

## Considering the Risks of Wind Energy Projects

As the shift to alternative sources of energy continues to be a topic of relevance, investments in wind energy have become increasingly prevalent.

While the energy source receives a great deal of attention, it also entails a complicated combination of risks, both financial and commercial. If you are considering wind farms as a potential investment, take the following factors into account to ensure that you have an ample risk management plan for this complex and largely unexplored territory.

### ESTIMATING

Needless to say, wind turbines are a sizable investment with the potential for huge losses. To sufficiently protect your investment, you must identify the unique sets of risks you will face during every phase of the investment: contracting, construction and ongoing operations. You must first determine the feasibility of the project, weighing construction and technology, payment, operation, maintenance, financial, political and sponsorship risks against financial projections and potential revenue stream. A practical plan of grid interconnection, dispatch, wheeling and sale of wind power requires a substantial amount of cooperation on both a small and large scale. Realistically estimating your risk when becoming involved in a wind project will allow you to mitigate it and successfully protect your investment.

### RISKS DURING CONSTRUCTION

The unique risks faced for wind farms during their construction are generally assumed by the builder, and include the following:

- Cost overrun
- Delays
- Start-up and testing problems
- Contract and payment defaults
- Hidden defects
- Force majeure (catastrophic event)

These risks can be mitigated using contractual agreements and associated guarantees, contingency funds, and lines of credit and insurance coverage.

## RISKS DURING OPERATION

Upon beginning commercial operations, operators must analyze the myriad of possible exposures they face. In general, the greatest drivers of exposure facing wind farms are property and equipment breakdown.

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Contractual arrangements, contingency reserves, cash traps, insurance coverage and other risk compensation devices are used to mitigate risk. Such risks include the following:

- Operating efficiency problems
- Routine operation and maintenance problems
- Major operation and maintenance problems
- Fall in market demand or pricing
- Input availability
- Force majeure (catastrophic event)

Considerable losses can be sustained when working with wind turbines—a total blade failure can lead to a claim ranging from \$150,000 to \$500,000, considering the cost of the crane, crew and materials.

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## OTHER CONSIDERATIONS

Dramatic growth in this sector suggests that wind projects can be profitable endeavours, but the general lack of experience by sponsors, operators and insurers creates an especially precarious position for an investor. Wind energy is an intermittent resource, and its output must be carefully coordinated so as not to disrupt surrounding grid function. Finally, wind projects are not competitive with least-cost alternatives in most markets, meaning some price-support mechanism is usually required.

## SUPPORT IN YOUR ENDEAVOUR

To discuss your risk transfer options when planning and operating a wind farm, contact your local insurance professionals who will be able to assist you in assessing your risks and needs at every stage of the project and secure the appropriate coverage.

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If you have questions specific to your business, or would like additional information, please reach out to your local advisor.

LET US HELP YOU MANAGE YOUR RISK

### LOCATIONS

Edmonton: 1.800.665.5243

Calgary: 1.866.845.8330

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