd* [1998] 3 VR 380.

4 Ben Zillman, 'A Further Erosion Into the Autonomy of Bank Guarantees?' (1997) 13 *Building and Construction Law* 354.

5 *Bocotra Construction Pte Ltd v Attorney General (No 2)* [1995] 2 SLR 733.

6 *Themehelp Ltd v West* [1996] QB 84; *Balfour Beatty Civil Engineering v Technical & General Guarantee Co Ltd* (1999) 68 Con LR 180.

7 *Potton Homes Ltd v Coleman Contractors (Overseas) Ltd* (1984) 28 BLR 19.

8 *Tins Industrial Co Ltd v Kono Insurance Ltd* (1987) 42 BLR 110.

The position under English law is that the Owner's right to call on the bond or bank guarantee depends on the court's construction of the bond or bank guarantee.

If the bond or bank guarantee guarantees the Contractor's performance, the Owner has to establish damages occasioned by the breach of conditions (and if the Owner succeeds, they recover the amount of damages proved).⁹

If the bond or bank guarantee is conditional on facts other than the Contractor's performance, the Owner can establish the relevant facts, and does not need to prove a breach.¹⁰

The court presumes that bonds or bank guarantees are to be conditioned upon the presentation of documents, rather than the existence of facts, unless it is obvious that the existence of facts is required.

Considerations during negotiation of a bond or bank guarantee

Generally:

- Owners should require an unconditional bond or bank guarantee, with a right to assign and charge the benefit of the bond or bank guarantee on the beneficiary. For the reasons mentioned above, no conditions regarding the calling of the bond or bank guarantee should be included in the contract.
- Contractors should try to insert conditions in respect of the bond or bank guarantee in the contract.
- A governing law should be inserted in the bond or bank guarantee.
- The bond or bank guarantee should be executed as a deed to avoid problems with consideration.
- Consideration should be given to the desired effect of the performance bond or bank guarantee and any alternatives (such as liquidated damages). The level of comfort sought should be balanced against any potential impact on the contract price.
- The notice requirements, for example, form of notice and address for service of notices.

With conditional bonds or bank guarantees:

- Consider rejecting provisions requiring the Owner to give notice to the issuer of the Contractor's default and the Owner's intention to claim, creating a condition precedent which can invalidate the Owner's call if the required notice is not given.
- Consider rejecting provisions giving the issuer the right to carry out the works itself.
- Ensure that the insolvency of the Contractor is referred to expressly as a default allowing the Owner to call the bond or bank guarantee.
- Ensure that it is expressly provided that the bond or bank guarantee is not to be rendered void due to any alteration of the contract between the Owner and the Contractor.

With a hybrid bond or bank guarantee, consider rejecting provisions obliging the Owner to exhaust all prior remedies before resorting to calling on the bond or bank guarantee.

⁹ *Nene Housing Society v The National Westminster Bank* (1980) 16 BLR 22; *Tins Industrial Co v Kono Insurance* (1987) 42 BLR 110.

¹⁰ *Esal Commodities & Reltor v Oriental Credit* [1985] 2 Lloyd's Rep 546; *Siporex Trade v Banque Indosuez* [1986] 2 Lloyd's Rep 146.

Conclusion

Careful consideration should be given to the type of bond or bank guarantee suitable for a particular party during contract negotiation.

41 Prevention and the enforceability of exclusive remedy clauses

Introduction

Where an Owner prevents a Contractor from completing work on time, and the construction contract includes a clause stipulating liquidated damages to be the exclusive remedy for delay, an Owner may find themselves with no remedy whatsoever against the Contractor for delay.

This update identifies the legal approach to the enforcement of exclusive remedy provisions where an act of prevention by an Owner has occurred, and explains why it is necessary to ensure an extension of time clause is tightly drafted to cover any act, omission, breach or default on the part of an Owner.

The Prevention Principle

The Prevention Principle has been applied by courts in the construction context to prevent Owners from delaying Contractors in the completion of works and then claiming liquidated damages for the delay. Sometimes known as the “Peak” Principle in reference to the English case of *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd*¹ where the principle was first applied, the Prevention Principle requires that each party will not do anything or prevent the other from performing the contract or delay the other party in performing it.

Where an act of prevention occurs the Contractor is no longer bound to deliver the work by the agreed completion date. Time, it is said, is set ‘at large’. As there is no longer a firm date for completion of the work, liquidated damages clauses will be unenforceable. In general this will usually leave an Owner with only the right to claim general damages at law for any delay considered by a court to be ‘unreasonable’.

The position under English law is that if the Owner prevents the completion of the works in any way, he or she loses the right to claim liquidated damages for non-completion on time.² The right can be lost if the Owner:

- fails to give possession of the site³
- fails to provide plans at the proper time⁴
- interferes improperly through his agent in carrying out the works⁵
- orders extras that necessarily delay the works⁶
- fails to deliver components he is bound to provide⁷
- delays in giving essential instructions⁸

1 (1970) 1 BLR 111.

2 *Amalgamated Building Contractors Ltd v Waltham Holy Cross UDC* [1952] 2 All ER 452.

3 *Holme v Guppy* (1838) 3 M&W 387.

4 *Roberts v Bury Improvement Commissioners* (1870) LR 5 CP 310.

5 *Russell v Viscount Sa da Bandeira* (1862) 143 ER 59.

6 *Dodd v Churton* [1897] 1 QB 562.

7 *Perini Pacific v Greater Vancouver Sewerage and Drainage District* (1966) 57 DLR (2d) 307 (British Columbia Court of Appeal).

The rule is likely to apply even if the Contractor has caused delay in addition to the delay caused by the owner.⁹

The Prevention Principle has also been applied in Australia.¹⁰

In Australia, the scope of acts of prevention has been extended significantly by *Peninsula Balmain Pty Ltd v Abigroup Contractors Pty Ltd*.¹¹ In that case, the Contractor failed to comply with the prescribed notice or claim requirements under the contract. The court decided that the contract administrator was nevertheless required to consider the merit of the Contractor's claim honestly and fairly, and if it did not do so, this would be an act of prevention.

Exclusive remedy clauses

In some construction contracts, however, the parties may agree to exclude the right to claim general damages and make liquidated damages the exclusive remedy in respect of late completion. For example, the contract may include a clause stating:

Liquidated damages shall be to the exclusion of any other remedy of the Owner in respect of the Contractor's failure to complete the Works by the Date for Completion.

Contractors will commonly request the inclusion of such a clause to increase the certainty of their agreements, fixing their financial exposure in the event of any delay and expediting dispute resolution during the construction process.

Enforcement of exclusive remedy clauses

In interpreting any contract the courts will aim to give effect to the parties' intentions as evidenced from the terms of the contract. Therefore, where the parties have expressed an intention that liquidated damages be an exclusive remedy, the courts will not interfere with this agreement. It is clear from the authorities, however, that if a party's common law right to sue for damages for breach of contract is to be contractually removed by an exclusive remedy clause, it must be done by very clear words.

The likelihood that the courts would enforce a clearly expressed exclusive remedy clause, such as the example above, is supported by case law where less clearly worded provisions have been upheld.

For example, in *Temloc Ltd v Errill Properties Ltd*¹² clause 24 of the contract appeared under the heading "Damages for Non-Completion" and stated the amount of "liquidated and ascertained damages" to be as stated in the Appendix. The relevant section in the Appendix was filled in with the word "nil". The court held that, on the proper construction of the contract, the parties had come to an exhaustive agreement as to the damages payable by the Contractor in the event of failure to complete the work on time. That agreement was that there should be no damages of any sort for delayed completion.

The rationale underlying the above decision was aptly summarised by Justice Giles of the New Zealand High Court in *Camatos Holdings Ltd v Neil Civil Engineering*,¹³ where his Honour stated:

"Although that result [in *Temloc*] may, at first glance, seem surprising when analysed, the Court is simply holding the parties to their agreement and that is consistent with the established principles. There was no ambiguity, and the clause constituted a recognition by both parties that no compensation should be recoverable".

8 *Peak Construction (Liverpool) Ltd v McKinney Foundations Ltd* [1970] 1 BLR 111.

9 *Astilleros Canarios v Cape Hatteras* [1982] 1 Lloyd's Rep 518.

10 See, eg, *Gaymark Investments Property Ltd v Walter Construction Group* (1999) 16 BCL 449.

11 (2002) 18 BCL 322.

12 (1987) 39 BLR 30.

13 [1998] 3 NZLR 596, 609.

Implications of inclusion of exclusive remedy clause

In light of the above analysis we generally advise that the preferred position for an Owner is to not include an exclusive remedy for delay clause. However, where the Contractor insists upon an exclusive remedy for delay clause, and it is expressed in clear and unambiguous language, it is critical that the extension of time clause is tightly drafted to provide comprehensive protection for an Owner. The Prevention Principle has been said to arise in relation to ‘virtually any event not expressly contemplated by the contract and not within the Contractor’s sphere of responsibility’.¹⁴ Therefore, the extension of time clause must make an extension available not only for any breach or default on the Owner’s part, but for all acts or omissions with the potential to delay the Contractor’s work.¹⁵

Suggested drafting

We recommend the following wording is adopted in the extension of time clauses of all construction contracts:

Subject to the provisions of this GC [], the Contractor is entitled to an extension of time to the Date for Commercial Operation as the Project Company assesses, where a delay to the progress of the Works is caused by any of the following events, whether occurring before, on or after the Date for Commercial Operation:

- *any act, omission, breach or default by the Project Company, the Project Company's Representative and their agents, employees and Contractors*
- *a Variation, except where that Variation is caused by an act, omission or default of the Contractor or its SubContractors, agents or employees*
- *a Suspension of the Works pursuant to GC [], except where that suspension is caused by an act, omission or default of the Contractor or its SubContractors, agents or employees*
- *[etc].*

Where this clause is included the responsibility for claiming an extension of time rests with the Contractor. If the Contractor fails to apply for the extension of time the Contractor will not be entitled to claim that an act of prevention resulted in its inability to complete the work under the contract on time, and any liquidated damages will be payable in accordance with the contract. In these such circumstances there will be no scope for the application of an exclusive remedy clause.

Extensions at Owner’s discretion

In addition, it is usually good practice to include a general right for the Owner to grant an extension of time at any time, although such a provision must be clearly drafted to ensure the Owner has complete and absolute discretion to grant the extension, and that it is not required to exercise its discretion for the benefit of the Contractor. We recommend the inclusion of the following clause in the contract:

Despite any other provisions of this GC [], the Owner may at any time make a fair and reasonable extension of the Date for Completion.

Fail safe clauses

Lastly, to protect the Owner’s position if liquidated damages are found to be unenforceable and where there is an exclusive remedy clause, we recommend the inclusion of a failsafe clause retaining the Owner’s entitlement to claim damages at law in the event that a liquidated damages clause is found for any reason to be void, invalid or otherwise inoperative.

¹⁴ Brian Eggleston, *Liquidated Damages and Extensions of Time in Construction Contracts*, (Blackwell, 3rd ed, 2009).

¹⁵ The same issue applies in relation to an exclusive remedies clause for performance liquidated damages.

Conclusion

Prevention remains a live obstacle to the enforceability of modern construction contracts. Where an act of prevention occurs, and the contract includes a clearly worded exclusive remedy clause, an Owner may be left with no remedy whatsoever in respect of a failure on the part of the Contractor to complete work on time. It is therefore essential that care is taken with the inclusion of exclusive remedy clauses, and that any extension of time clause is carefully drafted to provide the maximum protection for Owners.

42 Proportionate liability

1 Introduction

This paper provides an overview of the proportionate liability regime which has been enacted in all Australian States and Territories in varying forms.

The paper also discusses how the regime applies and operates throughout Australia and the change that the regime has made to the common law doctrine of joint, several and joint and several liability for claims for property damage or economic loss arising from carelessness or a failure to take reasonable care. The proportionate liability regime is unfortunately quite complicated with much of the devil in the detail, a difficulty that is enhanced by the many subtle differences across the different jurisdictions. It is beyond the scope of this paper to cover all of the intricacies of the proportionate liability regime, but the paper will highlight key aspects of the regime and discuss the slight variances in its application across different Australian jurisdictions.

The paper also discusses the history to the introduction of the regime, as well as recent proposals to introduce a model and uniform law of proportionate liability in Australia.

Knowledge and understanding of the proportionate liability regime is important for all commercial lawyers because it affects contractual risk allocation.

2 Why was the proportionate liability regime introduced?

In 1994, concerns about the way in which the common law doctrine of joint and several liability influenced litigation decisions and a perceived crisis regarding the cost of liability insurance prompted an inquiry instituted by the Commonwealth and NSW Attorneys General and conducted by Professor J L R Davis. Specifically, concerns were being voiced by professional and industry bodies that organisations with deep pockets (eg auditors) or insurers were being targeted in negligence actions not because of their liability (which was often small), but because they were more able to pay large damages awards. A consequence was a significant increase in insurance premiums for liability insurance (especially professional liability). While recommendations for reform were made as a result of that inquiry, they lay dormant until the collapse of the HIH Insurance Group in 2001, which provided the catalyst for change.

3 What is the proportionate liability legislation?

In 2003, the Finance Ministers of all Australian jurisdictions agreed to produce uniform legislation nationally. However, this was not achieved and proportionate liability legislation was introduced under 11 Acts with varying differences.

The relevant Acts are set out below.

Jurisdiction	Legislation
Cth	<i>Competition and Consumer Act 2010</i> (Cth) – Part VIA (CCA) <i>Australian Securities and Investments Commission Act 2001</i> (Cth) – Part 2, Division 2, Subdivision GA (ASIC Act) <i>Corporations Act 2001</i> (Cth) – Part 7.10, Division 2A (Corporations Act)
NSW	<i>Civil Liability Act 2002</i> (NSW) – Part 4 (NSW Act)
VIC	<i>Wrongs Act 1958</i> (Vic) – Part IVAA (Vic Act)
WA	<i>Civil Liability Act 2002</i> (WA) – Part 1F (WA Act)
QLD	<i>Civil Liability Act 2003</i> (Qld) – Part 2 (Qld Act)

Jurisdiction	Legislation
SA	<i>Law Reform (Contributory Negligence and Apportionment of Liability) Act 2001</i> (SA) – Part 3 (SA Act)
TAS	<i>Civil Liability Act 2002</i> (Tas) – Part 9A (Tas Act)
NT	<i>Proportionate Liability Act 2005</i> (NT) (NT Act)
ACT	<i>Civil Law (Wrongs) Act 2002</i> (ACT) – Chapter 7A (ACT Act)

4 What is the effect of the proportionate liability regime and how does it differ from the common law regime?

4.1 What are the common law principles on shared liability?

The common law principles on shared liability are as follows:

- **Severall liability:** Where two or more parties undertake separate obligations and each is liable only for its own obligations; if one party cannot meet its obligations, the other party is not liable for that liability
- **Joint liability:** Where two or more parties undertake the same obligation and each is liable in full for the performance of that obligation. In the event of non-performance, the parties would have to be sued jointly (and if one party pays the liability in full, it can require the other parties to pay their share)
- **Joint and severall liability:** Where two or more parties undertake the same obligation, action can be taken against one or more of them and if payment is not received then action can be taken against the other parties.

4.2 How does proportionate liability differ from the common law?

Where it applies, the proportionate liability regime replaces the common law rules of joint, several and joint and several liability with a system which requires liability for the loss to be apportioned between all the concurrent wrongdoers according to their respective responsibility for the loss. Each concurrent wrongdoer's liability is then limited to the amount of loss attributable to it.

The proportionate liability regime prevents the plaintiff from selecting the defendant(s) (with the deepest pockets) to recover from and thus eliminates the burden on the chosen defendant(s) from chasing the other wrongdoers for contribution. This burden now sits with the plaintiff. The risk of a wrongdoer's insolvency or valid defence is now also borne by the plaintiff and not the other wrongdoers. However, there is an argument that the pendulum may now have swung too far in favour of defendants.

The allocation of contractual risk under the proportionate liability regime (and the changes from the previous common law regime) are illustrated in the following common contractual scenarios:

Scenario	Example	Pre-proportionate liability regime	Post-proportionate liability regime
Co-Contractors	A property Owner separately contracts with both an architect and a builder to construct a project. Both breach their duty of care to the Owner (ie in relation to defective design and build on the same piece of work) and the Owner suffers loss.	Owner could recover 100% of its loss from either party.	Owner only entitled to recover from each party that portion of the loss for which the particular party is responsible.

Scenario	Example	Pre-proportionate liability regime	Post-proportionate liability regime
Head–Contractor and Sub–contractor	A property Owner contracts with a Head Contractor to construct certain works. The Head Contractor subcontracts aspects of the construction. Both breach their duty of care (ie in carrying out the works and by not properly supervising the sub–contractor) and the Owner suffers loss.	Owner could recover 100% of the loss from the Head Contractor. <i>(Note: the Head Contractor would likely have a contractual right to seek a contribution from the sub–contractor).</i>	Owner only entitled to recover from each party that portion of the loss for which that party is responsible (ie unable to solely rely on the financial capacity of the Head Contractor).
Co–sellers	A buyer contracts with multiple sellers to purchase shares in a company. The sellers breach a warranty given by them jointly under the sale contract in breach of the State/Federal misleading or deceptive conduct provisions.	Buyer could recover 100% of the loss from one of the sellers.	Buyer only entitled to recover from each seller that portion of the loss for which that seller is responsible.

Where the proportionate liability regime does not apply, a wrongdoer continues to be jointly and/or severally liable (as the case may be) at common law to the plaintiff for the whole of the plaintiff's loss and must rely on statutory, contractual or equitable rights of contribution or indemnity.

5 When and how does the proportionate liability regime apply?

5.1 When does the proportionate liability regime apply?

(a) The claim must be an apportionable claim

While an “apportionable claim” generally requires carelessness, the requirements are expressed differently across the different proportionate liability jurisdictions, which means that the range of claims falling within the proportionate liability regime may vary, particularly in a contractual context.¹

Carelessness – New South Wales, Victoria, Western Australia, Tasmania, Australian Capital Territory and Northern Territory

Subject to some minor variation, the legislation in these jurisdictions provides that proportionate liability applies to claims for economic loss or damage to property in an action for damages (whether in contract, tort or otherwise), arising from a failure to take reasonable care, excluding any claim arising out of personal injury².

There is a live issue around what constitutes an action for damages arising from “a failure to take reasonable care” and, by extension, how the proportionate liability regime applies to claims based on breach of a strict contractual obligation or warranty.

¹ Note: the SA Act refers to ‘apportionable liability’.

