

Position paper on performance liquidated damages – Power projects



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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.

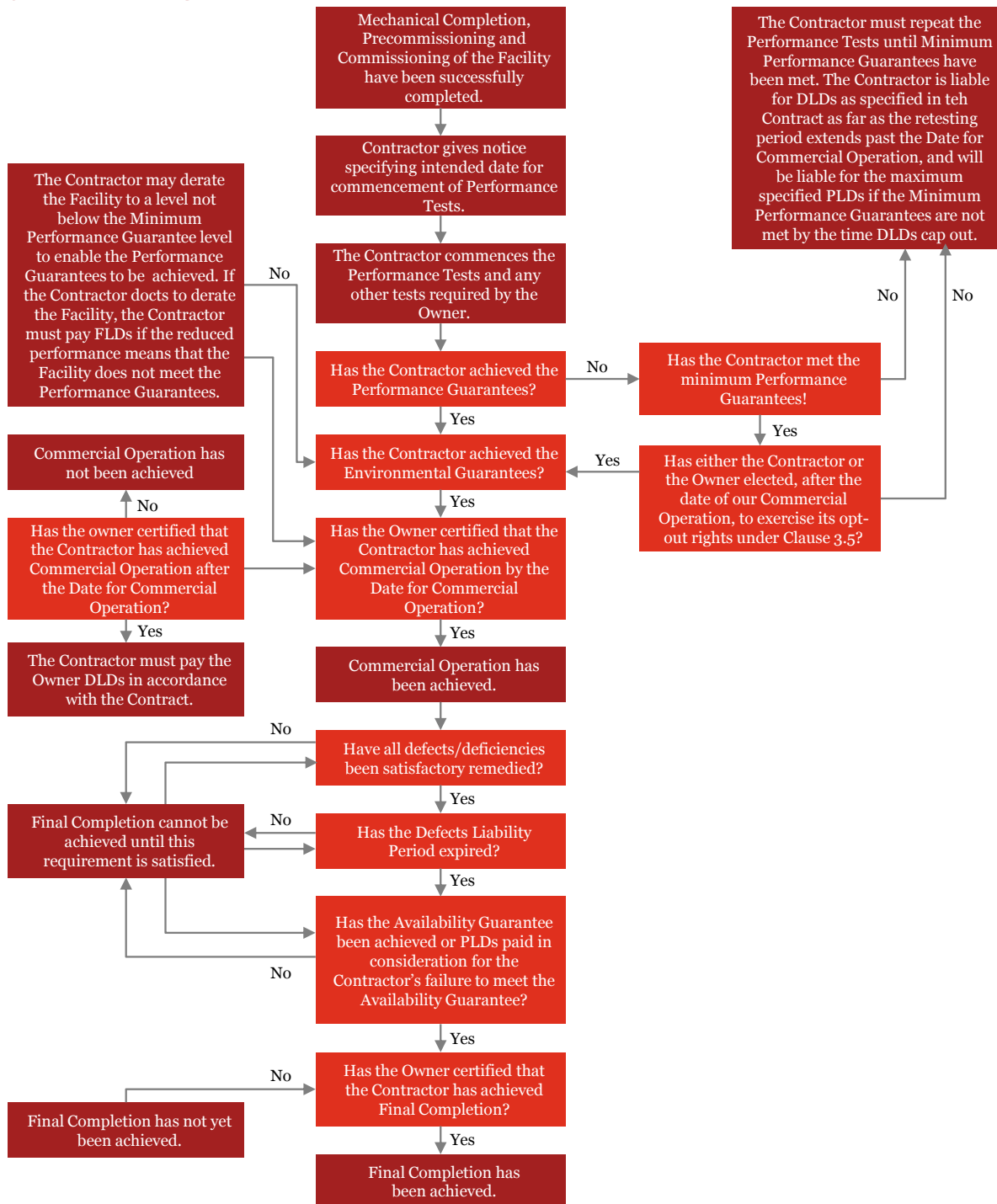
Spare Parts means the spare parts the Contractor is obliged to provide pursuant to the contract that must, as a minimum, comprise the parts listed in the [schedule of project technical requirements].

