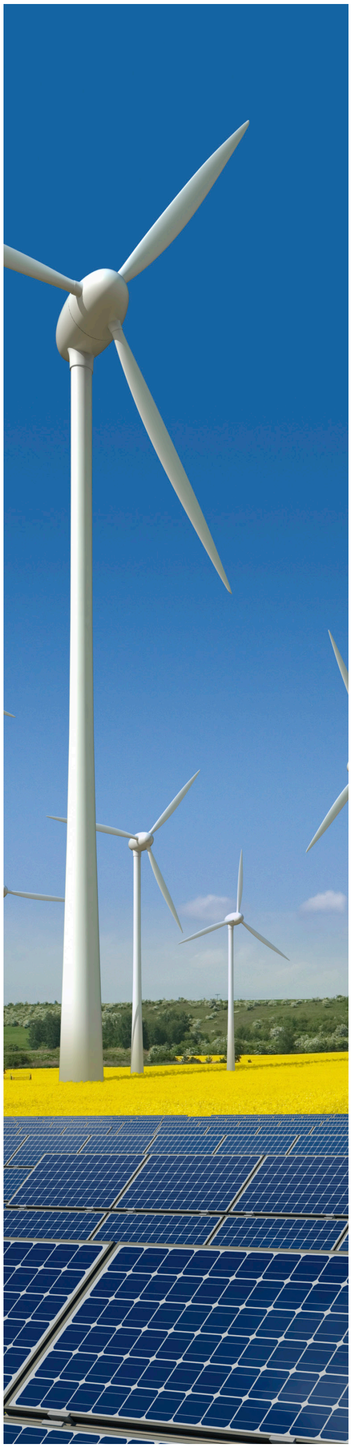
MARSH

MARSH INSIGHTS:

RENEWABLE ENERGY PROJECTS: RISK AND INSURANCE ISSUES

Renewable energy projects often require project owners to consider various risk transfer and risk mitigation measures to address an array of potential exposures, including construction, environmental, regulatory, technological, and operational risks. The ability to manage risks and insurance placements when developing a renewable energy project can contribute to the success of the organization and its bottom line.



CONSTRUCTION RISKS

Construction risks can include changes in project scope, contractor experience, design engineer experience, supply chain, poorly skilled staff, unfamiliarity with local conditions, and force majeure. Contractor selection is paramount because inexperienced contractors can often lead to significant issues and delays in a project. As equipment and construction costs of a project are substantial, it is also important for project owners to engage experienced parties with proven work records and who understand the local conditions surrounding a project.

REGULATORY RISKS

Project owners also face the risk of costs, fines, or delays stemming from permits, licenses, approvals, or the elimination of state or tax credits. Although these risks can be detrimental to the economics of the project, they typically are not insurable. Risk advisors can help project owners avoid and mitigate regulatory risks.

TECHNOLOGICAL RISKS

Technology can cause concern for project owners as well as lenders, who often require technology systems to perform at a maximum level of output for the long-term. Design flaws stemming from manufacturer/contractor error — or inexperience with technology — also present risks, as manufacturers may substitute quality systems to reduce the costs. Risk advisors can discuss the types of technology with insurers in order to determine the best risk management approach.

OPERATIONAL RISKS

Personnel and equipment, cancellation and standby costs, testing and commissioning, and operation and maintenance, all can add to an organization's operational risks. For example, in the case of a wind farm project, testing and commissioning often highlight operational concerns. Once operations commence after full mechanical completion of the project, the wind farm may not produce to the desired level of output. Also, the operation and maintenance of a facility has variable and fixed costs, including servicing contracts, insurance, and staffing.

Choosing the right operations and maintenance (O&M) contractor can contribute to the profitability and long-term success of the project. Project owners should engage a risk advisor to review the O&M agreement in order to identify and mitigate any potential insurable operational risks.

ENVIRONMENTAL RISKS

Environmental risks are inherent throughout the life cycle of a project. These risks should be identified in the early developmental stages of a renewable energy project. Some of these risks may stem from ground and soil conditions. Site selection is also a potential risk for project owners; many brownfield sites are available for development and may have contaminated ground and soil conditions that need to be considered when planning a project.

