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EPC Agreements: Devising a Sound Contractual Framework for Renewable Energy Projects

The development of a renewable energy project requires, among a range of factors, engineers to design the facility, state-of-the-art equipment, and a reliable construction firm to implement the project. A key factor in a renewable energy project's long-term success is devising an appropriate contractual framework to construct the facilities. This is a particularly important consideration, given the scale of many renewable energy projects and the financial sums at stake.

An engineering, procurement, and construction (EPC) agreement provides a contractual framework whereby a contractor agrees to engineer, procure, and construct a specified structure. It is often referred to as a "turnkey" agreement, since it requires the sponsor or project company to simply "turn a key" to commence operations of the constructed facility.

Advantages of the EPC Structure

From a project sponsor's perspective, a main benefit of having an EPC agreement in place is that it provides a single point of contact and responsibility for the development of a particular project. For a project company, this avoids both the logistical confusion of coordinating among separate design and construction firms, as well as the necessity to allocate risk among various parties in terms of delayed or defective performance.

With an EPC agreement in place, the contractor is essentially tasked with designing the renewable energy project, procuring the materials necessary to build the structure, and then actually building it. While, in practice, it is not uncommon for an EPC contractor to hire one or more subcontractors to carry out certain construction works, the EPC contractor will remain directly liable to the project company for ultimate performance.

EPC Agreements vs. Fragmented Structures

A main advantage of an EPC agreement over a fragmented structure—where there are separate design, supply, and construction agreements—is its attractiveness to commercial lenders. In traditional limited recourse financing, lenders will be looking for guarantees that the project will be operational, and therefore generating revenue, within prescribed timelines. Since the EPC structure usually includes performance guarantees, such as a guaranteed minimum output capacity, it is generally considered as preferable to separate agreements where no single contractor will be able to provide such guarantees.

The contractual framework for the development of a renewable energy project will be as unique to that project as its technical aspects. It is not strictly necessary for developers to engage a single contractor to engineer, procure, and construct the facilities. Many developers of large-scale private sector wind and solar farms have inhouse engineering capabilities, as well as a network of global supply chains which can provide wind turbines or photovoltaic panels. Some developers will therefore choose to procure the necessary equipment from their own suppliers and engage design and construction firms separately.

In the case of dedicated biomass projects, one of the main technical considerations is the supplier of the boiler or combustor. Since this is a highly specified technical aspect of a biomass project, which will have a significant impact on the overall performance of the power plant, developers often procure the boiler themselves. If an EPC structure is used for the design and construction of a dedicated biomass power plant, meaning that the EPC contractor is willing to accept the technological risk associated with procuring the boiler, developers and project lenders frequently require a list of approved suppliers of the boiler to be included in the EPC agreement.

Key Provisions of EPC Agreements

There are a number of key provisions in an EPC agreement for a renewable energy project. The sponsor should obtain a security or performance bond for a certain percentage of the contract price from the contractor, to be called upon in the event of nonperformance or inadequate performance. The amount, form, and issuer of the bond should be considered. The timing and amount of liquidated damages, either in relation to delayed construction or inadequate performance, should be devised. It is important to draft these clauses precisely in order to clearly identify under what circumstances the liquidated damages must be paid and ensure that they are not excessive in the circumstances.

For solar and wind power projects, it is important to properly consider aspects of output measurement. Unlike power plant projects, which rely on steady sources of fuel such as biomass, wind and solar power plants rely on freely available fuel supplies. The EPC contractor must take notice of the testing regime provisions and ensure that these provisions coincide with the related clauses of the power purchase agreement between the project company and the offtaker.

Split Agreements

A variation of the standard EPC agreement is the "split agreement." Many EPC contracts in the renewable sector contain both offshore and onshore agreements, whereby the design and procurement phases of the EPC contractor's work take place offshore. The onshore company, which carries out the construction work, can either be an affiliate, a joint-venture company in which the offshore EPC contractor has a stake, or an unrelated third-party construction firm which has entered into a consortium with the offshore contractor to complete the renewable energy project.

In renewable energy projects where the offshore and onshore works are to be split, the drafters of the EPC agreements must be mindful of the division of responsibilities between the offshore and onshore contractors. The sponsors of the project should ensure that both the offshore and onshore contractors agree to be held jointly liable for any damages that result from delayed or defective performance. The division of tasks should be clearly outlined in the offshore and onshore agreements. The liquidated damages clauses should reflect the commercial bargain. If construction is stalled because of a delayed shipment, or if the power facility is not capable of generating the rated capacity, the offshore and onshore agreements should clearly stipulate how much the sponsor or project company is entitled to claim.

Given the scale of many renewable energy projects, as well as the financial sums involved, it is vital that the contractual structure for the design and construction of the facilities is properly considered, negotiated, understood, and agreed upon between the parties.