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

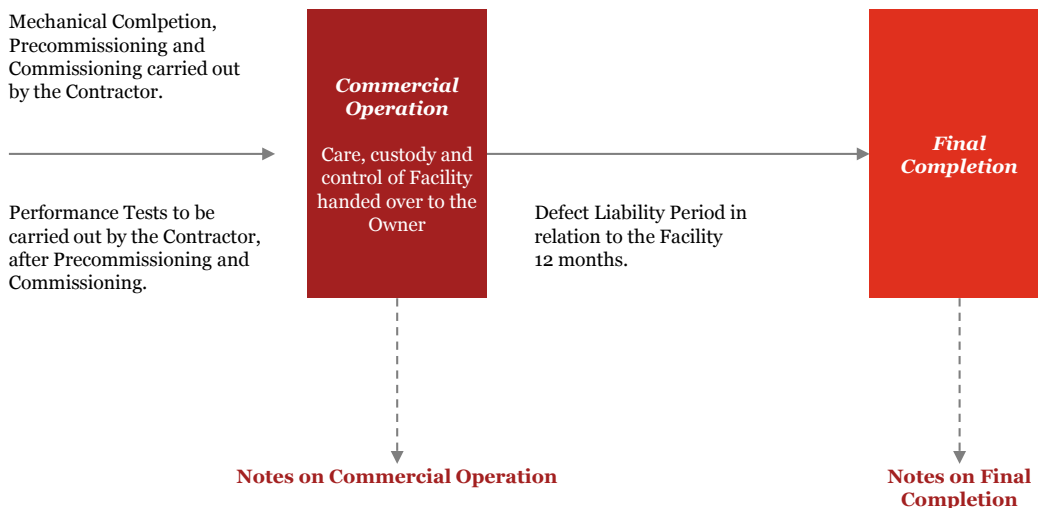


Appendix 4 Simple regime timeline

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.

