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TRANSFORMERS MARKET IN INDIA: OPPORTUNITIES AND THREATS

An in-depth analysis on how the transformer market is going to grasp the opportunities and overcome challenges

An I-Tech Media Publication

Although managing weather risk is relatively new in many geographies, but the concept is spreading fast

How to reduce cash-flow volatility in renewable energy businesses

Energy production – especially renewable energy production – is highly weather sensitive. Since renewable energy business have high financial leverages, the business has significant volumetric risk to weather parameters. This impacts their energy generation potential and hence their revenues.

Weather risk management for renewable energy businesses

Weather risk management is essentially about proactively managing these risk via financial risk management products designed to cover against adverse financial impact of weather anomalies. These are typically designed in the form of an index-based weather cover, which is a type of insurance that is triggered when the index exceeds a pre-defined value. "The index can be a temperature threshold, rainfall levels, sunshine duration, wind speed, or any other weather variable or combination of variables that represent the weather risk the business is exposed to," says Gabriel Gross, President, Meteo Protect. "The cover is designed to compensate exactly or partially the losses incurred through adverse weather conditions.
"With respect to wind energy, average wind speed variations are the main factor influencing production. Variations in availability of the renewable energy resource account for majority of the overall production risks (can be as high as 90 per cent of overall production risk) for a 20 per cent financial impact in certain regions."

Reducing cash-flow volatility

There are multiple options available to reduce the cash flow volatility in RE businesses like financial derivatives, exchange traded instruments or insurance contracts that protect against adverse outcome of weather parameters.

"The exact nature of contracts depends upon the regulatory framework in a particular geography," says Mr Gross. "The compensation may be fixed or progressive if the losses caused by the weather increase with the index value. As with any index-based insurance, it is when a pre-defined index value is exceeded that the loss, in traditional insurance terms, occurs."

The index value is the sole trigger for compensation. No claim adjustment process or additional administrative procedures are required.

Indian and weather risk management

India is a high-growth economy with an impressive track record of promoting renewable energy business, especially wind energy. India is set to make rapid strides in solar as well. While this is commendable efforts to reduce dependence on fossil fuels, this growing share of renewable also means growing climate dependency in coming years.

He also adds, "As renewable companies gain in size, there is growing awareness in India of the need to actively manage the financial consequences of climate variability."

In India, lending culture has traditionally been collateral based and same applies to renewable energy sector. "For large investments to flow in the sector, there is need to have greater attention to cash flows in the sector and risk standards need to develop to a higher level of sophistication," explains Mukul Kumar, Founder, Cognivant Consulting. "On the other hand, borrowers will need to strive

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Gabriel Gross, President, Meteo Protect

to attain higher credit quality so that investment can flow into the sector at competitive costs of finance."

It is well-known fact that renewable energy is expected to add new capacity over the next 5 years at a pace which is significantly higher than what we have seen over the last 5 years. According to Mr Kumar, "For a prudent estimate of addition of 30-40 GW over next 4-5 years, we need ₹ 3 lakh crore of investment out of which ₹ 2 lakh crore will have to be funded via debt. This will require that access to debt finance becomes more broad based and goes beyond traditional form bank finance of a lender locking in for an extended period into a specific project."

For a borrower, accessing financing based on risk reduction measures implemented during operations phase also becomes more cost efficient. "This is the trend the world over," opines Mr Kumar. "An active refinance market for operational projects with reduced risk profile are the way to accomplish the two objectives – greater access to finance and at competitive costs. For a very dynamic renewable sector, there is also a need to make bond market accessible by renewable energy projects. This would require bridging the gap between low risk profile of institutional investors and relatively high credit-risk profile of renewable energy project."

As the quantum of lending to the renewable sector increases many folks in coming years, the developers and lenders alike will look for better quality of cash flows and hence adoption of risk mitigation measures again externalities such as weather anomalies becomes imperative for healthy growth of the sector.

Overcoming challenges

Managing weather risk is relatively new in many geographies but spreading fast. According to Mr Gross. "We share our knowledge and raise awareness by working closely with local partners who know well customers' needs and know how to address their issues. We also hold seminars, where we invite different stakeholders to share practices and exchange views."

Emerging economies like China and India are able to profit from rapid advances in technology and quickly can adopt risk management best practices. "I find that Indian developer community is highly receptive to new ideas and yet very cost conscious. This helps drive innovation build better solutions. One difference we do note is that there may be varying degrees of data availability."

This kind of challenge can be solved by offering solutions that use reliable data for which both the insurance community and clients are comfortable. This comes particularly handy for new wind farms that have few historical data.

Risks for insurance and reinsurance brokerage business

Any insurance and re-insurance broking business runs on clients' trust the claims will be paid and that it will be settled on time, no matter what.

While talking about assuring trust, Mr Gross says, "We take due care in designing the product that the customer needs and understands. In fact, we help them make choices on parameters that they feel most comfortable with. We have also tied up insurance capacities with insurers that understand this risk extremely well."

Weather Index based insurance solutions are designed simple. They do not have complex loss reporting and documentation processes as trigger for payments are objective measurement of weather parameters.

Mr Gross claims, "Meteo Protect designs and sells trustworthy, reliable insurance and financial product solutions. All of our insurance products are underwritten by insurance companies with an A minimum rating from A.M Best, Standard and Poor's or Moody's. This independent rating shows the quality and financial strength of our risk takers and guarantees the efficient settlement of claims to our clients."

> "We have reached out to all the key stakeholders in the business to create awareness amongst developers, investors and lenders.
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> Mukul Kumar,
> Founder,
> Cognivant Consulting

Popularising in India

India is ranked as one of the most sensitive countries to climate risk. It has tropical climate with high monsoon dependency, which translates to high seasonality as well as inter-annual variability of weather parameters, which incidentally impact all renewable energy sources in some ways (wind, solar and hydro). "This means that there is greater need of measuring and proactively managing the financial impact of weather anomalies," says Mr Gross. "This is especially important to firms that have high financial leverages."

Mr Kumar assures that they have a multi-pronged strategy to promote this concept in India. "We have reached all the key stakeholders in the business creating awareness amongst developers, investors and lenders," he explains. "We also recently organised the seminars in Delhi and Mumbai in partnership with Unison Insurance Broking Services (UIBS) on 'Analysis and Management of Wind Variability Risk' where we discussed global trends in wind risk management and provided an overview of the modelling process and wind risk management techniques.

Mr Kumar believes that partnering with the Unison, they would be able to develop and deliver bespoke insurance solutions to their clients in the Indian sub-continent, and Unison has the entrepreneurial drive to understand customer needs, bring the best solutions to its customers.