² See NSW Act s 34(1) and s 34(3); ACT Act s 107B(2) and s 107B(3); NT Act s 4(2) and s 4(3); Tas Act s 43A(1), s 43A(8) and s 3B; WA Act, s 5AI(a), s 5AJ(2) and s 3A; and Vic Act s 24AF(1) and s 24AG(1).

On one interpretation, the legislation only applies to contractual claims where there is a breach of an express or implied contractual term requiring the defendant to exercise reasonable care, ie a contractual duty of care. On this interpretation, apportionment would not be available in a claim for breach of a strict contractual duty, even if the breach was caused by a failure to take reasonable care. No court has yet applied such a narrow interpretation, although such an interpretation is not without support.³

The alternative interpretation (supported by a string of cases in **New South Wales** and **Victoria**)⁴ is that proportionate liability applies to any breach of contract provided the conduct giving rise to the breach originates in a failure to take reasonable care. The key question is whether, as a matter of fact, the cause of action originates from some carelessness by the defendant and does not depend on establishing a breach of any duty of care.

In the New South Wales Court of appeal decision in *Perpetual Trustee Company Ltd v CTC Group Pty Ltd (No 2)*,⁵ Macfarlan JA stated that for an action to have arisen from a failure to take reasonable care, it was necessary for that failure to be an element of the cause of action relied on and that “*if claims could be apportioned where negligence is not an element of the successful cause of action, but merely arises from the facts, a plaintiff could lose his or her contractual right to full damages from a party whose breach of a contractual provision of strict liability happened to stem from a failure to take reasonable care*”.⁶ Barrett J disagreed⁷ (and referred to his reasoning in *Reinhold v NSW Lotteries Corporation (No 2)*),⁸ and Meagher JA preferred not to express a view on the issue (although he noted that the claim which may or may not arise out of a failure to take reasonable care is one which has been determined and established as a source of liability).⁹

Following *Perpetual Trustee Company Ltd v CTC Group Pty Ltd (No 2)*,¹⁰ it remains uncertain whether a court will find that a claim is an apportionable claim due to the facts where it is uncertain whether the cause of action requires a failure to take reasonable care (although a court is likely to closely scrutinise pleadings that appear to have been deliberately phrased to exclude the proportionate liability regime).¹¹

Carelessness – Queensland and South Australia

The language used in Queensland and South Australia is different. In Queensland, the regime only applies if there is a claim for economic loss or property damage “arising from a breach of a duty of care”.¹² Whereas in South Australia, the regime only applies to a liability in damages that arises under the law of torts or under statute or “for breach of a contractual duty of care”.¹³

There is presently no case law on these provisions, but they appear to reduce proportionate liability (in a contractual context) to a much narrower scope than in other jurisdictions.¹⁴

3 See for example the comments of Biscoe AJ (in an ex tempore judgment on an application for leave to amend a pleading during a trial) in *Pfizer Australia Pty Ltd v Probiotec Pharma Pty Ltd* [2010] NSWSC 532 at [8]. See also Barbara McDonald, “Indemnities and the Civil Liability Legislation” (2011) 27 *Journal of Contract Law* 56 in which she argues that such an interpretation “leads to the absurd result that it would now be advantageous for a defendant to plead negligence in cases where he or she is sued for breach of a warranty or strict obligation.”

4 See *Woods v De Gabriele* (2007) 2 BFRA 168; [2007] VSC 177, *Dartberg Pty Ltd v Wealthcare Financial Planning Pty Ltd* (2007) 164 FCR 450; [2007] FCA 1216, and *Reinhold v NSW Lotteries Corporation (No 2)* [2008] NSWSC 187.

5 [2013] NSWCA 58.

6 [2013] NSWCA 58 at [22].

7 [2013] NSWCA 58 at [37]-[42].

8 [2008] NSWSC 187.

9 [2013] NSWCA 58 at [35]-[36].

10 The special leave application to the High Court was dismissed: [2013] HCATrans 248.

11 Courts will be slow to resolve such issues summarily because of the complexity and uncertainty of the debate involved: see for example *ASF Resources Ltd v Clarke* [2014] NSWSC 252 per Kunc J.

12 Qld Act s 28(1)(a).

13 SA Act s 4(1). Section 3 of the SA Act refers to negligent or innocent liability for harm.

14 See Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at para [26130] for further discussion of the position in Queensland and South Australia.

Misleading or deceptive conduct

An apportionable claim also includes claims for economic loss or damage in an action for misleading or deceptive conduct under designated State or Federal legislation (not limited to a failure to take reasonable care).¹⁵

Recently, in *Selig v Wealthsure Pty Ltd*,¹⁶ the High Court confirmed the scope of the proportionate liability regime in Division 2A of Part 7.10 of the *Corporations Act*, thereby resolving the conflicting judgments delivered by differently constituted Full Federal Courts in *Wealthsure Pty Ltd v Selig*¹⁷ and *ABN Amro Bank NV v Bathurst Regional Council*¹⁸ in 2014.

The Seligs brought several claims against Wealthsure Pty Limited for breaches of the prohibition against misleading or deceptive conduct in relation to financial products or services in section 1041H of the *Corporations Act* and section 12DA of the *ASIC Act* (which were apportionable claims), as well as other provisions of the *Corporations Act* and other statutes, and for breach of contract and negligence (which were not apportionable claims).

The High Court held that a defendant whose conduct renders it:

- liable for damages for misleading or deceptive conduct which contravenes section 1041H of the *Corporations Act*
- liable for damages on other bases (including other contraventions of the *Corporations Act*).

May be liable for the whole of the plaintiff's loss caused by that conduct, notwithstanding the application of the proportionate liability regime to the s1041H claim. In so finding, the High Court held that an apportionable claim under section 1041L of the *Corporations Act* is only a claim for damages caused by misleading or deceptive conduct which contravenes section 1041H, and does not extend to other claims for damages on other bases, even where the damages claims are brought in parallel with the misleading or deceptive conduct claim and are based on the same loss or conduct.¹⁹

The High Court's reasoning also applies to equivalent proportionate liability provisions in the *ASIC Act* and to the contributory negligence defence in s1041I(1B) of the *Corporations Act*.

Following this, in *Williams v Pisano*,²⁰ the New South Wales Court of Appeal (albeit in obiter) applied the High Court's reasoning in *Selig v Wealthsure Pty Ltd* to the proportionate liability regime in Part VIA of the *Competition and Consumer Act 2010* (Cth) (CCA). The Court stated that where a party is liable for contravening both section 18 and section 30 of the Australian Consumer Law (Schedule 2 of the CCA), the party's liability under section 30 is not apportionable because an apportionable claim under section 87CB of the CCA is only a claim for damages caused by misleading or deceptive conduct which contravenes section 18 of the Australian Consumer Law.²¹

¹⁵ NSW Act s 34(1)(b); ACT s 107B(2)(b); Tas Act s 43A(1)(b); WA Act s 5AI(b); NT Act s 4(2)(b); SA Act s 3(2) and s 4(1)(c) (by implication); Vic Act s 24AF(1)(b); ASIC Act s 12GP(1); Corporations Act s 1041L(1) and CCA s 87CB(1). However, note that the second limb of s 24AF of the Vic Act refers to "a claim for damages for a contravention of section 18 of the Australian Consumer Law (Victoria)" without stating that it must also be a claim for economic loss or property damage.

¹⁶ [2015] HCA 18.

¹⁷ [2014] FCAFC 64.

¹⁸ [2014] FCAFC 65.

¹⁹ See [22] to [38] per French CJ, Kiefel, Bell and Keane JJ; [51]-[57] per Gageler J.

²⁰ [2015] NSWCA 177.

²¹ See [55] to [64].

The *Selig* decision is not good news for defendants who are only be able to enjoy the protection of:

- the proportionate liability and contributory negligence regimes in Division 2A, Part 7.10 of the *Corporations Act* to the extent that the plaintiff alleges a breach of section 1041H of the *Corporations Act*
- the proportionate liability regime in Subdivision GA of Division 2, Part 2 of the *ASIC Act* to the extent that the plaintiff alleges a breach of section 12DA of the *ASIC Act*.

Similarly, while the comments of the New South Wales Court of Appeal in *Williams v Pisano* were obiter, they signal a comparable approach by the Court that defendants are only able to enjoy the protection of the proportionate liability regime in Part VIA of the *CCA* to the extent that the plaintiff alleges a breach of section 18 of the *Australian Consumer Law*.

While courts have not yet referred to other legislation, the logical application of these decisions is that courts will take a literal reading of any legislative definition of an “apportionable claim”.

(b) The defendant must be a concurrent wrongdoer

A concurrent wrongdoer is generally defined broadly to include one of two or more persons whose acts or omissions caused, independently of each other or together, the loss or damage that is the subject of the claim.²² However, in **Queensland** and **South Australia**, the relevant persons must have acted independently of each other and not jointly.²³

A defendant seeking to limit its liability under the proportionate liability regime bears the onus of pleading and proving that it was a concurrent wrongdoer.²⁴

There have been numerous cases dealing with the issue of who is a concurrent wrongdoer and whether a person has caused the “loss or damage that is the subject of the claim”. These cases have culminated in the 2013 decision in *Hunt & Hunt Lawyers v Mitchell Morgan Nominees Pty Ltd*²⁵ in which the High Court adopted a more liberal interpretation as to the meaning of “loss or damage” for the purposes of the NSW Act and confirmed that independent and unrelated acts which both cause the same damage can be apportioned. In that case, on the basis of fraudulently obtained certificates of title and forged documentation presented by Mr Caradonna and Mr Vella (the fraudsters), Mitchell Morgan Nominees Pty Ltd (**MM**) advanced money which was secured by mortgage. The mortgage was negligently drafted by Hunt & Hunt lawyers to secure money owed by Mr Vella (and not Mr Caradonna) and therefore secured nothing.

The majority of the High Court reinstated the trial judge’s decision (overturning the Court of Appeal decision) and apportioned 72.5% liability to Mr Caradonna, 15 % to Mr Vella and 12.5% to Hunt & Hunt.²⁶ The basis for the High Court’s decision was that it did not matter that MM had different causes of action against Hunt & Hunt (for negligent drafting) and the fraudsters. The harm that MM suffered was the inability to recover the money and, so long as the acts of each wrongdoer were a material cause of that harm, they were concurrent wrongdoers (despite the legal bases of those claims).

²² NSW Act s34(2), ACT Act ss 107A and 107D; NT Act ss 3 and 6(1); Tas Act s 43A(2); Vic Act s24AH; WA Act s 5AI; ASIC Act s 12GP(3); Corporations Act s 1041L(3) and CCA s 87CB(3).

²³ Qld Act s 30 and SA Act s 3(2)(b). Note also that the SA Act uses the term ‘wrongdoer’ instead of ‘concurrent wrongdoer’ (s3 of the SA Act).

²⁴ *Dartberg Pty Limited v Wealthcare Financial Planning Pty Ltd* (2007) 164 FCR 450 at [31] and *Polon v Dorian* [2014] NSWSC 571 at [812].

²⁵ [2013] HCA 10; (2013) 246 CLR 613.

²⁶ French CJ, Hayne and Keifel JJ.

The High Court also distanced itself from the decision in *St George Bank Ltd v Quinerts Pty Ltd*,²⁷ which involved a negligent valuation and a subsequent mortgage default which left the Bank with a loss of more than \$100,000. In that case, the Victorian Supreme Court held that for the purposes of identifying concurrent wrongdoers, the damage or loss caused must be the “same damage” (and that the only actionable acts or omissions by the borrower and the Guarantor was the failure to repay the loan and that such failures did not cause the Bank to make the loan). However, the High Court was not prepared to delve into whether or not *Quinerts* was wrongly decided and so it remains law, particularly in relation to negligent valuations.²⁸

The decision in *Hunt & Hunt* is good news for defendants and insurers who will find it easier to establish that there were other concurrent wrongdoers who were responsible for the loss or damage the subject of the claim, and thus limit their liability under the proportionate liability regime. At this stage, whether or not parties are “concurrent wrongdoers” continues to depend on a detailed analysis of the claims against each of them and a careful characterisation of the loss caused by each of them. However, a plaintiff wishing to target a particular party will need to ensure that their claim focusses on the particular loss or damage caused, to help show that a concurrent wrongdoer’s conduct did not cause the same loss or damage as the targeted defendant.

(c) Proportionate liability must not be excluded from the claim

There are a number of categories of claims which are excluded from the proportionate liability regime, which are set out below (although not all of these exclusions apply in every jurisdiction):

- intentional or fraudulent conduct²⁹
- where proportionate liability is excluded by other legislation³⁰
- vicarious liability and the liability of a partner³¹
- agency³²
- consumer claims³³
- exemplary or punitive damages³⁴
- claims arising from personal injury³⁵
- criminal proceedings³⁶
- the right to contract out³⁷ (see Section 6 **Contracting out of the proportionate liability regime** below).

²⁷ (2009) 25 VR 666. See also *Shrimp v Landmark Operations Ltd* (2007) 163 FCR 510; [2007] FCA 1468.

²⁸ See also *Hadgelias Holdings Pty Ltd v Seirlis* [2014] QCA 117 where Holmes JA (with whom Gotterson and Morrison JJA agreed) explained the definition of concurrent wrongdoer in s87CB(3) of the *Trade Practices Act 1974* (Cth) (now s87CB(3) of the CCA) as “concerned with distinct acts (or omissions) or sets of acts (or omissions) by different actors, combining or working independently to cause loss or damage, and consequently inapplicable where there is but a single act or set of acts causing loss, attributable to more than one person”. This approach has been questioned. See for example Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at para [25770].

²⁹ NSW Act s 34A(1)(a) & (b); ACT Act s 107E(1); NT Act s 7(1); Qld Act ss 32D & 32E, SA Act s 3(2)(c); Tas Act s 43A(5); Vic Act s 24AM; WA Act s 5AJA(1)(a) & (b); ASIC Act s 12GQ(1)(a) & (b); Corporations Act s 1041M(1)(a) & (b); CCA s 87CC(1)(a) & (b).

³⁰ NSW Act s 39(c); ACT Act ss 107B(4) and 107K(d); NT(c) Act s 14(c); Qld Act s 28(4) & (5); Tas Act s 43G(1)(c); Vic Act ss 24AF(3) (fraudulent conduct only), 24AG(2) and 24AP(e); WA Act ss 5AJA(1)(c) & 5AO(c); ASIC Act s 12GW (c); Corporations Act s 1041S(c); and CCA s 87CI(c).

³¹ NSW Act s 39(a) & (b); ACT Act s 107K; NT Act s 14(a) & (b); Qld Act s 32I(a) & (c); SA Act s 3(1) ‘derivative liability’; Tas Act s 43G(1)(a) & (b); Vic Act s 24AP(a) & (c); WA Act s 5AO(a) & (b); ASIC Act s 12GW (a) & (b); Corporations Act s 1041S(a) & (b); CCA s 87CI(a) & (b).

³² ACT Act s 107K(b); Qld Act s 32I(b); Vic Act s 24AP(b).

³³ ACT Act s 107B(3)(b); Qld Act s 28(3)(b).

³⁴ Qld Act s 32I(d); SA Act ss 3(1) (see definition of ‘notional damages’), 3(3) & 8(6); and Vic Act s 24AP(d).

³⁵ NSW Act s 34(1)(a); ACT Act s 107B(3)(a); NT Act ss 3 definition of ‘economic loss’ and 4(3)(a); Qld Act s 28(3)(a); SA Act ss 3(2)(a)(i) & 8(6); Tas Act s 43A(1); Vic Act s 24AG(1); and WA Act s 5AI(1)(a).

³⁶ SA Act s 4(2).

5.2 Apportionment

If the proportionate liability regime applies, then liability for a plaintiff's loss is to be apportioned between all concurrent wrongdoers according to their respective responsibility for the loss.

Each concurrent wrongdoer's liability is then limited to the amount of loss apportioned to it. The proportionate liability legislation operates to restrict the courts, when ordering damages, to such amounts as the court considers "just", having regard to each concurrent wrongdoer's responsibility, and no more.³⁸

It is unclear what factors the court must take into account in determining what is "just", but the court must exclude the extent to which the plaintiff's contributory negligence caused the loss or damage.³⁹

5.3 Identifying and joining all possible concurrent wrongdoers

Courts may (and in **Western Australia, Tasmania** and **South Australia**, must) look to the proportionate responsibility of absent defendants.⁴⁰ In **Victoria**, the legislation is silent on this issue because under subsection 24AI(3), a court is only permitted to take into account the comparative responsibility of a non-party who has died or a corporation that has been wound up.⁴¹

A court has the power to grant leave for a concurrent wrongdoer to be joined as a defendant.⁴²

Except in **Victoria**, plaintiffs must identify and join everyone legally responsible to ensure the recovery of 100% of their loss. To facilitate this, a concurrent wrongdoer must inform the plaintiff if it has reasonable grounds to believe that a particular person may also be a concurrent wrongdoer in relation to the relevant claim. This is not a duty to inform as such, but if a concurrent wrongdoer fails to do this, it may be liable for any costs incurred by the plaintiff because it was not aware of such additional concurrent wrongdoer.⁴³ In **Victoria**, the defendants must ensure that all concurrent wrongdoers have been joined as parties to the proceedings.

5.4 Contribution between concurrent wrongdoers

The legislation in all jurisdictions (apart from **South Australia**) provides that a defendant against whom judgment is given as a concurrent wrongdoer in relation to an apportionable claim cannot be required to:

- contribute to any damages or contribution recovered from another wrongdoer in respect of that apportionable claim (in **Victoria** and the **Northern Territory**, the damages must have been recoverable in the same proceedings in which judgment was given against the defendant, whereas in other jurisdictions, it does not matter whether or not the damages were recovered in the same proceedings)
- indemnify any such wrongdoer.⁴⁴

37 NSW Act s 3A(2); Tas Act s 3A(3) and WA Act s 4A.

38 NSW Act s 35(1); ACT Act s 107F(1)(a); NT Act s 13(1)(a); Qld Act s 31(1)(a) (although note that the reference is to 'just and equitable' as opposed to 'just'); SA Act s 8(2)(a) (although note that there reference is to 'fair and equitable' as opposed to 'just'); Tas Act s 43B(1)(a); Vic Act s 24AI(1)(a); WA Act s 5AK(1)(a); ASIC Act s 12GR(1)(a); Corporations Act s 1041N(1)(a); and CCA s 87CD(1)(a).

39 NSW Act s 35(3)(a); ACT Act s 107F(2)(a); Vic Act s 24AN; NT Act s 13(2); Qld Act s 32G; Tas Act s 43B(3)(a); WA Act s 5AK(3)(a); ASIC Act s 12GR(3)(a); Corporations Act s 1041N(3)(a); CCA s 87CD(3)(a).

