

General

24 Key issues for offtake and construction interfaces

Investing in Energy Transition Projects
March 2023



Introduction

The offtake agreement is the agreement under which the Project Company generates revenue in order to meet its repayment obligations under the financing arrangements and produce profit for the equity investors.

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 investors in terms of bankability and project feasibility. 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, e.g. power, liquefied natural gas (**LNG**), petrochemical, etc. Importantly, these issues are of equal, if not more, concern to Principals/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 and other projects that require access to distribution infrastructure in order to generate revenue.

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 and investors must 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 (i.e., 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 (i.e., 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 Programme 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 (i.e., 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?

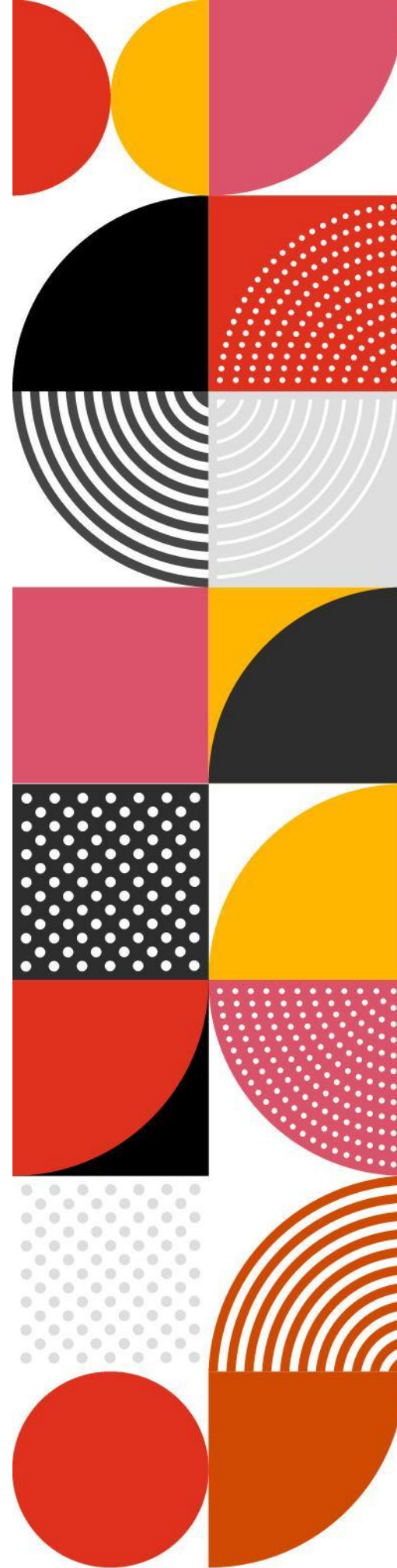




- What is the obligation of the Project Company to provide Grid Access in cases where the Contractor's works are late or the plant is unreliable – Is it merely a reasonableness obligation? Is the Project Company obliged to accelerate the completion of the grid connection infrastructure where the EPC 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 back its 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/Sponsor 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, on 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? 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, e.g. 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.



How to contact us



If you have any questions about this paper, please contact the editor, Damian McNair, Partner, Energy Transition.

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