



Wind Energy Insurance in China: Opportunities & Challenges Executive Summary



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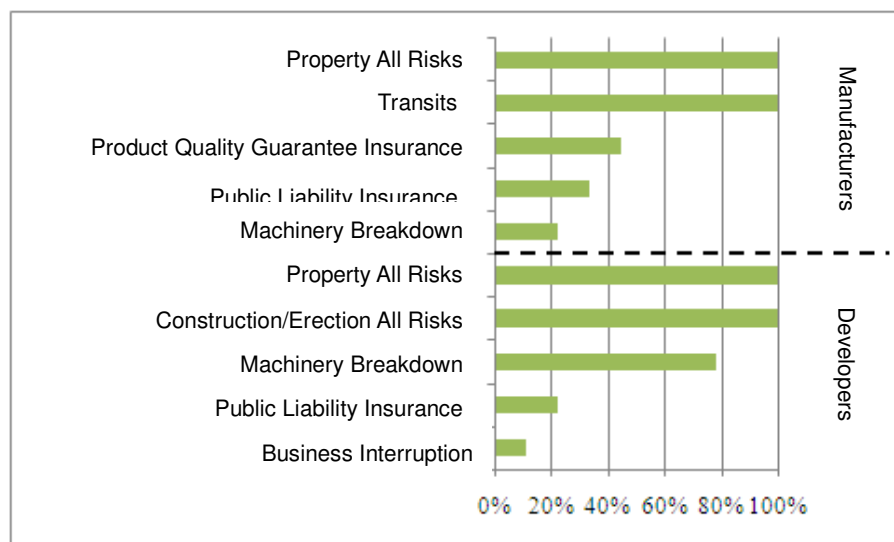
Executive Summary

The wind energy industry is one of China's most developed sources of low carbon energy with great potential to grow and contribute to the country's energy conservation and carbon reduction goals. As the industry has matured, however, risk management and transfer instruments have not kept pace with changing technology-related risks. Insurance provides an effective financial instrument for transferring these risks and will play a crucial role as the industry grows. China's wind energy industry, however, lacks adequate insurance solutions and must look internationally for capacity and examples of best practice to support its continued development.

This report evaluates the current state of the Chinese wind energy insurance industry with a special focus on how it compares with other leading wind energy nations. The analysis draws on a combination of surveys and interviews, and concludes with a series of recommendations.

Key Findings

China's wind energy insurance market is dominated by traditional general insurance products, including property insurance, transits, construction risks, machinery breakdown, business interruption, product quality guarantee insurance and public liability insurance.

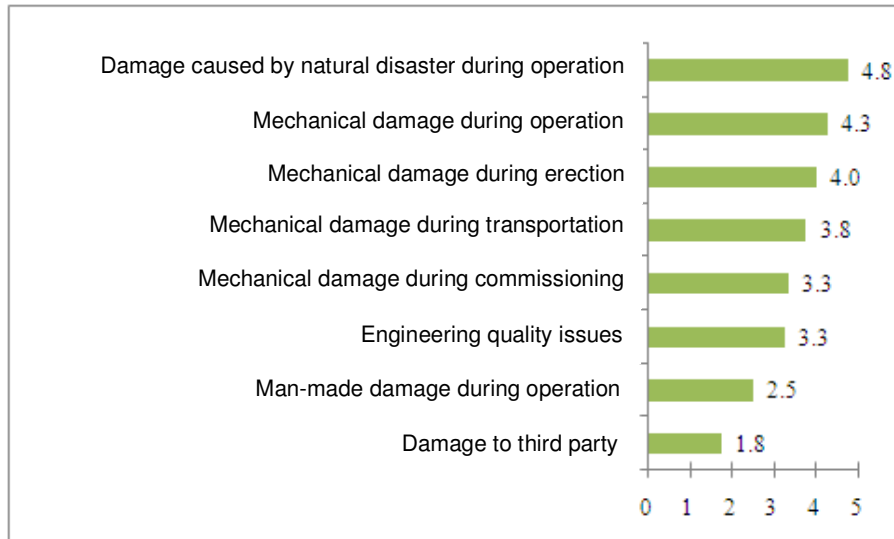


Types of insurance products purchased by wind energy enterprises

Competition in the domestic insurance market is strong due to the rapid rise of the country's wind energy industry. Even so, the insurance market still remains in its infancy.