40 NSW Act s 35(3)(b); ACT Act s 107F(2)(b); NT Act s 13(2)(b); Qld Act s 31(3); SA Act s 8(2)(b); Tas Act s 43B(3)(b); WA Act s 5AK(3)(b); ASIC Act s 12GR(3)(b); Corporations Act s 1041N(3)(b); CCA s 87CD(3)(b).

41 Vic Act s24AI(3).

42 NSW Act s 38; ACT Act s 107J; NT Act s 11; Qld Act s 32H; SA Act s 11; Tas Act s 43F; Vic Act s 24AL; WA Act s 5AN; ASIC Act s 12GV; Corporations Act s 1041R; CCA s 87CH. Leave will be granted even if only declaratory relief is sought against a concurrent wrongdoer. See for example *Fudlovski v JGC Accounting & Financial Services Pty Ltd (No 3)* [2013] WASC 476 and also *Lion-Dairy & Drinks Pty Ltd v Sinclair Knight Merz Pty Ltd* [2014] FCA 386.

43 NSW Act s35A (despite the section being titled 'Duty...to inform..'); ACT Act s 107G; NT Act s 12; Qld Act s 32; SA Act s 10; Tas Act 43D; WA Act s 5AKA; ASIC Act s 12GS; Corporations Act s 1041O; CCA s 87CE.

44 See NSW Act s36. ACT Act s 107H; NT Act s 15; Qld Act s 32A; SA Act s 9; Tas Act s 43C; Vic Act s 24AJ; WA Act s 5AL; ASIC Act s 12GT; Corporations Act s 1041P; CCA s 87CF are also in a similar form. Note that SA Act s 9(a) also provides that wrongdoers who are part of the same group are to be treated as a single wrongdoer.

Importantly, this protection only applies to concurrent wrongdoers against whom judgment is given in relation to an apportionable claim. As such, defendants who settle with a plaintiff ought to consider the relative benefits of having judgment entered against them.

5.5 Subsequent claims

A plaintiff who has previously recovered judgment against a concurrent wrongdoer for an apportionable part of any damage or loss is not prevented from subsequently bringing another action against another wrongdoer, provided the plaintiff cannot recover in total more than the damage or loss sustained by the plaintiff.⁴⁵

However, a plaintiff risks recovering less than their total loss if separate actions are run because courts are not bound to find the same proportionate responsibility for the later defendant to that which was apportioned by the court in an earlier proceeding.

The scope of s12GU of the *ASIC Act* was considered in *City of Swan v McGraw-Hill Companies Inc.*⁴⁶ In that decision Rares J found that the proportionate liability regime does not envisage that quantification of the claimant's damages will necessarily be finalised in the first proceedings and, instead, subsequent proceedings can arrive at different apportionments for other concurrent wrongdoers not joined in the original proceedings.

6 Contracting out of the proportionate liability regime

6.1 Is it possible to contract out?

A key issue to consider is the ability of a party under the proportionate liability regime to "contract out" – That is, to elect in the contract that the proportionate liability regime will not apply. On this point, as between the different jurisdictions in Australia, there are various approaches:

- **New South Wales, Western Australia and Tasmania:** Permit contracting out; expressly in Western Australia and by implication in New South Wales and Tasmania⁴⁷
- **South Australia, Victoria, Australian Capital Territory and Northern Territory:** Say nothing about contracting out. There is a significant risk that contracting out is not permitted because it is arguably inconsistent with public policy underpinning proportionate liability⁴⁸
- **Commonwealth misleading or deceptive conduct legislation:** Is the same as South Australia, Victoria, Australian Capital Territory and Northern Territory. It is generally accepted that it is not possible for parties to limit or exclude their liability for breach of the statutory misleading or deceptive conduct prohibitions
- **Queensland:** Prohibits contracting out.⁴⁹

⁴⁵ Under the NSW Act s 37; ACT the Act s 107I; the NT Act s 16; the Qld Act s 32B; the Tas Act s 43E; Vic Act s 24AK; the WA Act s 5AM; the ASIC Act s 12GU; the Corporations Act s 1041Q and the CCA s 87CG, the plaintiff's rights are expressly preserved. The position under s 11 of the SA Act is different and may be broader in scope. It does not expressly preserve the plaintiff's rights but starts from the premise that such actions may be brought.

⁴⁶ [2014] FCA 442 at para 63.

⁴⁷ WA Act s 4A (which includes an express statement that contracting out is permitted) and NSW Act s 3A(2) and Tas Act s 3A(3) (where the ability to contract out is not as clear cut as in WA but the relevant sections state that parties are not prevented from making express provisions for their rights, obligations and liabilities and the relevant Acts do not affect the operation of such express provisions). Courts have expressed the view that the provisions in the NSW Act and the Tas Act permit contracting out. See for example *Aquagenics Pty Ltd v Break O'Day Council* [2010] TASFC 3 at [19] and *Perpetual Trustee Company Ltd v CTC Group Pty Ltd (No 2)* [2013] NSWCA 58 at [11]-[12]. Legal commentators also agree with this position. See for example O. Hayford, "Proportionate liability – its impact on contractual risk allocation" (2005) *Australian Business Review* 29 at 44 and Barbara McDonald, "Proportionate liability in Australia: The Devil in the Detail", (2005) 26 *Australian Business Review* 29.

⁴⁸ See for example, Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at para [26790].

⁴⁹ Qld Act s 7(3) (the Qld Act does not prohibit contracting out entirely, but only in relation to Chapters 2 (which contain proportionate liability provisions) and 3).

6.2 Should parties contract out?

Whether it is more beneficial to allow the proportionate liability regime to operate or to exclude or modify its operation by contract (in those jurisdictions where it is currently permitted to do so) will depend on the party you are acting for. As a general rule, the proportionate liability regime benefits supplier defendants rather than customer plaintiffs – The blame is shared and the losses distributed. However, a customer plaintiff is generally better off excluding the proportionate liability regime because, in the event that it needs to sue a supplier/Contractor, it is preferable to deal only with the party it has contracted with as opposed to also having to sue a number of other entities (who may be unknown and of which there may be many).

Similarly, where there are multiple sellers in a sale contract, the proportionate liability regime favours the sellers (each of which will only be liable for the loss apportioned to them). However, the buyer would likely want to exclude the regime and replace it with the common law joint and several liability rule, so that it can sue one or more of the seller's for the whole of its loss (bearing in mind, it is generally agreed that it is not possible for parties to limit or exclude their liability for breach of the statutory misleading or deceptive conduct prohibitions).

6.3 How do parties contract out?

Where contracting out is permitted, there are a number of ways the parties can achieve this. For instance:

- (a) by including an express clause which states that the relevant proportionate liability legislation does not apply
- (b) by including provisions that have the effect of proportioning liability between the parties in a way that is inconsistent with the proportionate liability regime.⁵⁰ For example, a statement that the parties are jointly and severally liable (eg in a joint venture arrangement or a purchase agreement involving multiple sellers), a statement that a head Contractor is liable for the acts and omissions of its subContractors,⁵¹ or a statement that one party agrees to indemnify the other in relation to particular liabilities.

There has historically been some debate around whether a contractual indemnity alone is sufficient to constitute contracting out. However, the New South Wales Court of Appeal in *Perpetual Trustee Company Ltd v CTC Group Pty Ltd (No 2)*⁵² found that an indemnity by CTC Group Pty Ltd in favour of Perpetual Trustee Company Ltd for loss suffered by Perpetual as a result of a breach of warranty by CTC Group was sufficient to constitute contracting out under section 3A(2) of the NSW Act, and that to find otherwise would have deprived Perpetual of its contractual right to full indemnity for its loss.⁵³

6.4 Potential insurance issues

Note that if an insured party to a contract contractually assumes joint and several liability of an obligation to indemnify in respect of a claim which would otherwise be apportionable, it may be assuming a liability that would otherwise not have arisen at law. Most liability insurances will exclude protection for contractually assumed liability that would not ordinarily arise at law. Therefore, before contracting out in this way, parties should consider whether their insurers need to be aware of and accept this proposed risk allocation.

⁵⁰ The Tasmanian Full Court held in *Aquagenics Pty Ltd v Break O'Day Council* [2010] TASFC 3 at [19] that parties can contract out just by adopting an allocation of liability wording that is inconsistent with the proportionate liability regime, and without referring specifically to the proportionate liability regime. See also the Western Australia District Court in *Owners of Strata Plan 13259 v Fowler* [2013] WADC 5 (noting its limited precedential value) and the new South Wales Court of Appeal in *Perpetual Trustee Company Ltd v CTC Group Pty Ltd (No 2)* [2013] NSWCA 58.

⁵¹ This was the relevant contractual provision considered in *Aquagenics Pty Ltd v Break O'Day Council* [2010] TASFC 3.

⁵² [2013] NSWCA 58.

⁵³ Further, the Tasmanian Full Court in *Aquagenics Pty Ltd v Break O'Day Council* [2010] TASFC 3 at [16] observed that the "plain purpose" of s 3A(c) (the Tas Act equivalent of section 3A of the NSW Act) was "to ensure the primacy of express provisions of a contract as to the parties' rights, obligations and liabilities under the contract, over any provision in relation to the same matter in the Act".

6.5 Exclusion clauses

In **Western Australia, New South Wales** and **Tasmania** (where contracting out is permitted), an exclusion clause, whereby a defendant excludes all liability for breach of contract and negligence, would not seem to be affected by the proportionate liability regime.

Similarly, in **South Australia**, courts are expressly directed to take into account any special limitation of liability (which is defined to include a limitation under a contract) to which a defendant may be entitled and, as such, would not seem to affect the operation of an exclusion clause.⁵⁴

In **Queensland** (where contracting out of proportionate liability is prohibited), the legislation is expressed to “limit” the liability of a concurrent wrongdoer.⁵⁵ As such, it is arguable because the Qld Act deals with the *limitation* of liability (and not the *imposition* of liability), there is no reason why liability should not be excluded altogether.⁵⁶ If such an argument is valid under the Qld Act, it should also be valid in **Victoria**, the **Australian Capital Territory** and the **Northern Territory**, where the legislation is silent on contracting out and are similarly expressed to *limit* the liability of a concurrent wrongdoer.⁵⁷

6.6 Other possible indirect methods of contracting out

Other indirect ways in which the parties may be able to effectively contract out of the proportionate liability regime include:

- by choosing a governing law clause that is in a state where contracting out is permitted – Namely **Western Australia, New South Wales** and **Tasmania**) – There is a risk in pursuing this strategy if the chosen jurisdiction and the contract are not sufficiently connected⁵⁸
- by agreeing to arbitrate disputes under a contract – It is unclear whether arbitration is subject to the proportionate liability legislation.⁵⁹ If it is not, it may be possible to avoid proportionate liability in this way (although, for the sake of clarity, it is prudent to include an express provision in the contract that the proportionate liability regime does not apply to the arbitration)
- possibly, by creating separate legal relationships with parties who may be found to be proportionately liable, eg a Principal could enter into a deed with a subContractor pursuant to which the subContractor promises to the Principal that it will exercise due care in carrying out its obligations to the head Contractor. The Principal would then have a direct cause of action against the subContractor in the event that a claim for defective work against the head Contractor is met with a defence that the defects were caused by the subContractor. However, in the absence of a direct contractual relationship with the subContractor, the Principal may, nonetheless, be able to establish that the subContractor owed a duty of care to the Principal in carrying out the works contractually via the head Contractor.

⁵⁴ SA Act s 8(4)(d).

⁵⁵ Qld Act s31(1)(a).

⁵⁶ See Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at para [27020].

⁵⁷ *Ibid*.

⁵⁸ For further discussion on choice of law as an indirect method of contracting out, see Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at paras [26910] to [26970].

⁵⁹ In *Curtin University of Technology v Woods Bagot Pty Ltd* [2012] WASC 449, the Western Australia Supreme Court decided that the WA Act did not apply to commercial arbitrations as the word “court” in the WA Act did not comfortably encompass arbitrators. While this decision was based on the WA Act, it would seem likely that the reasoning would also apply to the other proportionate liability legislation. The court also left open the possibility that the implied term in every arbitration agreement that the arbitrator should decide the dispute according to the existing law of the contract meant that the proportionate liability regime applied. Earlier, in *Aquagenics Pty Ltd v Break O’Day Council* [2010] TASFC 3, the Tasmanian Full Court (in obiter) also favoured the view that the proportionate liability regime under the Tas Act did not apply to arbitrations.

7 Indemnities between concurrent wrongdoers

7.1 Are indemnities between concurrent wrongdoers permitted?

The availability of indemnities between concurrent wrongdoers depends on the relevant jurisdiction.

As noted in Section 5.4 (**Contribution between concurrent wrongdoers**), the legislation in all jurisdictions (other than South Australia) provides that a defendant against whom judgment is given (as a concurrent wrongdoer in relation to an apportionable claim), cannot be required to indemnify any other wrongdoer for any damages or contribution recovered from that concurrent wrongdoer in respect of that apportionable claim.⁶⁰

In **Tasmania, Western Australia** and the **Northern Territory**, the right to re-allocate liability through contractual indemnities is also expressly preserved.⁶¹

In other jurisdictions, a strict reading of the language above would operate to prevent a defendant from being required to indemnify a concurrent wrongdoer pursuant to a contractual right of indemnity. The position has not been judicially considered and remains unsettled. Commentators have used various analyses to argue that this is not the intention. For example, McDonald highlights the importance of looking at the proportionate liability legislation in juxtaposition with the legislation it replaces. If this is done, she argues, it can be seen that the restriction is on the power of the courts under the former legislation to order contribution or an indemnity as part of the apportionment process.⁶² Furthermore, there is no “*obvious reason of policy or justice which should prevent a defendant from enforcing a voluntarily entered, pre-existing contractual arrangement against another*”.⁶³ Conversely, Hayford argues that the limitation only applies to requirements arising under common law or statutory rights of indemnity,⁶⁴ as opposed to contractual requirements, and Watson argues that the limitation only applies to indemnities which are sought after judgement is given.⁶⁵

In **New South Wales**, section 3A of the NSW Act specifically acknowledges that contracting parties may make express provisions for their rights, obligations and liabilities to which the proportionate liability regime applies. Arguably this means that contractual indemnities can be enforced against a concurrent wrongdoer.⁶⁶

In **Queensland**, the same provision applies about making express provisions, but includes an express carve out for the proportionate liability regime. This suggests that contractual indemnities that re-apportion loss between concurrent wrongdoers will not be enforced in Queensland.⁶⁷

In **Victoria** and the **Australian Capital Territory**, the proportionate liability regime does not include the additional express acknowledgment that contracting parties may make express provision for their rights, obligations and liabilities. As such, the position is less clear and despite the arguments of commentators outlined above, the question remains that it was open to legislatures to include similar provisions to other jurisdictions, but they chose not to.⁶⁸

⁶⁰ In Victoria and the Northern Territory, the damages must have been recoverable in the same proceedings in which judgement was given against the defendant, whereas in the other jurisdictions, it does not matter whether or not the damages were recovered in the same proceedings).

⁶¹ Tas Act s 43C; WA Act s 5AL(2); NT Act s 15(2).

⁶² See Barbara McDonald, “Indemnities and the Civil Liability Legislation” (2011) 27 *Journal of Contract Law* 56.

⁶³ *Ibid.*

⁶⁴ Owen Hayford, “Proportionate liability – its impact on contractual risk allocation” (2005) *Australian Business Review* 29 at 44.

⁶⁵ James Wtaosn, “From Contribution to Apportioned Contribution to Proportionate Liability”, (2004) 78 *Australian Law Journal* 126.

⁶⁶ NSW Act s 3A(2). See further Dominic Villa, *Annotated Civil Liability Act 2002 (NSW)* (Lawbook Co, Second edition 2013), para 4.36.020.

⁶⁷ Qld Act s 7(3).

⁶⁸ See Joshua Thompson, Leigh Warnick and Ken Martin, *Commercial Contract Clauses: Principles and Interpretation*, Thompson Reuters – Legal Online at para [26550].

In **South Australia**, indemnities are approached differently but the result seems to be that a contractual indemnity can be enforced against a concurrent wrongdoer, even where proportionate liability applies.⁶⁹

7.2 Do indemnities between concurrent wrongdoers breach the prohibition on contracting out?

The next question is whether contractual indemnities between concurrent wrongdoers breach the “no contracting out position” in **Queensland** (and most likely **Victoria, South Australia, Australia Capital Territory** and the **Northern Territory**).

This point is arguable but commentators such as Barbara McDonald, who are in favour of the availability of indemnities, point to the fact that “*the primary liability of either wrongdoer to the plaintiff is not affected*” and that “*the common objection to allowing contracting out – That it enables powerful commercial clients to use their market power to insist on solitary liability and to undermine the effectiveness and benefits of the regime... does not apply where it is the potential defendants who have sorted out the allocation of risk between themselves in advance*”.⁷⁰

7.3 Indemnities given by non-concurrent wrongdoers

The proportionate liability regime does not operate to restrict indemnities given by a party who did not contribute to the loss (and is not a concurrent wrongdoer). These parties fall outside of the apportionment process under the proportionate liability regime.

8 Summary of jurisdictional differences

As noted throughout this paper, there are a number of important legislative inconsistencies between jurisdictions which raise the potential for forum shopping.

For ease of reference, we set out below a summary of the key differences across the different jurisdictions.

Scenario	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
If acting for a plaintiff, concurrent wrongdoers should be joined as parties to an action	✓	✗	✓	✓	✓	✓	✓	✓
If acting for a defendant, concurrent wrongdoers should be joined as parties to an action	✗	✓	✗	✗	✗	✗	✗	✗
Concurrent wrongdoers acting jointly (as well as independently) are caught	✓	✓	✗	✓	✗	✓	✓	✓

⁶⁹ SA Act ss 6(1), 6(3), 6(5), 6(9)(a) and 9 and Pt 2 and Pt 3.

⁷⁰ See Barbara McDonald, “Indemnities and the Civil Liability Legislation” (2011) 27 *Journal of Contract Law* 56.

Scenario	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Applies to contractual breaches regardless of whether there has been a breach of a duty of care (although there is some debate)	✓	✓	x	✓	x	✓	✓	✓
Intentional wrongdoing excluded (note fraudulent wrongdoing is excluded in all jurisdictions)	✓	x	✓	✓	✓	✓	✓	✓
Proportionate liability excluded as between Principal and agent	x	✓	✓	x	x	x	✓	x
Proportionate liability does not override the award of exemplary or punitive damages	x	✓	✓	x	✓	x	x	x
Exclusion clause can be used to exclude liability for negligence and breach of contract	✓	?	?	✓	✓?	✓	?	✓
Reapportionment through contractual indemnities between wrongdoers permitted	✓?	x?	x?	✓	✓?	✓	x?	✓
Contracting out permitted	✓	?	x	✓	?	✓	?	?

