



# RENEWABLE ENERGY PRACTICE

With projected global population growth, rising fossil fuel prices, diminishing reserves, climate change policy, and government incentives, the renewable energy sector is anticipated to be one of the fastest growing sectors of the energy market. As a market leading innovator, Marsh is at the forefront and has devised appropriate risk transfer solution in this developing sector.

Marsh supports a wide range of organizations, from prototypical solar arrays to the largest wind farm operators.

Marsh has a global network of dedicated renewable energy specialists who are experts in the provision of risk solutions for wind farms, solar, hydro and a variety of other renewable energy operations. Marsh energy colleagues arrange for comprehensive insurance coverage at competitive rates and provide superior service to the client. We are committed to the on-going development of customized solutions that can help your business, and the industry.



# WHAT WE DO

## RISK MANAGEMENT

We take a holistic approach to risk management. Our deep understanding of renewable energy technological trends and challenges allows us to address specific risk issues facing our clients. We also have expert knowledge in global renewable energy support mechanisms such as Renewable Energy certificates and the implications these may have on risk allocation and insurance coverage.

Our approach to risk management:

- Ensure that expenditure on risk management is aligned to corporate goals
- Achieve the best balance between risk and reward
- Reduce your cost of risk
- Attain favorable terms from global market
- Provide solutions for stakeholders aligned with the project

## INSURANCE SOLUTIONS

Marsh has been among the leader in developing creative insurance solutions for the renewable energy industry. Whether on single project basis or for comprehensive programs, Marsh is dedicated to meet our clients' needs. Our bespoke programs are tailored to individual clients around the following critical building blocks:

### Review of contractual risks

Achieving project milestones within budget, on schedule and in accordance with required performance and quality criteria depends on the accurate allocation of responsibilities between contractual parties. Marsh advises companies on protection against loss or damages and on legal exemption from penalties or liabilities in contractual provisions to clearly establish these responsibilities.

### Interface with lenders/advisers

Marsh supports clients in drafting of liability, indemnity and insurance clauses in the project contracts in collaboration with lawyers, banks and other advisers. Marsh also offers Lenders' Insurance Advisory Services focusing on lender's interest in respect of insurance.

## Risk Engineering

We have one of the most renowned risk engineering teams in the energy brokerage industry globally. We involve our engineers early for their depth of experience when dealing with insurance markets.

With years of experience in evaluating several client sites, our engineers have developed their strength in benchmarking of our client's risk performance against their industry peers.

## Claims

With a dedicated and experienced claims team, Marsh has created an industry differentiator and has been ably supporting our clients for timely resolution of claims.

Our experience in the industry and the relationship with the insurance companies give us an edge to expedite the process of claims settlement.

## Seamless account service

Marsh delivers seamless service and solutions across all disciplines involved in your bespoke program.

This fundamental element ensures that you are continually aware of your programs' status and have Marsh experts on hand to resolve any developing issues.

# MAJOR RISK ISSUES

## WIND



- Natural hazards like storms, hail, tornadoes, hurricanes etc.
- Turbine blade damage due to lightning, improper manufacturing or maintenance etc.
- Volatility in average wind speed – low wind speeds pose the risk of a fall below the threshold for economically efficient power output; higher speeds may damage the wind turbine system.
- Design and Engineering risk – overall turbine design, blade dimensions, rotor speed etc.
- Machinery breakdown and subsequent business interruption.
- Electrical failure and technology issues.
- Fire Damage due to lightning.
- Structural collapse and increased cost of working.
- Marine transit and delay in startup (DSU).
- Advance loss of profit.
- Testing procedures and handing - over issues.
- Liability exposures.

## HYDRO



- Exposure to act of god perils including earthquake, flash flooding, landslide and glacier lake outburst
- Marine transit and delay in start-up
- Advance loss of profit including denial of access.
- Machinery breakdown and subsequent business interruptions.
- Tunnel collapse and increased cost of working.
- Liability in all its relevant form.
- Seasonal/annual resource Variability.
- Testing procedures and handing - over issues.
- Business interruption analysis including availability of grid.

## SOLAR



- Damage to solar modules and substations.
- Heat exchanger fatigue or Failure.
- Moisture ingress.
- Solar heat receptor fatigue failure.
- Storm damage (sand and hail), e.g. to mirrors or solar reflectors.
- Thermal oil heat exchanger failure.
- Transit loss (including breakage and theft and delay in start-up (DSU)).
- Advance loss of profit.
- Natural hazards like hail, sandstorms etc.
- Electronic converter failure.
- Geological risks affecting the foundations of the devices.
- Performance guarantee.
- Theft from site and malicious damage.
- Solar Parametric/Lack of Sun affecting the production.

# SOLUTIONS

For adequate coverage of the risk issues pertaining to the solar, wind and hydro energy sectors, we offer the following solutions:

## PROJECT PHASE

- Marine Transit
- Marine Delay in Start-Up
- Construction/  
Erection All Risk
- Advance Loss of Profit
- Contractor's  
Annual Programs
- Third-Party Liability
- Workmen Compensation



## OPERATIONAL PHASE

- Property All Risk Insurance
- Machinery Breakdown
- Business Interruption
- Liability Insurance
- Professional Indemnity
- Political Risks



## SPECIALIZED SOLUTIONS

- Solar Performance  
Warranty Solution
- Parametric – Lack of Sun  
and Lack of Wind
- Extended Warranty/  
Comprehensive O&M  
Fleet Insurance
- Cyber Risk





# OUR SPECIALIZED SERVICES

RENEWABLE ENERGY – INDIA SOLUTIONS

## WHY

- Weather risk is an increasing cause of concern for the investors, lenders and developers of infrastructure products.
- Equity sponsors are looking to rebalance risk/reward of an investment to fit their risk appetite.
- Lenders are not comfortable with a project's weather risk profile.
- Construction firms are not comfortable with their contractual weather risks.

## WHO

Clients in industries whose operations are likely to be impacted by changes in weather and/or commodities such as:

- Power & Utilities.
- Solar Farms.
- Wind Farms.
- Hydro Projects.
- Agriculture.
- Construction.
- Mining.

## WHAT

- Customized solution that can offer the potential benefits of more stable earnings and more efficient use of working capital.
- Potentially improved risk/return profile of solar/wind/hydro projects.
- Protection against financial distress.
- Lucid settlement of payout.



**For more information about renewable expertise  
and other solutions from Marsh, visit [marsh.com](http://marsh.com)  
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