INSURANCE REQUIREMENTS AND LENDERS

LENDERS

Most renewable projects require lenders to provide external financing. Insurance is a critical component that helps assure lenders that their investment is protected. Project owners must demonstrate to lenders that the insurance program has integrity for the duration of the finance contract. Lenders may require the inclusion of certain insurance clauses within construction and operating policies. Owners should ensure that the lender's insurance requirements are commercially feasible. Lenders usually appoint an insurance consultant to negotiate insurance terms on their behalf. Project owners should engage a risk advisor on their behalf as early as possible to work with the stakeholders to establish a general consensus on the insurance program.

RISK TRANSFER THROUGH INSURANCE

There are three primary avenues through which renewable energy project risks can be transferred though insurance: construction phase insurance; operational phase insurance; and combined construction and operational insurance. Each type of insurance solution is briefly examined below:

CONSTRUCTION PHASE INSURANCE

The following insurance coverages are typically in force for the construction phase of the project.

- Construction all-risks (CAR) and delay in startup (DSU).
- Marine cargo/equipment transit and DSU.
- Owner's liability insurance.
- Contractor's liability insurance.
- Workers' compensation.
- Environmental insurance.
  - Site liability (ESL).
  - Contractor's pollution liability (CPL).
- Professional liability/errors and omissions.

CAR COVERAGE DETAILS

CAR insurance will cover the repair of physical damage to the erected structures and materials, including principal supplied material, temporary buildings and its contents, and all other property used or for use in connection with the project. Both parties typically are insured under the same policy, which often needs to tie-in with the allocation of risk of loss under the construction contract. It is important to avoid coverage disputes arising out of multiple policies covering the same project. For example:

- Did loss occur during fabrication or installation?
- Did loss occur during transportation or installation?

In terms of coverage extensions and exclusions, CAR policy wording is critical. The operative clause should include broad all-risk wording. The insured has the burden to prove loss or damage, while the insurers have the burden of proof related to exclusions. Examples of extensions/exclusions that should be addressed include:

- Contractor's plant and equipment.
- Design/defect.
- Original equipment manufacturer warranty.
- Coverage extensions such as:
  - Escalation/removal of wreck/sue and labor.
  - Standby/cancellation/forwarding/leak search costs.
  - Phased testing.
  - 50/50 clause.
  - Contingent DSU — losses to suppliers/customers.
  - Terrorism (offshore/onshore).
- Serial loss clause.
- Marine warranty survey requirements.
  - Major transits/lifts subject to warranty survey performed.

DSU COVERAGE DETAILS

DSU coverage under the CAR program can cover financial losses due to a delay caused by a covered property loss during construction. Generally, the DSU cannot be purchased as standalone coverage and typically is purchased in conjunction with the CAR.

Marine cargo extended to DSU insurance covers physical loss or damage to cargo in transit that can cause delays in startup. Loss control services provided through insurers can be effective when mitigating transit risks. It is critical that the coverage attachment and termination points do not leave any gaps upon leaving the supplier/manufacturer facility and arriving at the final destination and/or to staging site. Typically, DSU cannot be purchased as a standalone coverage and is often purchased with the cargo policy.

OPERATIONAL PHASE INSURANCE

Generally, the insurance coverages in place during the operational phase of a renewable energy project include:

- Property all-risks insurance, which includes:
  - Property damage and machinery breakdown coverage.
  - Extension to the O&M contract.
  - The ability to mesh with the warranties for cable/turbine/balance of plant (BOP).
- Business interruption insurance, which includes protection against financial loss in the event of an outage due to a physical loss.
- Commercial general liability insurance, which includes:
  - Coverage for third-party exposures.
  - Appropriate cover to comply with all requirements of operations, leases, and permits.
  - Workers' compensation insurance, which is a statutory requirement for employees and contingent for contractors. If there are offshore operations and activities, this coverage likely will fall under the US longshore and harbor insurance (USL&H) and Jones Act requirements.
- Environmental liability insurance.
- Executive risk policies, which may include directors and officers (D&O) liability, fiduciary liability, and crime insurance.
- Weather hedge insurance, which is designed to offset loss of revenue caused by lack of wind or sun.
- Natural catastrophe (CAT) insurance, which may be required based on the location of the project.

COMBINED CONSTRUCTION AND OPERATIONS INSURANCE

The majority of renewable insurers will write both the construction and operating phases of the project. It may be beneficial to place a combined construction/operating program with one set of underwriters. There are several potential advantages of this type of program, including cost savings. A combined program avoids coverage gaps during transition from construction to operation, especially in light of a phased project start up. This type of program also provides a measure of coverage certainty, thus avoiding potential disputes between builders risk and operational policies.

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