9 Proportionate liability reform

The lack of consistency in the proportionate liability legislation (particularly for claims involving more than one jurisdiction), prompted an extensive review of current proportionate liability beginning in 2007.

In September 2011, the Standing Council on Law and Justice (**SCLJ**) (formerly the Standing Committee of Attorneys General and then replaced by the Law Crime and Community Safety Council in December 2013) released consultation draft model proportionate liability provisions and a proportionate liability regulation impact statement for public consultation.

Following further submissions, the *Revised Draft Model Proportionate Liability Provisions – 26 September 2013 (Draft Model Provisions)* and a new *Decision Regulation Impact Statement – October 2013 (Regulation Impact Statement)* were presented to the SCLJ in October 2013. The Regulation Impact Statement notes that stakeholders and legal commentators have identified the following two main problems with the current proportionate liability regime:⁷¹

⁷¹ Page 7 of the Regulation Impact Statement.

- legislative inconsistencies between jurisdictions (particularly in relation to contracting out of the regime), which can lead to forum shopping
- a lack of clarity and/or certainty in the operation of particular provisions.

The Regulation Impact Statement considers a number of options and then recommends the introduction of uniform legislation applicable to all jurisdictions, which more narrowly defines an apportionable claim (ie as one where a failure to take reasonable care is an element of the action) and which prohibits contracting out.

The key recommended features of the proposed uniform legislation (reflected in the Draft Model Provisions), include:

- clarification that, apart from an action under the ACL for statutory misleading or deceptive conduct claims, a failure to take reasonable care must be an element of the claimant's cause of action
- "concurrent wrongdoer" is one of two or more persons who cause the same or "substantially or materially similar" loss or damage, even if a plaintiff has settled with them or released them from liability
- a defendant is required to provide information to a plaintiff about the identity and location of other possible concurrent wrongdoers, notify the possible concurrent wrongdoers and bears the onus of establishing a *prima facie* case against other possible wrongdoers
- in apportioning liability, the court must take into account the wrongdoing of a notified concurrent wrongdoer and may take into account the wrongdoing of any other concurrent wrongdoer
- in apportioning liability among concurrent wrongdoers, the court is to consider what is "just and equitable"
- standardisation of the types of claims that are excluded from the proportionate liability regime
- if notice is given to a plaintiff of a concurrent wrongdoer they should only be able to bring subsequent proceedings against that concurrent wrongdoer with leave of the court and caps should apply above which the plaintiff is not entitled to receive an award in subsequent proceedings
- proportionate liability legislation does not apply to arbitral tribunals or other entities capable of making a binding determination, unless they are a court or tribunal (jurisdictions may elect whether to include this provision)
- where a plaintiff settles with one concurrent wrongdoer, that concurrent wrongdoer will not be exposed to contribution claims from other concurrent wrongdoers
- contracting out is prohibited for all contracts except for an agreement by a concurrent wrongdoer to contribute to/indemnify another concurrent wrongdoer.⁷²

There is a useful table in the Regulation Impact Statement which illustrates the degree to which the Draft Model Provisions represent a change to the current proportionate liability legislation in each jurisdiction.⁷³

The Ministers of each jurisdiction have agreed to consider introducing the Draft Model Provisions, but there has not to-date been any concrete developments in this area.

⁷² See page 21 to 22 of the Regulation Impact Statement and also the Draft Model Provisions.

⁷³ See page 23 of the Regulation Impact Statement.

43 “Reasonableness” and withholding consent to an assignment of contractual rights

1 What is the purpose of this paper?

The purpose of this paper is to provide an overview of:

- the legal principles relevant to determining “*reasonableness*” in the context of withholding consent to an assignment of contractual rights (ie where such consent “*may not be unreasonably withheld*”)
- the effect of purported assignments when consent is withheld or not obtained.

2 What is the short answer/what are the key considerations?

2.1 Key considerations for determining “*reasonableness*”

“*Reasonableness*”, in this context, is assessed by an objective standard and is given a broad and common sense meaning.¹ Simply put, the withholding must be “*objectively reasonable*” in the particular circumstances, but the terms and proper construction of the relevant contract are paramount.²

Decisions to withhold consent should be based on factors “*relevant*” to the contract. Acting in this manner facilitates a party’s ability to demonstrate that their decision would equally have been reached by an objective and reasonable person.

Factors “*relevant*” to the contract will differ in each case and heavily depend on the particular circumstances including the nature and object of the specific contract and the purpose of the clause prohibiting the “*unreasonable*” withholding. Relevant factors may include any defaults in obligations under the contract,³ or the solvency or identity of a party (particularly in continuing contractual relations).⁴

While there is no obligation to explain or give reasons to support a decision to withhold consent, a court may interpret “*unreasonableness*” from a lack of explanation (especially if reasons are requested by other contracting parties).⁵

A party’s actions in withholding consent will generally be considered “*unreasonable*” if the grounds relied upon to support the withholding are:

- extraneous or disassociated from the subject matter of the contract⁶

1 *In the matter of Idoport Pty Ltd ACN 075 318 106; In the matter of Idoport Pty Ltd (In Liq) (Receivers Appointed)* [2012] NSWSC 524 (**Idoport**), [50].

2 *Cathedral Place Pty Ltd v Hyatt of Australia Ltd* [2003] VSC 385, [25]; *Idoport*, [52]; *St Barbara v Hockley No 2* [2013] WASC 358, [39].

3 *Idoport*, [85].

4 *Fulham Partners LLC v National Australia Bank Ltd* [2013] NSWCA 296 (**Fulham**), [90].

5 *Idoport*, [57].

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- materially inconsistent with any provision(s) of the contract⁷
- based on collateral or improper considerations.⁸

Facts not known to a party refusing consent, but existing at the time of refusal, may be used at a later time to support the “*reasonableness*” of their decision to withhold.⁹ Equally, facts existing at the time consent was refused, but not actually or constructively known to the party refusing consent, may also be relied on to establish that a reason for the refusal was “*unreasonable*”.¹⁰

The party alleging “*unreasonableness*” has the onus of proof and must demonstrate that the withholding was *objectively unreasonable*.¹¹

2.2 *Effect of purported assignments where consent is withheld or not obtained*

A party may attempt to assign the benefits of a contract where consent has not been provided (ie, where consent is sought and withheld or where it has not been sought at all). These purported assignments (ie, those in breach of express provisions of the contract) are generally ineffective.

There is little by way of authority directly on point, but the starting point will *always* be a question of construction as to what was objectively the intention of the parties in the given situation.

3 “Reasonableness” and withholding consent

The “*reasonableness*” of withholding consent (relating to an assignment of contractual rights, or otherwise) is most often disputed in leasing contracts and other real property transactions. There has been some judicial support for extending those authorities to a wider commercial context. However, recent appellate authorities emphasise that the meaning of the phrase “*not to be unreasonably withheld*”, and those like it, will depend in each case on the particular contract and circumstance in question.

3.1 *Consent and the common law right of assignment*

Assignment is a process which brings about the change in Ownership of contractual rights (contractual benefits), but not contractual obligations (contractual burdens).

At common law, a contracting party (the **assignor**) has the right to transfer contractual rights to a third party (the **assignee**), *without* the consent of other parties to the contract (the **obligor/s**) (except in rare situations where the rights are non-assignable, for example where they are personal.). Restrictions on assignment are frequently included in contracts to exclude or limit this common law right. For instance, contracts often include a provision that parties may only assign their rights under the contract with the consent of other parties and regularly provide that such consent “*must not be unreasonably withheld*”.¹²

Where a party attempts to assign without consent, or without seeking consent, purported assignments are likely to be ineffective (see item 4 below).

6 Fulham, [44].

7 *EDWF Holdings 1 Pty Ltd v EDWF Holdings 2 Pty Ltd* (2010) 41 WAR 23; [2010] WASCA 78 (**EDWF**), [115].

8 *Ibid*, [89], [242].

9 *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd* [1979] HCA 51; (1979) 144 CLR 596; 26 ALR 567 (**Secured Income**), 581-2.

10 *St Barbara Ltd v Hockley [No 2]* [2013] WASC 358, [158]-[182].

11 Fulham, [59].

12 It is also possible for a court to imply a restriction on the exercise of the discretion to provide consent, provided it is not inconsistent with the remainder of the contract. Including a reference to “*absolute discretion*” provides a basis for a party to claim that an implied term would be inconsistent.

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3.2 Leading High Court authority on “reasonableness” and withholding consent

The leading High Court authority considering “reasonableness” and withholding of consent (albeit, not used here as a mechanism to limit common law assignment) is *Secured Income Real Estate (Australia) Ltd v St Martins Investments Pty Ltd*¹³ (**Secured Income**).

In *Secured Income*, a contract for the sale of land provided that all leases of the premises after the contract’s execution (prior to settlement) should be approved by the purchaser, but that approval was not to be “*capriciously or arbitrarily withheld*”. Mason J (with whom Gibbs, Stephen and Aickin JJ agreed):

- held that “*arbitrarily*” connotes “*unreasonably*” in the sense that what was done was done “*without reasonable cause*,” and doubted whether “*capriciously*” added anything further¹⁴
- on the issue of what constituted “unreasonableness”, adopted an earlier statement of Walsh J that “*the reason for refusal must be something affecting the subject matter of the contract which forms the relationship between the landlord and the tenant, and not something extraneous and dissociated from the subject matter of the contract*.”¹⁵

3.3 Secured Income principles extended to commercial contexts

In *Cathedral Place Pty Ltd v Hyatt of Australia Ltd*,¹⁶ Nettle J held that “*logic dictates*” that the approach taken to consents to assignments of leases in cases such as *Secured Income* should be extended to a hotel manager’s consent to the assignment of the hotel Owner under a hotel management agreement.¹⁷ However, his Honour emphasised that the considerations that may be relevantly taken into account when reasonably withholding consent under a provision will *always* depend on the particular contract.¹⁸

This approach was endorsed in *EDWF Holdings 1 Pty Ltd v EDWF Holdings 2 Pty Ltd*¹⁹ (**EDWF**), which concerned a clause in a joint venture agreement and whether a joint venture participant had unreasonably withheld its consent to a change of control of another participant. Buss JA contrasted the nature of a joint venture transaction with that of a grantor/grantee of a right under a contract or a lessor/lessee relationship, which do not involve the common pursuit of a venture, and in which the fundamental rights and interests of the parties in respect of the subject matter of the transaction will usually be opposed.²⁰

His Honour (with whom Owen and Newnes JJA agreed) held that:

- it was “essential to exercise caution in reviewing authorities decided in different contractual settings”²¹
- each case turns on its own contractual provisions and individual facts and circumstances (ie, “the terms of the contract are paramount”)²²
- the proper construction of a particular contract will determine the permissible grounds on which consent may be refused.

13 [1979] HCA 51; (1979) 144 CLR 596; 26 ALR 567.

14 Ibid, 578.

15 Secured Income, citing *Colvin v Bowen* (1958) 75 WN (NSW) 262, [264].

16 [2003] VSC 385.

17 Ibid, [18].

18 Ibid, [25].

19 [2010] WASCA 78.

20 EDWF, [113]. The distinction in this context is discussed at some length by Bryson J in *Noranda Australia Ltd v Lachlan Resources NL* (1988) 14 NSWLR 1, [21].

21 EDWF, [113].

22 Ibid.

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- the proper construction of a particular contract will determine the permissible grounds on which consent may be refused.

His Honour further concluded, after considering the relevant clauses of the joint venture agreement that, in general, a party would be acting *unreasonably* in withholding its consent if the grounds for withholding:

- are not honestly held
- are extraneous or unrelated to the objects of the contract, or to rights, benefits or obligations of the affected party or other participants under the contract
- are not permissible under the contract, or are materially inconsistent with its provisions, properly construed
- on the basis of the facts and circumstances, objectively ascertained, as at the date on which consent was refused, are unreasonable.²³

*Re Idoport Pty Ltd (In Liquidation) (Receivers Appointed)*²⁴ concerned a clause in a consulting agreement which restricted Idoport from encumbering its rights under the agreement without its lending bank’s consent, whose consent should not be unreasonably withheld. Idoport sought to create charges over its contractual rights in favour of a third party and requested the bank’s consent, which was refused. The chargees then instituted proceedings against the bank. The New South Wales Supreme Court determined that the bank had acted reasonably in the circumstances, because its decision to withhold consent had been made on factors directly relevant to the contract.²⁵ On appeal, Basten JA (with whom Bergin CJ in Eq and Barrett JA agreed)²⁶ confirmed the first instance decision and determined that the bank’s reasons for refusing consent were all concerned with the status, both legally and financially, of the proposed assignor and assignee. His Honour held that these reasons were legitimate grounds on which to reasonably withhold consent because they did not relate to matters extraneous to the agreement and were not collateral, extraneous or improper considerations.²⁷

While the court emphasised that the question of “*reasonableness*” must be determined by reference to the particular contract, the following principles were also useful in determining the “*reasonableness*” of the withholding. Namely, that:

- it is a question of fact whether the withholding is “*reasonable*” and the expression should be given a broad and common sense meaning²⁸
- the “unreasonableness” of the withholding is determined objectively having regard to all the circumstances of the case, including the reasons given (or not given) to support the withholding²⁹
- it is objectively unreasonable to withhold consent for the purpose of achieving an objective that is “*a collateral advantage outside the terms of the contract*”.³⁰

In *St Barbara v Hockley [No 2]*³¹ (discussed at item 4.1 below), Beech J applied the approach outlined in *EDWF* above, but emphasised that the proper construction of the relevant contract was of “*central*

23 *EDWF*, [115].

24 [2012] NSWSC 524.

25 *Ibid*, [85].

26 See generally *Fulham Partners LLC v National Australia Bank Ltd* [2013] NSWCA 296.

27 *Ibid*, [89], [96]-[97].

28 *Idoport*, [50].

29 *Idoport*, [51].

30 *Idoport*, [53].

31 [2013] WASC 358.

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significance” in determining whether the grounds for withholding consent relate to the pursuit of the objects of the contract (ie and are reasonable), or whether they are extraneous (ie and are unreasonable).³²

3.4 Prescribed instances of “unreasonableness”

In *Lockrey v Historic Houses Trust of New South Wales*³³ the NSW Court of Appeal gave effect to a consent provision that set out express examples in which consent could be deemed unreasonable.³⁴ In that case, the lessor refused to grant consent for an assignment of a lease and, because the situation was covered by the contract it was unnecessary for the Court to determine the “*reasonableness*” of the refusal.

This demonstrates that one way to effectively rule out any ambiguity surrounding “*reasonableness*” is to expressly prescribe circumstances or provide examples in the contract where conduct would be deemed “*unreasonable*”.

4 Effect of assignment where consent is withheld or not obtained

A party may attempt to assign the benefits of a contract where consent has not been provided, either because consent is sought and withheld, or where it has not been sought at all.

In this context, the validity of the purported assignments may be challenged by the obligor (ie the party burdened by the benefit purportedly assigned). The better view is that these purported assignments are invalid and of no effect as between the obligor and the purported assignee, because until consent has been obtained the right remains incapable of assignment. The consent operates as a condition precedent to any assignment. In these instances, the assignee may have a claim for breach of contract against the purported assignor for failing to deliver what was promised. The assignor may also potentially sue the obligor for breach of an express obligation to not unreasonably withhold consent, if that is the circumstance.

It is conceivable that in a particular case consent was intended to operate as a condition subsequent such that the assignment was effective, but liable to be discharged if consent is not forthcoming. However, there would need to be sound commercial reasons for the assignment to operate in such a manner and for a court to accept this construction.

There is little by way of authority directly on point. As such, the starting point will always be a question of construction as to what was objectively the intention of the parties.

4.1 Purported assignments where consent is “unreasonably” withheld

Beech J’s decision in *St Barbara v Hockley [No 2]*,³⁵ demonstrates that a party who has “*unreasonably*” withheld consent to an assignment of contractual rights may, if the court sees fit, be compelled to do all things necessary for the transfer to proceed.³⁶ However, without court intervention, the purported assignment is ineffective (see item 4.3 below).

³² Ibid, [39].

³³ (2012) 84 NSWLR 114.

³⁴ See also *Esso Australia Resources Pty Ltd v Southern Pacific Petroleum NL (Receivers and Managers Appointed)* [2004] VSC 477.

³⁵ *St Barbara v Hockley No 2* [2013] WASC 358 (**St Barbara**).

³⁶ *St Barbara*, [270].

Background

St Barbara announced that it would be selling certain assets to Hanking Gold Mining Pty Ltd (**Hanking Gold**). Those assets included a mining lease (**Tenement**) held by St Barbara, which was the subject of a Sale of Mining Lease Agreement (**Agreement**) between St Barbara and Desmond Hockley. The Agreement provided that 25% of the gold mined by St Barbara from Clough Lode (the area where the Tenement was located), was to be delivered to Mr Hockley with the balance belonging to St Barbara. Mr Hockley’s share of gold was also subject to the deduction of 25% of the mining costs in mining the Clough Lode. Clause 14 of the Agreement provided that:

“Either Party may assign his entire interest in the mining lease and his rights under this deed to a third party, PROVIDED THAT such third party shall agree in a deed with the other Party to be bound by the terms of this deed in all respects and the assigning Party first gets the written consent of the other Party (which shall not be unreasonably withheld).”

St Barbara and Mr Hockley were also parties to an agreement entitled Supplemental Agreement to Sale Agreement (**Supplemental Agreement**), which imposed mining and reporting obligations on St Barbara. By letter of 10 January 2013, St Barbara sought Mr Hockley’s consent to the proposed assignment of the Tenement and rights under the Agreement to Hanking Gold. Mr Hockley declined to provide his consent to the assignment and provided some of his reasons in a letter to St Barbara dated 20 January 2013. On 5 February 2013, Mr Hockley wrote again to St Barbara and set out reasons for his refusal to consent. On 30 April 2013, St Barbara commenced proceedings against Mr Hockley seeking, among other things, a declaration that Mr Hockley had unreasonably withheld consent to the assignment to Hanking Gold.

