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Let the Sun Shine: Best Practices For Solar EPC Contracts

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For a variety of reasons, the solar industry has experienced, and will continue to experience, record growth. According to the Solar Energy Industries Association and Wood Mackenzie, a global energy and chemical research company, the U.S. solar industry grew 43% and installed a record 19.2 gigawatts (GWdc) of capacity in 2020, a pandemic year. Wood Mackenzie further forecasts that the U.S. solar industry will install a cumulative 324 GWdc of new capacity over the next decade.

Additionally, [as we wrote in a previous article](#), one key driver of the construction industry in 2021 and beyond will be the approval of President Biden's "Build Back Better" plan. The plan is expected to include sizeable investments for infrastructure, manufacturing and clean energy projects.

Due to the anticipated demand for these types of projects in the coming years, particularly in the area of renewable energy, it is important to understand not only the benefits of clean energy but also best practices for solar construction contracts.

Benefits of Clean Energy

If history has taught us anything, every time there has been a crisis, industries tend to adapt. In the case of construction, we have seen advances in design and technology, to make projects more climate friendly, among other things, which encourages continued future growth in the area of clean energy.

There are many benefits to using solar power, including but not limited to:

- reduction of carbon footprint;
- financial benefits relating to longer lifespan of equipment, federal, state and sometimes even local tax credits and rebates;
- increased reliability; and
- reduced dependence on foreign entities, among others.

From a construction perspective, Engineering, Procurement and Construction (EPC) contracts are the most common form of agreement used for complex projects such as these. Arguably, these types of agreements are more complex than standard construction contracts. As such, this article will give a brief overview of EPC contracts and identify key areas for review in advance of your next solar project.

EPC Contracting – General Concerns

EPC contracts cover everything from the design, equipment procurement and construction on a solar project. In addition, they may attach other performance guarantees as well. These can include specific start-up and testing procedures, output minimums and target energy capacities tied to calendar dates. As such, the overall goal of a solar EPC contract is to minimize upfront risk while maximizing long-term plant profitability. Of course, this is never an easy task on complex projects such as these, especially in light of dependence on utility companies.

Key Considerations for any Solar EPC Project

- **Carefully Select Your Project Team.** As with any large-scale project, it is important to select a contractor who has a deep understanding of constructing a highly specialized project such as a solar power conversion. In addition, your contractor's finances should be strong. This is due in part to the extended nature of performance guarantees which are typically in place for many years after the project is completed. In the event there is a non-conformance with the work that impacts the overall performance, you want to be confident that the contractor's business will still be operational for many years following completion.
- **Understand Project Supply Chain.** Solar projects require an intense amount of technology and equipment (i.e. photovoltaic panels, batteries, tracking systems, collection systems etc.). Establishing a solid supply chain, will not only help with minimizing project delays but can aid in keeping costs in check.
- **Establish Strict Project Controls.** Since solar projects involve significant sourcing of sophisticated equipment and extended performance output guarantees (which are tied to various calendar dates) scheduling delays can be common and extremely costly. As a result, establishing strict project controls and protocols in an effort to mitigate anticipated issues before they occur is advised. (i.e. scheduling, management controls, communication, change order procedures, etc.) Owners should also consider liquidated damages provisions, designed to compensate the owner for lost tax benefits and energy output issues.
- **Understand the EPC's Termination Clause.** As with any contract, a proper understanding of the termination requirements and procedures is a best practice to follow. However, a thorough understanding of any termination language in an EPC contract is of upmost importance due to the strict scheduling deadlines and completion dates which must be followed in order to minimize possible delay damages. If possible, having the ability to terminate, at least to some extent, in the event of a delay is advisable.
- **Clearly Define Scope of Work.** Start up and commissioning are important components to the scope of work on solar projects. The parties should incorporate detailed language as to how, and when, these activities will be accomplished and what constitutes "completion." Finally, the parties should address whose responsibility it is to perform such activities so there is no confusion. In other words, will the owner and contractor share in the responsibility, will a third party be involved or will the contractor be solely responsible for such tasks?
- **Set Performance Guarantees and Warranty Obligations.** Warranties and performance guarantees are likely to be heavily negotiated. Performance guarantee provisions should be given additional consideration, as they will relate to overall project output for many years following initial completion. If certain thresholds are not met, the subsequent purchaser of the project may be entitled to significant sums of money, which can adversely impact profits. The performance guarantees should be well thought out and specific. Warranty provisions are equally important. For example, if the project is not performing as required, it is likely that the work is nonconforming and will necessitate re-work. Having a robust warranty provision is key especially when attempting to limit future exposure due to output issues as a result of non-conforming work.
- **Review Limitation of Liability Provisions.** As with any contract, each party attempts to limit their potential exposure. As an owner, you should consider the potential risks and costs associated with a non-conforming system and how capping the contractor's liability may expose your bottom line. Consider "carve out" language that attempts to broaden the contractor's liability in certain situations. In addition, waiver of consequential damage provisions may be incorporated into these sections as well. It is important to understand whether your anticipated risks may be viewed as waived under a broad waiver of consequential damage provision or, alternatively, fall outside of the reach of this language.
- **Consider Use of an Independent Expert.** The parties should also consider designating an independent expert agreeable to both parties, with authority regarding change order valuations and interpretation of applicable engineering codes or standards. Doing so can greatly speed up the process of resolving technical disputes that would otherwise result in delays.

Given the complex nature of solar projects and the corresponding EPC agreements, it is important that the project team work together and draft an agreement which appropriately manages risk while taking into account strict project deadlines. Although the above areas are by no means meant to be an all-inclusive list of items to consider when negotiating your next EPC contract, they are most certainly some of the more highly contested subjects of contract negotiation.

For more information or to discuss any of these topics, please contact one of the members of Gould & Ratner's [Construction Practice](#).