This has led to relatively high loss ratios for all types of insurance products. In light of this, a number of insurance companies have decided to stay out of the market, preferring a 'wait and see' position instead.

The causes of insurance claims for wind energy vary. Natural disasters obviously rank highly. Mechanical failures during the operation and erection of wind turbines are also notable. Human error and third-party injury are considered among the lowest-risk.



Main claim incident sections in wind energy projects

The Chinese wind energy market mostly comprises domestic wind farm developers that are affiliated to state-owned power generation companies. Usually these companies prefer insurers to cover both wind energy projects and conventional thermal power projects. This so-called "bundled insuring" is unique to China and shapes the domestic insurance market.

The early stages of wind energy technology development are characterized by high risks. European and North American markets have three decades of experience dealing with such risks. China's domestic insurers, in contrast, have only had a few years. These risks revolve around three main issues: equipment defects, lack of demand, and the low capacity of the wind energy insurance sector. Together they combine to create an environment with few incentives for promoting value. The development of offshore wind energy and large-scale wind farms promises to give rise to new risks. These derive from the tougher technical requirements placed on the technology, as well as those related to the transit, installation and maintenance of offshore wind turbines.

Recommendations

The barriers to growth for wind energy cannot be resolved by the insurance industry alone. The following recommendations incorporate suggestions for the Chinese Government, insurers, the wind energy industry and other key stakeholders:

Government: Clear guidance on the development objectives for wind energy is needed to achieve a stable investment market. Such stability will in turn help establish greater industry standardisation and better regulation. With a clear investment and policy framework in place, insurance companies will then be able to provide better quality services and coverage. The industry would benefit from periodic reporting of accidents and equipment quality standards. A collaborative, sector-wide sharing of non-competitive information would be valuable, as would the Government taking a lead role in promoting information sharing between insurers, the wind energy industry and other stakeholders.

Insurers: Insurers and the wind energy industry need to continue to work together to advance their understanding of risk management, to clarify policy terms, and to make the claims service more transparent. The technical capabilities of insurers should be improved so as to make their services more effective. Insurers should also cooperate with independent third-party verification and certification bodies where necessary.

Wind energy industry: Wind energy companies need to develop a better understanding of risk management and the positive contribution that insurance can make to the industry. Building awareness of how effective quality assurance can contribute to reducing risks for all parties in the construction, operation, maintenance and repair stages is also important. In addition, more work is required to increase understanding of the impacts of claims.

Technical institutions: Independent third-party technical institutions must continue to collaborate with all parties to build capacity. Industry associations should utilise and share available data on wind energy technology accidents, to strengthen communications and cooperation between stakeholders.

Next steps

As wind energy technology continues to develop, the insurance industry is expected to develop with it. Based on current research into China's domestic wind energy insurance market, we propose the following two issues as key areas for further investigation:

1. **Cooperation:** There are currently many discrepancies regarding damage assessment and claims between insurance providers and clients. Third-party service institutions can potentially play a crucial intermediary role through the provision of unbiased damage assessment and repair plans. To resolve this tension, more cooperation among service institutions, wind energy enterprises and insurance companies would be welcome. We

therefore advise that an in-depth analysis be undertaken into the feasibility and appropriateness of such a cooperative approach.

2. Project financing: The involvement of insurance companies can diversify project finance. It is easier for wind energy companies, to obtain bank loans with risk guarantees for projects when insurance has been arranged. Determining the insurance attributes required to obtain project financing therefore represents a fruitful line of research. In a similar vein, it would be valuable to investigate which models of joint cooperation would be most appropriate for insurers, wind energy companies and banks.

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