Decision and principles

As mentioned above, Justice Beech applied the approach outlined in *EDWF* (discussed above), but emphasised that the proper construction of the relevant contract was of “*central significance*” in determining whether the grounds for withholding consent relate to the pursuit of the objects of the contract or whether they are extraneous.³⁷

Justice Beech also considered the question of whether facts existing at the time consent was refused, but not actually or constructively known to the party refusing consent, could be relied on to establish that a reason for the refusal was “*unreasonable*”. This question had not been dealt with directly by any of the cases to date. The converse proposition that facts not known to the party refusing consent, but existing at the time of refusal, could be used to support the “*reasonableness*” of the decision was established in *Secured Income*. Justice Beech noted that the exercise of the contractual power to withhold consent was tested by an objective criteria of unreasonableness which does not differentiate between whether the facts can be used to support or weaken the “*reasonableness*” of the decision. This meant that St Barbara could rely on facts not actually or constructively known to Mr Hockley to support the unreasonableness of the decision.³⁸

Mr Hockley, in effect, relied on five pleaded reasons for the refusal which related to aspects of Hanking Gold (including its capacity to perform obligations under the agreements to be assigned), mining costs, any mining Hanking Gold might do of the Clough Lode and existing disputes between St Barbara and Mr Hockley. Beech J approached the question of the “*reasonableness*” of withholding consent by first construing the Agreement and Supplemental Agreement so that legitimate or extraneous considerations could be identified.³⁹ Each of Mr Hockley’s pleaded reasons for refusal were then considered by reference to the facts available at the time consent was refused.

Justice Beech ultimately found that none of Mr Hockley’s pleaded reasons for refusal to consent to the assignment supported a reasonable withholding of consent. His Honour:

- made a declaration that Mr Hockley had *unreasonably* withheld his consent to the assignment to Hanking Gold

³⁷ St Barbara, [39].

³⁸ St Barbara, [39]-[44].

³⁹ St Barbara, [44]-[46].

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- ordered Mr Hockley to do all things necessary for the transfer of the Tenement to Hanking Gold.

4.2 Failure to seek consent is lack of consent and an invalid assignment

As a matter of logic, if consent has not been sought, then there is no operational consent. It follows that any purported assignment should be treated the same way as if consent had been (reasonably) refused.

This approach appears to have been accepted by Fryberg J in *Ace Property Holdings P/L v Australian Postal Corp*,⁴⁰ where his Honour stated (citing *Hendry v Chartsearch*) that: “...consent cannot be said to have been withheld unless and until it has been asked for. It is no answer that no reasonable objection could have been made if consent had been sought.”⁴¹

4.3 Legal effect of prohibition on assignment more generally

Prohibitions on assignment can either be drafted as promises (eg “*agreement not to assign*”) or as restrictions (eg “*no entitlement to assign*”). There is a doctrinal difference between these in the sense that a mere promise not to assign should result in the assignment being effective, but giving rise to a right to damages. However, it would need to be clear that this was the intention of the parties.

Generally, even where the language of promise is used courts construe the clause as a true prohibition on the basis that the parties intended such an operation when incorporating the provision. More importantly, and as discussion of the *Chester* decision (discussed below) suggests, even where a court considers that parties did intend to include a mere promise not to assign, this will not result in the court upholding the assignment because to do so would involve them enforcing one contract (to assign) that is in breach of another contract (not to assign).

Generally speaking, a purported assignment of a contractual right in breach of a provision of the contract prohibiting assignment is ineffective. In *Linden Gardens Trust Ltd v Lenesta Sludge Disposals Ltd*,⁴² Lord Browne-Wilkinson (with whom the other Law Lords agreed) said:

*“[A] prohibition on assignment normally only invalidates the assignment as against the other party to the contract so as to prevent the transfer of the chose in action: in the absence of the clearest words it cannot operate to invalidate the contract as between the assignor and the assignee and even then it may be ineffective on the grounds of public policy...[T]he existing authorities establish that an attempted assignment of contractual rights in breach of a contractual prohibition is ineffective to transfer such contractual rights...If the law were otherwise, it would defeat the legitimate commercial reason for inserting the contractual prohibition, viz to ensure that the original parties to the contract are not brought into direct contractual relations with third parties.”*⁴³

There is a view that in this case Lord Browne-Wilkinson only intended to say that the prohibition merely prevented the obligor having to account to the assignee. That is, the prohibition characterised the obligation to perform rather than the right to assign. It would follow that the right to assign remains assignable in equity. Despite this, the weight of authority has treated the judgment as recognising that the parties can, by incorporating a prohibition of assignment, rob the contractual rights in question of their characteristic of assignability.

For example *Hendry v Chartsearch Ltd*,⁴⁴ concerned a clause that stated that the relevant party was not “*entitled*” to assign (ie a prohibition). Millett LJ said that a clause must take effect according to its tenor. He thought the assignment was effective as between the assignor and assignee, but that it was ineffective to create a breach of contract between the assignor and obligor (that is, its language did not incorporate a promise not to

⁴⁰ *Ace Property Holdings P/L v Australian Postal Corp* [2010] QCA 55, at [188].

⁴¹ See also *Owners of Strata Plan 5290 v CGS & Co Pty Ltd* [2011] NSWCA 168, (2011) 281 ALR 575.

⁴² *Linden Gardens Trust Ltd v Lenesta Sludge Disposals Ltd* [1994] 1 AC 85.

⁴³ *Ibid*, at [108] per Lord Browne-Wilkinson (with whom the other Law Lords agreed).

⁴⁴ [1998] C.L.C 1382; EWCA Civ 1276, *The Times*, 16 September 1998; cited in *Chitty on Contract*, [19-044].

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assign that would have been breached upon the attempted assignment). As between the assignor and the obligor it was simply without effect.⁴⁵

Earlier in *R v Chester and North Wales Legal Aid Area Office (No 12)*,⁴⁶ a case involving a prohibition in the form that the relevant party “shall not assign” (ie, a promise not to assign), Millett LJ concluded that the prohibition prevented equitable assignments, and said that “equity will not enforce the performance of an obligation [that is, a promise to assign] which constitutes a breach of a prior contract with a third party [that is, the obligor]”.⁴⁷ Millett LJ recognised the distinction between a promise not to assign and a clause that negated any power to assign. In *Hendry*, he noted that a prohibition need not take the form of a covenant not to assign or reserve a power to treat an assignment without consent as a repudiatory breach of contract. It was sufficient, he thought, if the clause was in a form that disentitled a party from assigning. It appears his view was that any form of language would render any assignment ineffective.⁴⁸

Australian authority appears to follow the English approach.

In *Re Idoport*⁴⁹ (discussed above), Ball J held that generally, a purported assignment of a contractual right in breach of a provision of the contract prohibiting assignment is ineffective. His Honour cited Lord Browne-Wilkinson in *Linden Gardens* holding that it is necessary that such assignments be rendered ineffective because otherwise “it would defeat the legitimate commercial reason for inserting the contractual prohibition...[being] to ensure that the original parties to the contract are not brought into direct contractual relations with third parties.”

Even if the prohibition is subject to consent, which in turn is expressed to not be unreasonably withheld, the result appears to be the same at present. If the obligor is found to have “unreasonably” withheld consent, the purported assignment is still not effective (although, the withholding party may be compelled, should the court see fit, to do all that is necessary for the transfer to proceed).⁵⁰

In *Fulham Partners* (the *Re Idoport* appeal),⁵¹ Basten JA observed that the appellant’s pleadings presumed that an unreasonable withholding of consent was equivalent to a grant of consent, although this argument was not pursued at trial or on appeal. Despite this, his Honour rejected this argument and instead approved *Linden Gardens Trust Ltd v Lenesta Sludge Disposals Ltd* [1994] 1 AC 85. Practically, however, it would appear to be open to a party to seek specific performance of the contract and require the obligor to provide consent to the assignment.⁵²

For reasons above, clients need to be aware of the uncertainty that can arise in relation to prohibitions on assignment and consider expressly providing for the consequences of an attempt to assign in the face of a clause restricting or prohibiting such right. For example, parties can expressly agree that any attempt to assign in breach of the clause has no effect or amounts to a repudiatory breach of the agreement.

45 See also *Freakley v Centre Reinsurance International Co* [2005] 2 BCLC 530, [540] per David Richards J.

46 [1998] 1 WLR 1496.

47 Ibid, [1501]. See also *Australian Olympic Committee Inc v The Big Fights Inc* [1999] FCA 1042, [119–20]; *Australian Rugby Union Ltd v Hospitality Group Pty Ltd* (2000) 173 ALR 702, 735 (affirmed (2001) FCR 157). See further *New Zealand Payroll Software Systems Ltd v Advanced Management System Ltd* [2003] 3 NZLR 1, [7], suggesting that a purported assignment in the face of a prohibition was a breach of contract and the only question was whether it should be compensated in damages or whether it should simply be held that the assignment never occurred. General principle dictates if it constitutes a breach of contract it must give rise to a right to damages.

48 GJ Tolhurst, *The Assignment of Contractual Rights*, Hart Publishing 2006, p 249-261.

49 [2012] NSWSC 524.

50 St Barbara, [270].

51 [2013] NSWCA 296.

52 If there was no basis upon which the obligor could have “reasonably” withheld consent, there is weak authority that the assignment may be effective: *Hendry v Chartsearch Ltd* [1998] C.L.C 1382; EWCA Civ 1276, *The Times*, 16 September 1998, per Evans LJ (in the minority). However, the issue has not been determined by Australian courts. See generally discussion in GJ Tolhurst, *The Assignment of Contractual Rights*, Hart Publishing 2006, p 249-261.

5 Final notes

A party faced with the task of obtaining consent from another party in similar circumstances now has the benefit of guidance and an awareness of common issues they could encounter from the decisions outlined above.

EDWF, Re Idoport and *St Barbara v Hockley [No 2]* all emphasise that a proper construction of the relevant contract is necessary to identify whether the grounds for withholding consent are legitimate and not extraneous to the contract’s objects. The question of reasonableness is an objective one based on all of the facts and circumstances existing at the time of the decision, whether known to the party refusing consent or not, and can be relied on to support the reasonableness or unreasonableness of the decision.

44 Security of payment

Introduction

'Security of payment' is a term used to describe the entitlement of Contractors, sub-contractors, consultants or suppliers in the contractual chain to receive progress payments due to them under construction contracts when undertaking construction work. Security of payment laws are primarily aimed at facilitating timely payment by Principals and Head Contractors down the contractual chain by operating on a 'pay now, argue later' approach. This is achieved through:

- granting claimants the right to apply to court for progress payments where the Principal or Head Contractor has not made payment in accordance with the time period required by the construction contract or enactment (as the case may be)
- establishing a mandatory adjudication scheme for the interim resolution of payment claim disputes.

Security of payment laws apply to contracts for construction work, the supply of related goods and services, and preparatory work done in anticipation of construction (including, for example, design consultancy services). 'Construction contracts', 'construction work' and 'related goods and services' are defined by the enactments to include a wide scope of activities, which vary between States and Territories. The full text of these definitions and extent to which they vary between states is contained in the Schedule to this Article.

Security of payment laws run concurrently alongside entitlements under a construction contract, and claims for payment can proceed to adjudication even if the formal dispute resolution procedure under the construction contract has commenced.

State variances

Security of payment laws are in place in every State and Territory, however there is no standardised Australia-wide approach to security of payment. There is a clear delineation between the approach taken by Western Australia and Northern Territory (**West Coast Model**), and the remaining States and Territories (**East Coast Model**).

East Coast Model enactments

Victoria	Building and Construction Industry Security of Payment Act 2002 and the Building and Construction Industry Security of Payment Regulations 2013
New South Wales	Building and Construction Industry Security of Payment Act 1999 and the Building and Construction Industry Security of Payment Regulation 2008
Australian Capital Territory	Building and Construction Industry (Security of Payment) Act 2009
Queensland	Building and Construction Industry Payments Act 2004 and the Building and Construction Industry Payments Regulation 2004
South Australia	Building and Construction Industry Security of Payment Act 2009 and the Building and Construction Industry Security of Payment Regulations 2011
Tasmania	Building and Construction Industry Security of Payment Act 2009

West Coast Model enactments

Western Australia	Construction Contracts Act 2004 and the Construction Contracts Regulations 2004
Northern Territory	Construction Contracts (Security of Payments) Act 2004 and the Construction Contracts (Security of Payments) Regulations 2004

Some key differences between the East Coast Model and West Coast Model include:

- **Overriding contractual mechanisms:** The East Coast Model prescribes a statutory payment scheme that overrides any inconsistent contractual provisions.¹ The West Coast Model only provides legislative assistance where the construction contract does not have agreed payment provisions. This is achieved through the implication of terms relating to payment for construction works where the construction contract is silent.²
- **Procedure for payment claims:** The East Coast Model creates a statutory payment system whereby the claimant must (except in NSW) endorse its payment claim as being made under the relevant Act, and serve it upon the respondent before proceeding in accordance with that Act. Payment claims under the West Coast Model are made pursuant to the procedure of each construction contract, with statutory adjudication available only where a dispute arises during the contractual payment claim procedure.
- **Payments able to be claimed:** The East Coast Model provides for recovery of progress payments up the contractual chain. Therefore, the adjudication procedure under East Coast Model enactments may only be used by Contractors and suppliers to recover payment from a Principal or head Contractor. The scope of the West Coast Model is wider, allowing either party to make an adjudication application for any payment disputes, including debts and damages claims.
- **Default penalty:** The East Coast Model penalises a party who fails to respond to a payment claim with a payment schedule by rendering it liable to pay the whole of the claimed amount. The West Coast Model does not impose such a penalty.

Procedure

Security of payment laws only apply to a payment dispute arising out of a contract for construction work. A payment dispute will arise if:

- the amount claimed in a payment claim is due to be paid under the contract, and the amount has not been paid in full, or the claim has been rejected or wholly or partly disputed
- any money retained by a party under the contract has not been paid (when due to be released)
- any security held by a party under the contract is due to be returned under the contract, and has not been returned.

¹ See, for eg: s 48 Vic Act; s 34 NSW Act; or s 33 SA Act, each of which hold a provision of an agreement void if the operation of the Act is, or is purported to be, excluded, modified or restricted or it may reasonably be construed as an attempt to deter a person from taking action under the Act.

² Where a construction contract does not contain written provisions with respect to matters such as variations, payment entitlement progress payments or the mode and manner of making payment claims, Part 2, Division 2 and Schedule 1 of the WA Act or Part 2, Division 2 and the Schedule of the NT Act will imply terms. For a discussion of implied terms, particularly in the context of construction contracts, see *Codelfa Constructions v State Rail Authority of New South Wales* (1982) 149 CLR 337 (although please note the controversy as to the ongoing application of *Codelfa: Mount Bruce Mining Pty Ltd v Wright Prospecting Pty Ltd* [2015] HCA 37).

The phrase “due to be paid” is significant. This assumes that time for payment is expressly included in the contract. However, not all contracts may contain an express term with respect to time for payment. In these cases, security of payment laws require that the time for payment be a certain number of days from receipt of the payment claim.

The state-by-state variances in procedure are set out in the schedule to this article.

Drafting implications

Whilst the obligations created by security of payment laws cannot be contracted out of,³ the legislation does allow the parties to stipulate how they should apply. The following issues should be considered when drafting payment provisions in construction contracts:

- **Amount of a progress payment**

Under the East Coast Model, there are two ways of determining the amount of a progress payment:

- **Method 1:** Where the construction contract expressly provides a method for calculating the value of a progress payment, it is to be determined in accordance with those terms.⁴ In Victoria, this is subject to the following qualifications (notwithstanding anything to the contrary in the construction contract):
 - claimable variations may be taken into account⁵
 - excluded amounts must not be taken into account.⁶
- **Method 2:** where the construction contract makes no express provision for the amount of a progress payment, the amount will be calculated on the basis of the value of work carried out, or undertaken to be carried out.⁷ The value of the work is calculated, having regard to contract price, other prices, defects and variations.⁸

For Contractors and Principals who value certainty, stipulating the method for calculation of a progress payment is essential. If the parties do not stipulate a method by which a progress payment should be calculated, the Principal particularly is exposed to the risk that the Contractor may claim any number of expenses which are not agreed.

Under the West Coast Model, where the underlying contract is silent, there will be an implied term that the Contractor has an entitlement to be paid a “reasonable amount for performing its obligations”.⁹ With no specific provision for the valuation of a “reasonable amount”, parties that do not stipulate calculation of progress payment terms in the construction contract may be exposed to significant variations in the amount of a progress payment.

- **Time periods for payment**

Under the East Coast Model, a progress payment becomes payable in accordance with terms of contract.¹⁰ Payment due dates, where the contract makes no express provision for payment, are set out in the table below.

3 s 48 Vic Act; s 34 NSW Act; s 99 Qld Act; s 42 ACT Act; s 33 SA Act; s 11 Tas Act; s 10 NT Act; s 53 WA Act.

4 s 10(1)(a) Vic Act; s 9(a) NSW Act; s 13(a) Qld Act; s 9(a) SA Act; s 13(1) Tas Act; s 11(a) ACT Act.

5 s 10(2).

6 s 10(3).

7 s 10(1)(b) Vic Act; s 9(b) NSW Act; s 13(b) Qld Act; s 9(b) SA Act; s 13(2) Tas Act; s 11(b) ACT Act.

8 s 11 Vic Act; s 10 NSW Act; s 14 Qld Act; s 10 SA Act; s 13(2) Tas Act; s 12 ACT Act.

9 s 14 (entitlement to be paid) and Sch 1, Div 2 (amount to be paid) WA Act; s 17 (entitlement to be paid) and Sch, Div 2 (amount to be paid) NT Act.

10 s 12(1)(a) Vic Act; s 11(1) NSW Act; s 15(1)(a) Qld Act; s 11(1)(a) SA Act; s 15(1) Tas Act; s 13(1)(a) ACT Act.

Jurisdiction	Days (after claim is made) when payment due
Victoria	10 business days ¹¹
Queensland	10 business days ¹²
New South Wales	15 business days for head Contractors ¹³ 30 business days for subContractors ¹⁴
South Australia	15 business days ¹⁵
Tasmania	20 business days for claims relating to residential structures, where the respondent is the Owner of the land or where the respondent is not a building practitioner ¹⁶ 10 business days for any other case ¹⁷
ACT	10 business days ¹⁸

Parties to construction contracts under the East Coast Model should carefully consider where there are any applicable default payment provisions in the jurisdiction in which they are operating. Parties should ensure that the payment terms outlined in the construction contract do not contravene the relevant statutory payment terms, thereby ensuring the parties are not exposed to default payment provisions.

For parties operating in Western Australia and the Northern Territory, it is notable that both jurisdictions prohibit terms in construction contracts that provide for payment to be made more than 50 days after the payment is claimed. In each jurisdiction, the contractual time period is read down to 28 days after payment is claimed.¹⁹

- **Pay when paid provisions**

Some construction contracts may include terms that seek to make a party's liability under contract conditional on them receiving payment from another person, whether or not they are a party to the contract (a 'pay when paid' provision). A party would be inclined to include a clause such as this in order to protect their cash flow in the event that an upstream Contractor failed to make timely payment.