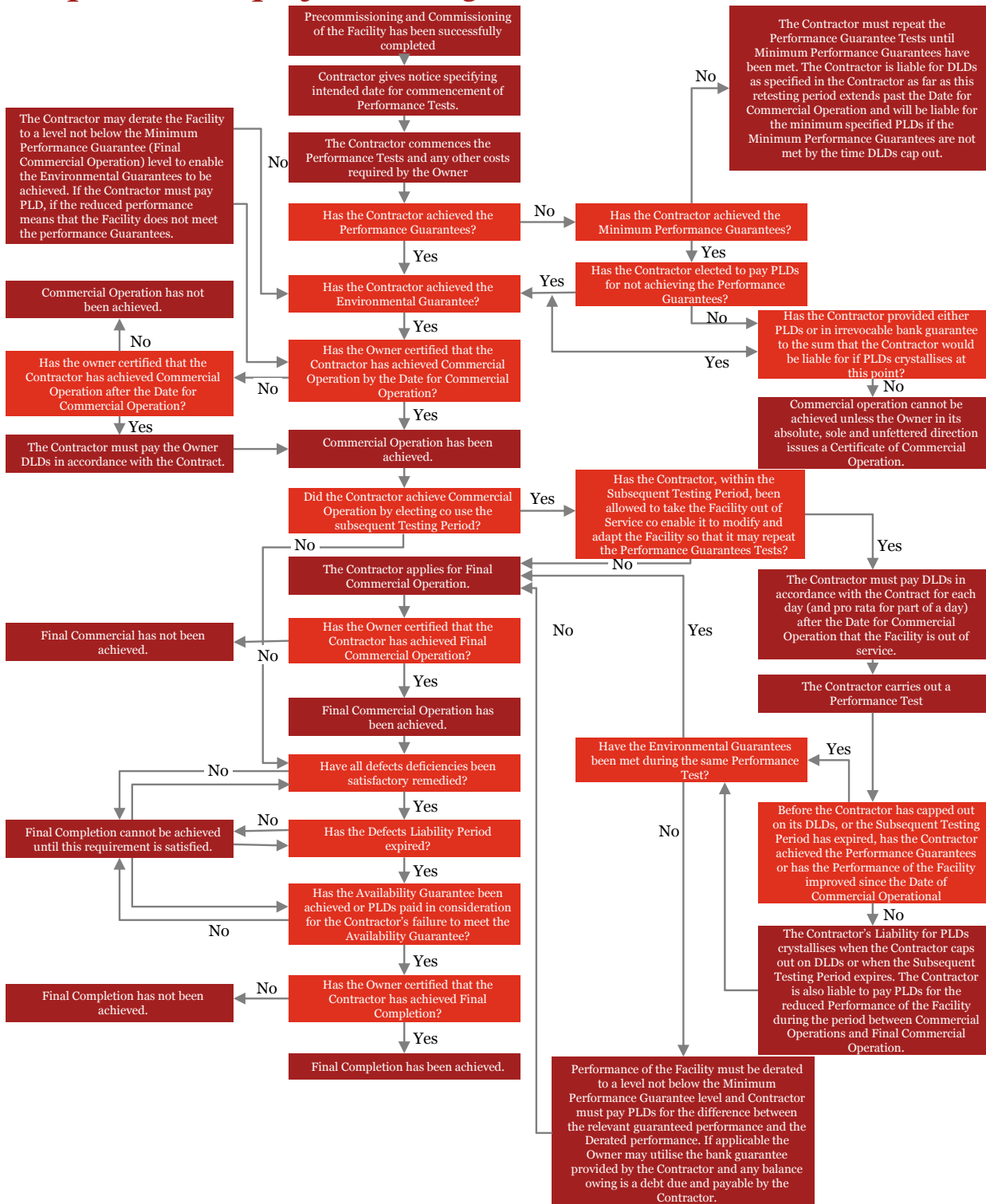
Despite the fact that Clause 3.2 requires the Contractor to continue to improve the plant after the Date for Commercial Operation, provided that the Minimum Performance Guarantees and the Environmental Guarantees have been met, at any time after the Date for Commercial Operation either the Contractor 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

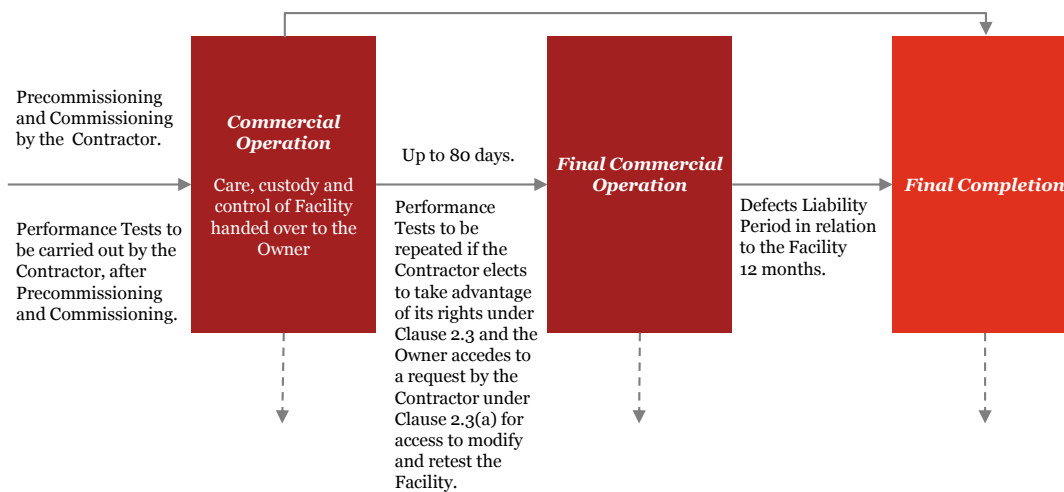


Appendix 6 Detailed regime timeline

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.

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