Under security of payment laws however, 'pay when paid' provisions are void or of no effect in each jurisdiction.²⁰ As a result, parties must carefully plan their expected cash flow and ensure that contingencies are in place to meet liabilities in the event that another party does not pay them.

Drafting implications

The application and content of security of payment laws vary from state-to-state. When drafting payment provisions in a construction contract, parties should ensure that they are aware of the statutory terms that operate alongside express terms in a construction contract, and those which serve to override contractual terms where those terms are not in line with those provided for under statute.

¹¹ s 12(1) Vic Act.

¹² s 15(b) Qld Act.

¹³ s 11(1A)(a) NSW Act.

¹⁴ s 11(1B)(a) NSW Act.

¹⁵ s 11(1)(b) SA Act.

¹⁶ s 15(2) and s 19(3)(a) Tas Act.

¹⁷ s 15(2) and s 19(3)(b) Tas Act.

¹⁸ s 13(1)(b) ACT Act.

¹⁹ s 10 WA Act; s 13 NT Act.

²⁰ See: s 13 Vic Act; s 12 NSW Act; s 14 ACT Act; s 12 NT Act; s 16 Qld Act; s 12 SA Act; s 16 Tas Act; s 9 WA Act.

45 Severability boilerplate clause

Need to know

A severance clause is a boilerplate provision included in many contracts which, in generic form, states that provisions of the contract may be severed if found to be void or unenforceable.

There is, however, debate as to whether there is any consequence or increased risk if a generic clause is not included in a contract, given its primary purpose is to provide evidence to demonstrate the parties' intention that the contract should operate without one or more terms.

For this clause to add value to your contract, it should be tailored to the specific transaction and to your client's needs. For instance, a severance clause may be used to identify non-severable provisions in a contract, to prescribe variable fall-back positions in the event that one or more terms are void or unenforceable, or to permit modification or renegotiation of offending terms under certain circumstances (see item 2 below).

A sample boilerplate clause is set out below. For reasons mentioned, this clause should be considered in the context of the specific transaction contemplated by the contract and the needs of the client.

The sample clause

Any term of this [*deed/agreement*] which is wholly or partially void or unenforceable is severed to the extent that it is void or unenforceable. The validity or enforceability of the remainder of this [*deed/agreement*] is not affected.

1 Severability

1.1 Severability by a court

If asked, a court must consider whether to sever a term or part of a term from a contract. Courts will first look to see whether the parties intended, as a matter of objective construction, the contract to operate as a single, indivisible arrangement, or whether they intended for it to continue even if a part of the agreement was severed.¹

Courts determine the question of severability by looking at (1) the construction of the agreement, (2) the intention of the parties and (3) the importance of the particular term to the whole agreement.

(a) Construction of the agreement

This is a two-step analysis, where the court will consider:

- the consideration provided under the agreement

The relevant term being severed must not be the whole or main consideration given by a party under the contract.² That is, remaining terms must continue to be supported by adequate consideration.³

- the nature of the agreement.⁴

¹ *Brooks v Burns Philp Trustee Co Ltd* (1969) 121 CLR 432 at 442 per Taylor J. See also *Life Assurance Company of Australia Ltd v Phillips* (1925) 36 CLR 60 at 72 per Knox CJ.

² *Brooks v Burns Philp Trustee Co Ltd* (1969) 121 CLR 432 at 463 per Windeyer J.

³ *Horton v Jones* (1935) 53 CLR 475 at 485 per Rich and Dixon JJ.

⁴ See for example, *Thomas Brown & Sons Ltd v Fazal Deen* (1962) 108 CLR 391 at 411 per Kitto, Windeyer and Owen JJ.

The operation of the contract, after severance of the term, must continue to be consistent with general public policy. Severance would not be used in a contract which is, in substance, illegal but it would be used in relation to a restraint of trade clause where covenants are found to be unreasonable and contrary to public policy.⁵

(b) Intention of the parties

It must be shown that the parties intended to make a contract that could operate without one or more terms (whether a whole or a part of a term or an associated transaction).⁶

(c) Importance of the particular term to the entire agreement

A court must be able to sever terms of a contract without having to add to or change any words (referred to as the “blue pencil” test).⁷ A court will not rewrite a contract to make it valid or able to achieve severability.⁸

In summary, to be able to sever a term the court must be able to determine that:

- the provision(s) to be severed is/are not the main part or substance of the contract⁹
- the valid elements can be separated from the term(s) to be severed¹⁰
- the remaining provisions of the contract can continue to operate without changing the fundamental nature, scope or effect of the contract.¹¹

Please note that there are also various legislative provisions relevant to arguments concerning the ability to sever a contractual term. These include:

- section 4 of the *Restraints of Trade Act 1976* (NSW)¹² and section 4L of the *Competition and Consumer Act 2010* (Cth),¹³ which provide that contractual provisions contrary to these Acts may be severable¹⁴

⁵ See *DJE Constructions Pty Ltd v Maddocks* (1982) 1 NSWLR 5 at 10 per Street CJ, *McFarlane v Daniell* (1938) 38 SR (NSW) 337 at 346 per Sir Frederick Jordan. For the relevant considerations in the restraint of trade context see *SST Consulting Services Pty Ltd (ACN 083 263 914) v Rieson* (2006) 225 CLR 516 at 531; 228 ALR 417 at 428-9; [2006] HCA 31 at [46] per Gleeson CJ, Gummow, Hayne, Heydon and Crennan JJ.

⁶ *Duggan v Barnes* [1923] VLR 27, *Whitlock v Brew* (1968) 118 CLR 445, *Mercantile Credit v Comblas* (1982) 40 ALR 75 at 84, *G Scammell & Nephew v Ouston* [1941] AC 251, *Electric Acceptance Pty Ltd v Doug Thorley Caravans (Aust) Pty Ltd* [1981] VR 799 at 820-821 per Brooking J.

⁷ *Marquett v Walsh* (1929) 29 SR (NSW) 298

⁸ See for example, *Esso Petroleum Co Ltd v Harper's Garage (Stourport) Ltd* [1968] AC 269 at 295; [1967] 1 All ER 699 at 705-6; *Marshall v NM Financial Management Ltd* [1997] 1 WLR 1527 at 1532 per Millett LJ (with whom the other members of the English Court of Appeal agreed)

⁹ *Mason v Provident Clothing and Supply Co Ltd* [1913] AC 724, *Nicolene Ltd v Simmonds* [1953] 1 QB 543, *Demtear Pty Ltd v Abelian Pty Ltd* [2004] QSC 103 at [41].

¹⁰ See for example, *Attwood v Lamont* (1920) 3 KB 571, *Allison v BDO (NSW-Vic) Pty Ltd* [2010] VSC 35 and *Emeco International Pty Ltd v O'Shea (no 2)* [2012] WASC 348.

¹¹ *SST Consulting Services Pty Ltd v Rieson* (2006) 225 CLR 516 at 531 per Gleeson CJ, Gummow, Hayne, Heydon and Crennan JJ affirming *McFarlane v Daniell* (1938) 38 SR (NSW) 337 at 345 per Jordan CJ. See also *United Group Rail Services Ltd v Rail Corporation of New South Wales* (2009) NSWCA 177, *Whitlock v Brew* (1968) 118 CLR 445, *David Jones Ltd v Lunn* (1969) 91 WN (NSW) 468 and *Macdonald Holdings (Qld) Pty Ltd v Nikolas* (2007) NSWSC 552.

¹² For a discussion of this provision, see *Orton v Melman* (1981) 1 NSWLR 583, *ICT Pty Ltd v Sea Containers Ltd* (1995) 39 NSWLR 640, *Reed Business Information v Seymour* (2010) NSWSC 790 and *Wentworth Partners Estate Agents Pty Ltd (t/as Re MAX Gold) v Gordony* (2007) NSWSC 1135.

¹³ See the High Court's analysis of s4L in *SST Consulting Services Pty Ltd v Rieson* (2006) 225 CLR 516 at 533 per Gleeson CJ, Gummow, Hayne, Heydon and Crennan JJ, where the court found, among other things, that on proper construction the provision required rather than permitted severance of the offending contractual term.

¹⁴ See also, in relation to the severability of a breach of contract for the sale of goods, s38 of the *Goods Act 1958* (Vic), s33 of the *Sale of Goods Act 1896* (Qld), s31 of the *Sale of Goods Act 1895* (SA), s31 of the *Sale of Goods Act 1895* (WA), s34 of the *Sale of Goods Act 1972* (NT), s36 of the *Sale of Goods Act 1896* (Tas) and s35 of the *Sale of Goods Act 1954* (ACT). See also, in relation to contracts, s4 of the *Frustrated Contracts Act 1959* (Vic), s5 of the *Frustrated Contracts Act 1988* (SA) and s13 of the *Fair Trading Act 2010* (WA). Finally, see also s114 of the *Industrial Relations Act 1979* (WA).

- section 7 of the *Contracts Review Act 1980* (NSW) prescribes that the relief a court may grant against an unjust contract extends to severing one or more terms
- other statutes such as section 69F of the *Banking Act 1959* (Cth) and section 7 of the *Superannuation Guarantee Charge Act 1992* (Cth) refer to severability in a more limited way.

1.2 Why is a severability clause used in a contract?

A severability clause is often used in a contract to document the parties' intention that, if a term of their contract is found to be void or unenforceable, it may be severed and that the remaining terms of the contract will continue to operate.

However, when used in this generic form there is some debate about whether there is any consequence or increased risk if the clause is **not** included in a contract. That is, a court will likely look to sever part of a contract (either pursuant to legislative power or as a matter of common law) whether or not there is an express severability provision, and whether or not there is express wording purporting to extend the scope of the power to sever. Accordingly, much of its value may be attributed to the commercial position that is brought to bear when parties contest the validity of a particular clause.

2 The better way to use a severance clause

The most effective way to use a severance clause is to tailor it to your client's needs and to the specific transaction contemplated by the contract.

Possibilities include, but are not limited to, using this clause to specify:

- Non-severable clauses in the contract:** A court may sever a term from a contract such that the balance of the contract is not affected, but it may no longer be a contract that your client wishes to be a party to. In that case, a party may prefer that the whole agreement become unenforceable. To prevent this, particular terms which the parties do not want to be severable should be expressly identified, and/or the contract should include an indemnity or a right to terminate in relation to the effect of severance in a particular instance.
- A mechanism for modification or renegotiation of offending terms:** This clause could also provide a mechanism for modification or renegotiation (to the extent necessary), in the event that clauses or parts of the contract are challenged as void or unenforceable (ie, to give the parties greater control over the process and to mitigate the necessity to litigate).¹⁵
- Jurisdictional limits:** Depending on the circumstance, it may be relevant for this clause to state that, if a term is unenforceable or invalid in one jurisdiction and not in others, it can be severed in that jurisdiction but should remain in operation for the others. (**NB:** While clauses dealing with severance in a particular jurisdiction are becoming reasonably common, there is little law directly on the subject and it remains unclear whether severance of this nature is actually possible).
- A mechanism with variable fall-back options:** This could be useful, for instance, if the contract includes a restraint of trade clause. In that case, the severance clause should refer to, or the restraint of trade clause itself should be drafted in a way that facilitates, severance by setting out several variables so that parameters can be severed with a fall back option remaining in place.¹⁶ Parties should spell out the variables desired and specify the order in which they should apply. That way, if any term is found to be invalid it is absolutely clear what should apply instead. This type of provision should also expressly state that the severability clause is included as a precaution against invalidity only and is subject to severance.

¹⁵ *Donwin Productions Ltd v Emi Films Ltd* [1984] CLR 365.

¹⁶ R E McGarvie *Illegality and Severability in Contracts* (1977-1978) 13 *University of Western Australia Law Review* 1, 15. See, for example, *Laybutt v Amoco Australia Pty Ltd* (1974) 132 CLR 57.

3 How effective is it?

A severance clause will **add value** to your contract if it is tailored to your client's needs and to the specific transaction contemplated by the contract. However, as mentioned above, when used in the generic form, there may well be no consequence or increased risk if it is not included in a contract.

While a generic severance clause is helpful from an evidentiary perspective (ie to clearly demonstrate the parties' intention), it is not determinative of whether severance can occur.¹⁷ In certain circumstances, provisions cannot be severed and a court will not rewrite a contract to achieve severability.¹⁸ Given this, if a provision is declared void or unenforceable and cannot be severed, it may well render the whole contract void or unenforceable (as applicable), despite the presence of the severance clause.¹⁹

In certain cases, the use of a severance clause may also be superseded by other provisions. For example, contracts intended to operate over an extended period of time or which may be subject to frequent changes in legislation, may contain a "change in law" clause dealing with this eventuality, or if there is a *force majeure* clause in the contract, a change in law resulting in illegality is sometimes listed as a *force majeure* event.

4 Drafting and reviewing the clause

For reasons already discussed, it is unlikely to make any material difference whether a generic severance clause is, or is not, included in a contract. However, great value and benefit can be achieved if the contract includes a severance clause that is specifically tailored to the deal and to your client (see item **Error! Reference source not found.** above). A court will look to effect the intentions of the parties in any respect.

¹⁷ *Living Design (Home Improvements) Limited v Davidson* [1994] IRLR 67.

¹⁸ *Lindner v Murdock's Garage* (1950) 83 CLR 628.

¹⁹ *Bennett v Bennett* [1952] 1 KB 249.

46 Sponsor checklist

Introduction

This paper provides a general checklist of issues to be considered by project Sponsors during the development of a facility in order to protect their position. It focuses on construction and commissioning issues.

The checklist identifies specific risk areas and suggests strategies which may be taken to alleviate those potential risks. It is intended as a general guide only and would need to be considered in light of the specific circumstances of each project including the project agreements.

Protection of completion date

General Issues

- Ensure correspondence on any extension of time claims comply with the notice requirements under the EPC Contract.
- Carefully consider the wording of the extension of time clause in order to reject claims that do not comply with threshold requirements.
- Ensure any requirements for the Lenders' engineer approval of extension of time claims are complied with under the EPC Contract and the tripartite or direct agreement.
- Continually monitor possibility of reaching commercial positions with the Contractor regarding extensions of time if they are in the best interests of the project and can assist in accelerating completion. Any agreements must be documented effectively.

Implementation of delay claim process

- Implement a comprehensive delay claim process which must include:
 - Reviewing compliance by the Contractor with any conditions precedent in the extension of time clause.
 - Maintaining an extension of time register which allows for effective logging by the Sponsors' representative of the respective claims and the documentation supporting those claims.
 - Ongoing analysis by the Sponsors' representative of specific delay claims and gathering of information to rebut claims. This information should be gathered as close to the time of the claim as possible.
- Implementation of a comprehensive and vigilant delay claim process will assist the Sponsors' representative in protecting the rights of the Sponsors. For example, if a claim is made for failure to provide sufficient consumables, a review at the time of the delay event may allow the Sponsors' representative to refute the claim by showing that the Contractor's use of previous supplies was wasteful and, as a result, no extension is warranted. Leaving this review to three months after the event may make it more difficult to make that argument effectively as the people and/or documentation may not be accessible.

Protection of delay liquidated damages

General Issues

- Ensure close monitoring of extension of time claims and their impact on the position with respect to delay liquidated damages.

- Demands for payment of delay liquidated damages should be issued in a timely manner.
- Monitor status of progress payments and ability to set off progress payments in lieu of the payment of delay liquidated damages. The last thing Sponsors want is to make progress payments (or any other payments that might otherwise become due to the Contractor) in circumstances where the Sponsors have a right to withhold or deduct payment in lieu of the payment of delay liquidated damages.

Interface Issues

- Review and understand interface issues with respect to the recovery of delay liquidated damages under the EPC Contract and any obligations under the offtake agreement.
- Understand the Lenders' rights regarding the allocation or entitlement to delay liquidated damages and the flow of these funds under the relevant financing agreements.

Commercial Position

- Consider possible acceleration strategies which reduce delay liquidated damages recovery but accelerate construction. Any agreements must be documented effectively.

Protection of Sponsors' interests – Testing, performance and commercial operation

General Issues

- Undertake a review of the testing requirements under the EPC Contract and the offtake agreement and protocols developed to satisfy the respective testing requirements.
- Resolve uncertainties in the testing measurement methodology as early as possible to avoid delay and confusion.

Performance liquidated damages

- Review timing and measurement of performance testing, including any testing fuel specification issues.
- Develop procedures for repeat tests with the Contractor. For example, if a specific test is required to be repeated, any related test must also be repeated.

Consumables

- Discuss consumable requirements for commissioning and testing with the Contractor including quality issues, quantity and timing for provision.

Commercial operation

- Review the requirements for commercial operation under the offtake agreement to ensure a smooth interface with completion under the EPC Contract.
- Seek prior agreement from the offtaker for the requirements for declaring commercial operation and the necessary formal documents that need to be submitted.

O&M manuals

- Ensure adequate review has been conducted of the O&M manuals

- Spare parts
- Ensure ongoing monitoring of spare parts inventory, especially long lead time items

Protection of Sponsors' interests under the financing documents

Rights of Lenders

- Ensure understanding of the rights of Lenders under any direct or tripartite agreement with the Sponsors and Contractor.

Rights of Lenders' engineer

- Determine if the financing documents require various testing/certificates/extensions of time to be approved by an engineer appointed by the Lenders? If so, ensure the Lenders' engineer is consulted as early as possible.

Drop dead dates for completion/funding

- Monitor drop dead dates for project funding/completion and ensure that the various requirements are met.

Lenders rights claims and waivers

- Review the rights of the Lenders with respect to claims and the ability of the Sponsors and Employer's Representative to compromise claims without Lender approval.

Protection of security

Withholding progress payments

- Review contractual (or merely commercial) ability to set off progress payments in lieu of the payment of liquidated damages.

Release of retention monies

- Review contractual (or merely commercial) ability to withhold the release of retention monies in lieu of the payment of liquidated damages.

Worst case scenarios – Calling the bond

- Although in practice, the calling of a bond or a guarantee is an infrequent option, the threat or prospect of making a call can prove to be a very important commercial bargaining device.
- Calling the performance bond. Review nature of the performance bond. Is it a conditional or unconditional bond and what notification procedures are required?
- Enforcing parent company guarantees. Monitor any ongoing rights of the Sponsors under the relevant parent company guarantees. Ensure compliance with all relevant notice requirements eg, notification of any claims against the Contractor.

General administration issues

Contract administration procedures

- Ensure appropriate contract administration procedures are in place. This will enable the Sponsors to quickly identify and react to issues as they arise rather than simply responding to issues raised by the Contractor.
- Ensure all correspondence is answered in a timely manner.
- Ensure all correspondence is drawn up with care and an understanding of its possible implications. For example, correspondence may be interpreted as the Sponsors' assuming a risk for which they are not responsible under the project agreements. This may result in the Sponsors being estopped from denying responsibility for that risk.
- Best for project must be the catchcry for all discussions and correspondence. Despite the need to protect the Sponsors' commercial position, our experience from involvement in the construction phase of a number of projects has taught us that dealing with the Contractor is not only about maximising commercial positions but also about fostering relationships for mutual gain.

Communication process

- Implement a communication process which allows all parties to identify risks and take appropriate actions. Ideally, the Sponsors' representative under the EPC Contract should:
 - Meet with the construction manager at the start and end of each day
 - Organise a formal weekly meeting with the Contractor.
- Flowing from those meetings, action items and deliverables, which may include programme amendments, defect reports and environmental and safety issues should be documented and distributed. These action lists should be reported against at subsequent meetings and escalated as necessary.

Claim/event documentation system

- Implement a system which documents all correspondence and claims, including the establishment of a formal register of claims, variations, back charges, insurance issues and warranty compliance.
- Document major events immediately following their occurrence in order to protect the Sponsors' position in the event the Contractor makes a claim. Detailed records must be maintained for daily events and programme issues.
- Use of technology in contract administration must be considered to allow for the efficient and effective management of the project. For further information look at the following website: www.affinitext.com

Conclusion

Apart from the specific issues raised in the above checklist, it is clear the most effective way to protect the position of the Sponsors during the construction and commissioning phases of a project is to ensure effective administration and review procedures are established and maintained during the life of the project.

47 Unilateral discretion in construction contracts

Introduction

Construction contracts often give Owners unilateral discretions. The way in which these discretions are exercised may have unintended consequences. Set out below are some of the issues you need to be aware of when drafting such discretions, together with suggested ways of avoiding unintended consequences.

Contractual discretions generally

Many construction contracts give one party (usually the Owner) discretions to make decisions or exercise certain contractual rights. Such discretions are often linked to circumstances such as the approval of work, personnel or sub contractors, and the granting of extensions of time (in circumstances where the Contractor has not claimed an extension of time).

It is important to understand whether there are any limitations on the exercise of such discretions.

Owners

From an Owner's perspective, it is important to know whether you are limited in how you exercise a discretion, in order to avoid any challenge by the Contractor about the way in which you exercise a particular discretion.

Contractors

From a Contractor's perspective, it is important to know whether agreeing to give the Owner a contractual discretion may lead to the unrestricted exercise of that discretion, to your detriment.

Implied "fetters" on the exercise of contractual discretions

Courts in Australia have been showing an increasing willingness to imply terms of good faith and reasonableness into commercial contracts. However it is uncertain whether obligations of good faith and reasonableness are to be implied into commercial contracts generally. Despite this uncertainty, it seems that, in the absence of clear words to the contrary in the contract, courts will often be keen to impose some fetter or restriction on the way in which discretions are exercised (particularly where the discretion is wider than is necessary to protect a party's legitimate interests).

Cases in both Australia and the UK have held that contractual discretions must not be exercised unreasonably, arbitrarily, capriciously, dishonestly or for an improper purpose.

The potential uncertainty that this creates (particularly for Owners, since it is Owners who primarily have the benefit of such discretions) often prompts Owners to try to avoid any restriction being imposed on the way in which a unilateral discretion is exercised.

When will the unrestricted exercise of a discretion be permitted?

Courts will assess the purpose for which a party is given a discretion under a contract according to the particular context, and the language of the contract. In addition, courts are generally unwilling to 're-write' the agreement of parties where the parties have been dealing at arms' length, and have willingly entered into the agreement.

Therefore, any implied restriction on the exercise of a contractual discretion can be avoided if it is clear from the language and nature of the contract that the parties intended that the discretion was to be exercised without restriction. The type of language required to preclude any such restriction need only be relatively simple.

How can Owners avoid a restriction on the exercise of contractual discretions?

Unfortunately, the party exercising a discretion is unlikely to know whether exercising the discretion in a particular manner, or in particular circumstances, is unreasonable or not for a proper purpose until the other party to the contract challenges it. In addition, the party having the benefit of a discretion may not want to have to turn its attention to issues of reasonableness or proper purpose ‘in the heat of the moment’. A court will never condone dishonesty or “capricious or arbitrary” exercise of a power.

Owners should normally seek to avoid these potential uncertainties by including clear language in the contract precluding the imposition of any restriction on the exercise of a discretion. An example of such language is as follows:

*10.10 Whether or not the Contractor has made, or is entitled to make, a claim for an extension of time under this clause 10, the Owner may, **in its absolute, sole and unfettered discretion**, at any time from time to time by written notice to the Contractor, unilaterally extend the Date for Practical Completion.*

The Owner is not required to exercise its discretion under this clause 10.10 for the benefit of the Contractor, and has no obligation under this clause 10.10 to grant, or to consider whether it should grant, an extension of time.

Owners may also want to include a general clause in the contract seeking to exclude the implication of obligations of reasonableness and good faith generally. An example of such a provision is as follows:

Except where it is expressly stated that a party or another person must act in good faith or reasonably, in exercising a right, power or function under this Contract, the party or person may decide whether and in what manner it does so in its own discretion and is under no obligation to consider the interests of any other person or party. To the full extent permitted by law the parties exclude any implied terms of good faith or reasonableness.

How can Contractors ensure that discretions must be exercised reasonably?

Obviously, the existence of absolute and unrestricted discretions in a contract may have a significant impact on the position of the other party to the contract. Contractors should therefore try to include in the contract provisions requiring the Owner to exercise all discretions reasonably and in good faith. This can be achieved using a provision such as:

The Owner and the Owner’s representative must act reasonably and in good faith in determining any matter, or exercising any discretion or contractual right or power, under or in connection with the Contract.

Conclusion

All parties to a contract need to consider the implications of unilateral discretions within their contracts, and be mindful of the wording of such discretions. For more information on the subject of discretions and the restriction of these discretions within contracts, contact

48 Variation boilerplate clause

Need to know

The variation boilerplate clause regulates the manner in which a contract can be varied. The clause has important evidentiary and practical value because it encourages parties to ensure that any variations to the contract are documented and authorised by the parties. Including this clause in a contract minimises inadvertent or informal variations and helps to avoid disputes between the parties about what was and was not agreed to be varied. Outlining a clear procedure for variations also reduces the risk of waiver, which may arise where the requirements for a binding variation agreement are not met. Key considerations when drafting this clause include:

CAUTION: This clause has limited effectiveness because oral variations can occur even if prohibited by the clause. However, this clause should be included for its evidentiary value, because it documents the parties' intentions as to the agreed method of variation.

The sample clauses

Option 1 – No variation

No variation of this [*deed/agreement*] is effective unless made [*in writing/by deed*] and signed by each party.

Option 2 – No variation unless particular procedure followed

No variation of this [*deed/agreement*] is effective unless made in accordance with the following procedures: [*insert procedures*].

Option 3 – Variation by a specified person

No variation of this [*deed/agreement*] is effective unless made [*in writing/by deed*] and signed by [*an Authorised Officer of*] each party.

1 What is this clause and why is it used?

1.1 What is the variation clause?

A variation clause details whether, and the extent to which, one or more parties to a contract can amend or vary the contract and provides the procedure that must be followed to vary provisions of the contract.¹

For example, an agreement might contain a clause:

- stating that no amendment or variation can take effect unless it is in writing, signed by authorised representatives of each of the parties; or
- allowing a manufacturing party with the written consent of the other party to amend the specifications of a manufacturing agreement so long as the amendment does not change the functions of the finished product, its size and maintenance.

¹ A variation clause preserves the principle that a contract can only be varied with the consent of both parties. A unilateral variation is not binding if the parties have clearly stated that consent of both parties is required to give effect to the variation. If the parties have agreed that unilateral variations of a limited kind are permissible, then they will be binding assuming the agreement for this to happen forms part of the original agreement. See also *the Australian Consumer Law* (Schedule 2 of the *Competition and Consumer Act 2010* (Cth)) and the prohibition against 'unfair' unilateral variations rather than unilateral variations per se. This is also consistent with *Leveraged Equities Ltd and Another v Goodridge* (2011) 191 FCR 71 and the ability to agree to novation in advance without further agreement between the original party and the incoming party, with agreement between the outgoing and incoming parties being sufficient to effect the novation. Historically where a deed was altered before it became operative, the rule in *Pigot's Case* ((1614) [1588–1774] All ER Rep 50) did not invalidate it, but the obligor could not be held to the obligation in its altered form, because it had never made or assented to such an obligation. In NSW only, section 184 of the *Conveyancing Act 1919* has abolished the rule in *Pigot's Case* and provides that a material alteration to a deed (or to a dealing under the *Real Property Act 1900* (NSW)) does not by itself invalidate the instrument or render it voidable or otherwise affect any obligation under the deed. See also *Karacominakis v Big Country Developments Pty Ltd & Ors Big Country Developments Pty Ltd v Chadlace Pty Ltd J W Wall Investment Co Pty Ltd v Big Country Developments Pty Ltd & Ors Hollingsworth & Anor v Big Country Developments Pty Ltd* [2000] NSWCA 313 at [47].

1.2 What is the purpose of the variation clause?

The purpose of a variation clause is to set out the minimum requirements which the parties agree are needed to effect a change to the contract and thereby preclude all, or at the very least minimise the incidence of, variations which are not made in accordance with those formalities. The most important reason why parties include a variation clause is to ensure predictability and certainty (ie to ensure that the variation is agreed in writing).

There are, however, no guarantees that the clause will achieve its intended purpose as courts appear reluctant to reject an oral variation which is clearly intended to be binding even if the parties have included a no oral variation clause in the original contract (ie a clause which requires the variation to be in writing).

1.3 What does "variation" mean?

A "variation" alters the terms of an existing contract between the same parties. It may create a new contract, rendering the original contract of no effect, or it may keep terms of the original contract on foot, with variations or additions to those terms. A court will construe the agreement to vary to determine its effect on the original contract.²

All requirements necessary to create a valid and enforceable agreement must be satisfied to effect a variation. Any agreement that varies the terms of an existing contract must either be supported by consideration or executed as a deed.³

1.4 Are there any legal requirements for variations to be in writing?

Yes, a variation must be in writing if:

- there is a statutory requirement of writing

For example, variations to contracts for the sale of land,⁴ and variations to contracts of guarantee made in the Northern Territory, Queensland, Tasmania, Victoria and Western Australia, are required to be made in writing.

- it relates to a deed.

Variations to deeds must be made by deed to be effective at law,⁵ although in equity a simple contract is sufficient.⁶ Variations to these types of contracts must be evidenced in writing.⁷ If the writing requirement is not met, the original contract stands unaffected.⁸

2 How effective is it?

The major issue concerning this clause is its effectiveness.

2.1 Effectiveness of "no oral" variations clause

While commercial contracts often contain stipulations that they can only be varied in writing or that a purely verbal variation is not enforceable, such stipulations appear to be ineffective, except as evidence relevant to the question of whether a variation was in fact agreed.⁹

² See *Dan v Barclays Australia Ltd* (1983) 46 ALR 437 at 448 per Wilson and Dawson JJ (in dissent in result) and approved in *Commissioner of Taxation v Sara Lee Household & Body Care (Australia) Pty Ltd* (2000) 201 CLR 520 at 534.

³ *Williams v Roffey Bros & Nicholls (Contractors) Limited* [1991] 1 QB 1.

⁴ *Conveyancing Act 1919* (Cth).

⁵ *Berry v Berry* [1929] 2 KB 316 at 319.

⁶ *McDermott v Black* (1940) 63 CLR 161; *Berry v Berry* [1929] 2 KB 316 at 319; *Pappas v Rimar Pty Ltd* (1984) 55 ALR 327 at 333.

⁷ *Phillips v Ellinson Bros Pty Ltd* (1941) 65 CLR 221 at 243-4.

⁸ *Phillips v Ellinson Bros Pty Ltd* (1941) 65 CLR 221 at 243-4.

Courts will give due weight to the parties' express intention that no oral variations should be effective, but that express intention appears to give way in the face of clear evidence of an oral variation agreed by individuals who clearly had both the authority and intention to make it. Ellicott J noted in *Crothall Hospital Services (Aust) Ltd (1981) 36 ALR 567 at 567*:

"It is open to the parties to a written contract to vary it. This may be done in writing or, except where the contract is required by law to be evidenced in writing, by oral agreement. The agreement to vary may be express or implied from conduct."

It is doubtful whether the existence of a variation clause in an original contract would protect a party from being bound (by way of contract or estoppel) to a subsequent variation if:

- that party has engaged in conduct that amounts to a clear representation that it agrees to the variation
- the other party to the contract did in fact act on the representation.

Nevertheless, there is an important evidentiary and practical value to the clause. It encourages the parties to ensure that any variation is documented and authorised by all parties, thereby helping to avoid any dispute between them about what was and was not agreed to be varied.

This does not, of course, apply where there is a statutory requirement of writing for a contract.

2.2 Effectiveness of procedural clauses

It is not certain that a procedural clause renders invalid any variations made not made in compliance with it, since the parties may, when making a variation, agree implicitly or even expressly to vary or ignore the procedure set out in the clause.

2.3 Consideration

A variation of an existing contract requires fresh consideration. The promise to perform an existing contractual duty is not consideration to sustain a variation.¹⁰ As stated by Mason J in *Wigan v Edwards (1973) 47 ALJR 586 at 594*:

"The general rule is that a promise to perform an existing duty is no consideration, at least when the promise is made to the promisee under that contract, and it is to do no more than the promisor is bound to do under that contract. The rule expresses the concept that the new promise, indistinguishable from the old, is an illusory consideration".

For example, if parties contract on the basis of a fixed price for performance of services and the plaintiff is able to obtain a promise of extra payment in exchange for the promised performance of services, there would be no consideration provided by the plaintiff because there is no detriment in doing what was already owed and no extra benefit to the defendant in receiving what is due. The promise of extra payment is of no effect.¹¹

However, if a party has made a new promise which goes beyond the pre-existing contractual duty, this may be sufficient to constitute consideration.¹² Generally, courts look to find consideration in contracts. In *Williams v Roffey Bros & Nicholls (Contractors) Ltd*¹³ and *Musumeci v Winadell Pty Ltd*¹⁴ it has been held that consideration may be found in some distinct factual benefit to the promisor in performing the existing

9 *Liebe v Molloy (1906) 4 CLR 347 at 353-5; Commonwealth v Crothall Hospital Services (Aust) Ltd (1981) 36 ALR 567 at 567; Update Constructions Pty Ltd v Rozelle Child Care Centre Ltd (1990) 20 NSWLR 251; GEC Marconi Systems Pty Ltd v BHP Information Technology Pty Ltd [2003] FCA 50 at [291], [394]-[395], [467]. The issues raised by 'no oral' variation clauses are discussed at length by Finn J in *GEC Marconi Systems* at [213]-[223].*

10 *Stilk v Myrick (1809) 170 ER 1168.*

11 Seddon, N, Bigwood, R, Ellinghaus, M, *Cheshire and Fifoot Law of Contract*, 10th ed, 2012, Lexis Nexis at p203.

12 *Hartley v Ponsonby (1857) 7 E&E 872; 119 ER 1471; North Ocean Shipping Co Ltd v Hyundai Constructions Co (The Atlantic Baron) [1979] QB 705; [1978] 3 All ER 1170.*

13 [1991] 1 QB 1; [1990] 1 All ER 512.

14 (1994) 34 NSWLR 723.

contractual duty (for example, saving the promisor from having to find another Contractor, streamlining payment schemes).

In practice, many commercial parties document their permitted variations by deed or by referring to the payment of a small sum by way of consideration in the written documentation. These methods are designed to alleviate the risk of disputes over whether valid consideration (whether “fresh” or a “practical benefit”) was given to support the variation.

2.4 Australian Consumer Law

Relevantly, a term in a standard-form consumer contract (as defined in the Australian Consumer Law (*Schedule 2 of the Competition and Consumer Act 2010* (Cth) (ACL) that permits, or has the effect of permitting one party, but not another party, to vary the terms of the contract may be unfair and void under the ACL.

3 Drafting and reviewing the clause

3.1 Should I always include it, and what happens if I don't?

The variation clause has real utility in commercial practice as it is likely to protect parties against casual and unfounded allegations that variations have been made. A variation clause should always be inserted for its evidentiary value in demonstrating the parties' intentions as to the agreed method of variation. Unless there is clear evidence that all parties objectively intended to vary the contract, a court would not find a variation.

If you do not include a variation clause in your contract, assuming the contract is not one which is required by law to be in writing (eg contracts for the sale of land or certain contracts of guarantee etc), then the parties would be free to amend or vary their agreement in writing or orally.

3.2 When, if ever, should I amend the clause?

Specific legislation may affect the requirements of a variation. It is important that you amend the sample variation clause to reflect any applicable legislative requirements to your contract to ensure that any subsequent variation is valid.

For example, where under statute of frauds legislation, the original contract is required to be in writing, a variation must also be in writing. If it is not, the original contract stands unaffected.¹⁵

4 Other practical considerations

Variation distinguished from other related legal concepts

Variation must be distinguished from rescission, novation, forbearance, waiver, anticipatory breach, collateral contracts and counter offers:

- **Rescission:**¹⁶ May be distinguished from variation based upon the intention of the contracting parties, which may be express or implied. *In Morris v Baron & Co*,¹⁷ Viscount Haldane said it is essential, if the agreement is to amount to a complete rescission, “*that there should have been made manifest the intention in any event of a complete extinction of the first and formal contract, and not merely the desire of an alteration, however sweeping, in terms which still leave it subsisting*”
- **Novation:** Is comprises a tripartite agreement that creates a new contract with different parties in substitution (and supersession) of the original contract, while variation retains and only alters the original agreement

¹⁵ *Tallerman & Co Pty Ltd v Nathan's Merchandise (Vic) Pty Ltd* (1957) 98 CLR 93 at 113 (Dixon CJ and Fullagar J).

¹⁶ An agreement to rescind (or terminate) the contract discharges the parties from the duty to perform their contractual obligations.

¹⁷ [1918] AC 1 at 19 per Viscount Haldane. See also *Dan v Barclays Australia Ltd* (1983) 46 ALR 437 at 448 per Wilson and Dawson JJ (in dissent in result) and approved in *Commissioner of Taxation v Sara Lee Household & Body Care (Australia) Pty Ltd* (2000) 201 CLR 520 at 534.

- **Forbearance or waiver:** Of a right under the contract or of a particular mode or manner of performance does not amount to a variation of the terms of that contract and the parties cannot sue on it. For instance, parties cannot sue for not delivering at an appointed time or cannot refuse delivery at the time
- **Anticipatory:** Breach of contract is independent from a variation to the contract. It arises where a non-breaching party terminates an agreement because, prior to the time when performance falls due, it becomes clear that another party cannot,¹⁸ or will not,¹⁹ fulfil their obligation/s under that agreement. Provided the breach is sufficiently serious,²⁰ it is the non-breaching party's exercise of their right to terminate that gives rise to the anticipatory breach of contract. This action is not related to, and does not equate to, a variation of contract
- **Counter offer:** Might be framed as an acceptance conditional upon the offeror's agreement to vary the terms of the offer (but is usually considered as a fresh offer that destroys the original offer, which is no longer capable of acceptance). Counter-offers occurring prior to contract formation are outside the scope of variations contemplated by the sample variation clause
- **Collateral Contracts:** (with the same parties as the main agreement) Augment the obligations in the main agreement and confer additional rights and obligations on the parties, but do not vary the original terms.

18 *Sunbird Plaza Pty Ltd v Maloney* [1988] HCA 11, [26] (Mason CJ), [46] (Gaudron CJ); both citing *Rawson v Hobbs* [1961] HCA 72, [10].

19 *Rawson v Hobbs* [1961] HCA 72, [10] (Dixon CJ); *DTR Nominees Pty Ltd v Mona Homes Pty Ltd* [1978] HCA 12, [24] (Jacobs, Mason and Stephen JJ).

20 See *Hochster v De La Tour* [1853] 118 ER 922; *Francis v Lyon* [1907] 4 CLR 1023; *Loughridge v Lavery* [1969] VR 912; *Afos Shipping Co SA v Pagnan* [1983] 1 All ER 449.

49 What is gross negligence?

Introduction

It is often standard industry practice for the party performing the services or carrying out the work (the Contractor) to request and obtain from the other party (the Principal) a clause limiting or excluding the Contractor's liability for, as an example, indirect or consequential loss.

If the Principal accepts this, the Principal will in turn require the limitation clause to exclude certain situations where it would be unjust for the Contractor to obtain the benefit of that exclusion of limitation. Typically, these situations include liability for fraud or criminal acts or for 'gross negligence'.

An example of such a clause is:

The total liability of the Contractor to the Owner under this contract will not exceed the contract price. This clause does not limit the liability of the Contractor in cases of:

- (a) *fraud*
- (b) *gross negligence*
- (c) *illegal or unlawful acts.*

The term "fraud" is well defined and understood. Similarly, the law is clear on what constitutes "illegal or unlawful acts". However, the term "gross negligence" does not currently have a settled meaning.

What is 'gross negligence'?

The Concept of Negligence

Since the term "gross negligence" is clearly meant to cover something more than just ordinary negligence, it is useful to summarise the legal definition of "negligence".

Negligence is the failure by a party to fulfil its duty of care owed to another party, to the standard of care legally required, such that material damage results.¹

A duty of care arises:

- where there is a risk of harm, and this risk is foreseeable by a reasonable person;²
- where there is a legally recognised relationship of proximity between the parties.³

The standard of care that is required to be met, in order for that party to fulfil its duty of care, is assessed "objectively". This means that the standard of care is what a hypothetical "reasonable person" of ordinary prudence,⁴ or of ordinary care and skill,⁵ engaged in the type of activity⁶ in which the defendant was engaged in, would be expected to adhere to.

¹ *Vaughan v Taff Vale Railway Co* (1860) 157 ER 1351 (Willes J); *Heaven v Pender* (1883) 11 QBD 503, 507; *Cunnington v Great Northern Railway Co* (1883) 49 LT 392.

² *Donghue v Stevenson* [1932] AC 562, 619 (Lord Macmillan); *Glasgow Corporation v Muir* [1943] AC 448.

³ *Caparo Industries plc v Dickman* [1990] 2 AC 605, 617-618 (Lord Bridge).

⁴ *Vaughan v Menlove* (1837) 132 ER 490, 497 (Tindal CJ).

⁵ *Heaven v Pender* (1883) 11 QBD 503, 509 (Brett MR).

What is gross negligence?

Is there a higher standard of care for gross negligence?

The term “gross negligence” has been commonly used and accepted in criminal cases, however, there is no consensus as to what the term actually means in civil cases.

There are two contrary views:

- There is no distinction between negligence and “gross negligence”. The prefix “gross” is superfluous.
- There is a distinction between negligence and “gross negligence”. “Gross negligence” in the civil context is akin to the very high standard of negligence or recklessness required to establish criminal responsibility.

View 1: No Distinction

Under English and Australian law, the first (and traditional) view was enunciated in *Hinton v Dibble*⁷, where Lord Denman famously stated in the English High Court that “*it may well be doubted whether between gross negligence, and negligence merely, any intelligible distinction exists.*”⁸

This decision was followed by *Pentecost and Anor v London District Auditor and Anor*,⁹ where the High Court stated that it was meaningless to attach an epithet to negligence, as a person is either guilty of negligence, or they are not guilty of negligence. The Court went so far as to say that “gross negligence is not known to the English common law so far as civil proceedings are concerned.”¹⁰

View 2: There Are Different Categories of Negligence

In England, the Privy Council has long held that there are degrees of negligence and that it would be a mistake not to observe this distinction merely because of the difficulty entailed in drawing a strict line between negligence and “gross negligence”.¹¹

The English courts distinguish “gross negligence” from ordinary negligence in situations where the negligent conduct is particularly severe and offensive.

In Australia, the courts have never expressly enunciated that there are different categories of negligence but they have used the term “gross negligence” to describe negligence which is worse than ordinary negligence.

The modern position

Contractual and Statutory Use

Despite the fact that the courts see no great distinction between negligence and gross negligence, when parties use the term “gross negligence” the courts will try to give effect to the intention of the parties. This means that the courts will, on the merits of each case, attempt to distinguish between “mere” negligence and “gross” negligence.¹² In other words, they attribute a sensible meaning to the phrase.¹³

For example, in the English case of *The Hellespont Ardent*¹⁴ the effect of indemnity and exemption clauses was considered. This case involved a clause expressly indemnifying or exempting a party from liability in the event

6 *Wilsher v Essex Area Health Authority* [1987] QB 730, 750-751 (Mustill LJ).

7 (1842) 2 QB 646.

8 *Ibid.*

9 [1951] 2 KB 759

10 *Ibid.*, 764 (Lynskey J)

11 *Giblin v McMullen (1868) LR 2 PC 317* (Lord Chelmsford), citing *Beal v South Devon Railway Company* (1864) 159 ER 560.

12 *Armitage v Nurse* [1997] 2 All ER 705.

13 English Trust Law Committee, UK Parliament, *Trustee Exemption Clauses* (2000), [2.10].

14 *Red Sea Tankers Ltd and Others v Papachristidis and Others Henderson, Baarma and Bouckley (Third Parties) (The 'Hellespont Ardent')* [1997] 2 Lloyd's Rep 547, 586 (Mance J).

What is gross negligence?

of negligence. The question was whether the immunity provided by the exemption clause covered gross negligence, or whether only ordinary negligence was exempted. The High Court held that the distinction between negligence and gross negligence was potentially material, as the contractual term was clearly intended to represent something more than a failure to exercise the standard of care that would ordinarily constitute “mere” negligence.¹⁵ The Court found that “gross” negligence includes conduct undertaken with actual apprehension of the risks involved and serious disregard of or indifference to an obvious risk.¹⁶

Conclusion

In negotiating contracts, a Contractor will be unlikely to agree to a liability clause that does not limit its liability for negligence but may, however, agree to be liable for “gross negligence”. If a reference to gross negligence is included it is likely that the courts will impose a higher burden of proof on the Owner to show negligence. In other words it will be harder to argue that, for example, the Contractor’s liability should not be capped. However, because there is no accepted legal meaning of gross negligence in civil law the results may be arbitrary and therefore unforeseeable.

As a result of the lack of a clear definition of “gross negligence” and the need for certainty in a business relationship, we recommend that the term be avoided if possible.

Under English law, aggravated and punitive damages are not available for breach of contract,¹⁷ so the use of the word “gross” will not be of any extra benefits.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ *Kralj v McGrath* [1986] 1 All ER 54.

50 Schedule – Variances in definitions

Scope of application to 'construction contracts'

NSW Section 4

Construction contract is defined to mean a contract or other arrangement under which one party undertakes to carry out construction work, or to supply related goods and services, for another party.

Section 7

The Act applies to any construction contract (written or oral), even if the contract is expressed to be governed by the law of another jurisdiction. The Act does not apply to construction contracts:

- that form part of a loan agreement, contract of guarantee or contract of insurance under which a recognised financial institution undertakes to:
 - lend money or to repay money lent
 - guarantee payment of money owing or repayment of money lent
 - provide an indemnity with respect to construction work carried out, or related goods and services supplied, under the construction contract
- for the carrying out of residential building work (within the meaning of the *Home Building Act 1989* (NSW)) on a site (or part of a site) used or proposed to be used as a residence by the party for whom the work is carried (an exempt residential construction contract: s4)
- under which it is agreed that the consideration payable is to be calculated otherwise than by reference to the value of the work carried out or the value of the goods and services supplied.

Section 7(3)

The Act also does not apply to a construction contract to the extent to which it contains provisions under which a party undertakes to:

- lend money or to repay money lent;
- guarantee payment of money owing or repayment of money lent; or
- provide an indemnity with respect to construction work carried out, or related goods and services supplied, under the construction contract.

VIC Section 7

Substantially the same as NSW. The Act does not apply to contracts governed by the *Domestic Building Contracts Act 1995* (Vic), except:

- contracts where the building Owner is in the business of building residences and the contract is entered into during the course of that business; or
- contract is incidental to work carried out under another construction contract.

QLD Section 3

Substantially the same as NSW. The Act does not apply to contracts governed by the *Domestic Building Contracts Act 2000* (Qld).

Note: In Queensland subContractors may choose between the Act and the *SubContractors' Charges Act 1974* (Qld). This legislation enables subContractors to secure a statutory charge over money payable (or to be paid in the future) to them by their Contractor without having first obtained a court judgment for the alleged debt. The giving of a notice of claim of charge under this legislation effectively suspends any rights that a subContractor may have under the *Building and Construction Industry Payments Act 2004* and prevents them from taking any steps to recover outstanding money under that Act.

Scope of application to 'construction contracts'

SA Section 7

Identical drafting to NSW. The Act does not apply to contracts governed by the *Building Work Contractor Act 1995* (SA).

ACT Section 9

Substantially the same as NSW except as stated below. The Act does not apply to contracts governed by the *Building Act 2004* (ACT).

TAS Section 7

Substantially the same as NSW except that:

the Act applies to a supply in Tasmania, even though the construction work is being performed outside Tasmania; and

the Act also applies to residential structures and resident Owners.

WA Section 3

Construction Contract is defined to mean a contract or other agreement, whether in writing or not, under which the Contractor has one or more of the following obligations:

- carry out construction work;
- supply to the site any goods that are related to the construction work;
- provide (on or off site) professional services which are related to the construction work; and
- provide onsite services that are related to the construction work.

Section 7(2)

The Act applies to any construction contract (written or oral or part thereof), irrespective of where the contract was entered into or whether it is expressed to be governed by the law of another jurisdiction.

Section 7(3)

The Act does not apply to construction contracts to the extent to which it contains provisions under which a party undertakes to carry out construction work, or supply related goods and services, as an employee of the party for whom the work is to be carried out or to whom the related goods and services are to be supplied.

NT Sections 5 and 9: Identical drafting to WA.

Scope of definition of 'construction work'

NSW Section 5(1)

Construction work means any of the following work:

- the construction, alteration, repair, restoration, maintenance, extension, demolition or dismantling of buildings or structures forming, or to form, part of land (whether permanent or not)
- the construction, alteration, repair, restoration, maintenance, extension, demolition or dismantling of any works forming, or to form, part of land, including walls, roadworks, power-lines
- telecommunication apparatus, aircraft runways, docks and harbours, railways, inland waterways, pipelines, reservoirs, water mains, wells, sewers, industrial plant and installations for purposes of land drainage or coast protection
- the installation in any building, structure or works of fittings forming, or to form, part of land, including heating, lighting, air-conditioning, ventilation, power supply, drainage, sanitation, water supply, fire protection, security and communications systems
- the external or internal cleaning of buildings, structures and works, so far as it is carried out in the course of their construction, alteration, repair, restoration, maintenance or extension
- any operation which forms an integral part of, or is preparatory to or is for rendering complete, work of the kind referred to in the above paragraphs including:
 - site clearance, earth-moving, excavation, tunnelling and boring
 - the laying of foundations

Scope of application to 'construction contracts'

- the erection, maintenance or dismantling of scaffolding
- the prefabrication of components to form part of any building, structure or works, whether carried out on-site or off-site
- site restoration, landscaping and the provision of roadways and other access works
- the painting or decorating of the internal or external surfaces of any building, structure or works
- any other work of a kind prescribed by the regulations for the purposes of this subsection.

Section 5(2)

Construction work does not include:

- the drilling for, or extraction of, oil or natural gas;
- the extraction of minerals, including tunnelling or boring, or constructing underground works, for that purpose; or
- any other work of a kind prescribed by the Regulations. Currently, the Regulations do not prescribe any other kind of excluded work.

Section 6

Related Goods and Services means any of the following goods and services:

- materials and components to form part of any building, structure or work arising from construction work
- plant or materials (whether supplied by sale, hire or otherwise) for use in connection with the carrying out of construction work
- the provision of labour to carry out construction work
- architectural, design, surveying or quantity surveying services in relation to construction work
- building, engineering, interior or exterior decoration or landscape advisory services in relation to construction work
- goods and services of a kind prescribed by the regulations for the purposes of this subsection.

VIC Section 5

Identical to the NSW definition.

QLD Section 10

Identical to the NSW definition save for some minor wording and syntax changes and the express inclusion of the testing of soils and road making materials.

Also includes building work within the meaning of the *Queensland Building and Construction Commission Act 1991* (QLD), namely:

- the erection or construction of a building
 - the renovation, alteration, extension, improvement or repair of a building
 - the provision of lighting, heating, ventilation, air conditioning, water supply, sewerage or drainage in connection with a building
 - any site work (including the construction of retaining structures) related to work of a kind referred to above
 - the preparation of plans or specifications for the performance of building work
 - contract administration carried out by a person in relation to the construction of a building designed by the person
 - fire protection work
 - carrying out site testing and classification in preparation for the erection or construction of a building on the site
 - carrying out a completed building inspection
 - the inspection or investigation of a building, and the provision of advice or a report, for termite management systems for the building, and termite infestation in the building.
-

Scope of application to ‘construction contracts’

SA Section 5

Substantially the same as the NSW definition and includes fencing work.

ACT Section 7

Substantially the same as the NSW definition.

Also includes building work within the meaning of the Building Act 2004 (ACT), namely:

- work in relation to the erection, alteration or demolition of a building, and includes disposal of waste materials generated:
 - by the alteration of a building other than a building excluded under the regulations
 - by the demolition of a building (but not part of the building)
- work in relation to repairs of a structural nature to a building.

TAS Section 5

Incorporates most of the elements of NSW definition but with the addition of passenger and goods lifts, plumbing installations, and alterations in terminology (“docks and harbours” has been replaced by “marine infrastructure” and “power lines” has been replaced by “energy infrastructure”).

WA Section 4(2)

Construction work means any of the following work on a site in Western Australia, whether on land or off-shore:

- reclaiming, draining, or preventing the subsidence, movement or erosion of, land
- installing, altering, repairing, restoring, maintaining, extending, dismantling, demolishing, or removing, any works, apparatus, fittings, machinery, or plant, associated with any work referred to above
- constructing the whole or a part of any civil works, or a building or structure, that forms or will form, whether permanently or not and whether in WA or not, part of land or the sea bed whether above or below it
- fixing or installing on or in any thing referred above and any fittings forming, or to form, whether permanently or not, part of the thing, including:
 - fittings for electricity, gas, water, fuel oil, air, sanitation, irrigation, telecommunications, air-conditioning, heating, ventilation, fire protection, cleaning, the security of the thing, and the safety of people
 - lifts, escalators, insulation, furniture and furnishings
- altering, repairing, restoring, maintaining, extending, dismantling, demolishing or removing any thing referred to above or any fittings that form part of that thing
- any work that is preparatory to, necessary for, an integral part of, or for the completion of, any work referred to above, including:
 - site or earth works, excavating, earthmoving, tunnelling or boring
 - laying foundations
 - erecting, maintaining or dismantling temporary works, a temporary building, or a temporary structure including a crane or other lifting equipment, and scaffolding
 - cleaning, painting, decorating or treating any surface
 - site restoration and landscaping
- any work that is prescribed by regulations to be construction work for the purposes of this Act.

Civil works includes:

- a road, railway, tramway, aircraft runway, canal, waterway, harbour, port or marina
- a line or cable for electricity or telecommunications
- a pipeline for water, gas, oil, sewage or other material
- a path, pavement, ramp, tunnel, slipway, dam, well, aqueduct, drain, levee, seawall or retaining wall
- any works, apparatus, fittings, machinery or plant associated with any works referred to above.

Scope of application to 'construction contracts'

Section 4(3)

Construction work does not include any of the following work on a site in Western Australia, whether on land or off-shore:

- drilling for the purposes of discovering or extracting oil or natural gas, whether on land or not
- constructing a shaft, pit or quarry, or drilling, for the purposes of discovering or extracting any mineral bearing or other substance
- constructing any plant for the purposes of extracting or processing oil, natural gas or any derivative of natural gas, or any mineral bearing or other substance
- constructing, installing, altering, repairing, restoring, maintaining, extending, dismantling, demolishing, or removing, wholly artistic works, including sculptures, installations and murals
- work prescribed by the regulations not to be construction work for the purposes of this Act.

Section 5

Goods and services are related to the construction work if they are:

- materials or components (whether pre-fabricated or not) that will form part of any thing referred to in ss4(2)(b) or 4(2)(c) or of any fittings referred to in s4(2)(d)
- any fittings referred to in s4(2)(d) (whether pre-fabricated or not)
- plant or materials (whether supplied by sale, hire or otherwise) for use in connection with the carrying out of the construction work at the site of the construction work
- services that are provided by a profession and that relate directly to construction work or to assessing its feasibility (whether or not it proceeds):
 - including surveying, planning, costing, testing, architectural, design, plan drafting, engineering, quantity surveying, and project management, services; but
 - not including accounting, financial, or legal, services.

NT Section 6

Identical drafting to WA.

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