

# INSURING YOUR RENEWABLE

The ever-increasing use of renewable energy—whether wind, solar, wave, hydro, or geothermal—will help reduce the impact of power generation on the environment and reduce reliance on non-renewable fossil fuels. The global need for reliable and comprehensive renewable energy sector insurance to support these often complex projects is now more apparent than ever.

Since renewable energy projects can be operating in unusual and sometimes very challenging settings, insurance products must be carefully designed by the insurance companies to meet the full needs of the renewable energy project's developers, builders, and owners.

Whether it is a solar project in the desert of the U.S. west or an offshore wind power project off the east coast, insurers can work closely with the parties involved in a renewable energy project—the developer, the construction contractor, or the project operator—to understand how the risks of each project can be managed, and tailor an insurance package that can best meet their needs.

Below are some of the key insured risks and environmental issues associated with the main renewable energy project areas.

## PHOTOVOLTAIC SOLAR

### KEY INSURED RISKS

- Inverter failure
- Failure due to moisture ingress
- Storm damage

### KEY ENVIRONMENTAL ISSUES

- Types of materials used
- End-of-life recovery and recycling
- Dependent on sunlight availability

## CONCENTRATING SOLAR POWER

### KEY INSURED RISKS

- Fire
- Storm damage to mirrors
- Thermal oil heat exchanger failure

### KEY ENVIRONMENTAL ISSUES

- Use of water, especially in hot, arid areas
- Dependent on sunlight availability, although storage techniques are emerging

## CONCENTRATING SOLAR POWER—HIGH TEMPERATURE HEAT

### KEY INSURED RISKS

- Storm damage to solar reflectors
- Solar heat receptor fatigue failure
- Heat exchanger fatigue failure

### KEY ENVIRONMENTAL ISSUES

- Use of water, especially in hot, arid areas.
- Dependent on sunlight availability

# ENERGY PROJECT

## ONSHORE WIND POWER

### KEY INSURED RISKS

- Fatigue failure of main rotating parts
- Electrical failure
- Cable damage

### KEY ENVIRONMENTAL ISSUES

- Potential biodiversity impacts
- Visual impact
- Sensitive siting required

## OFFSHORE WIND POWER

### KEY INSURED RISKS

- Fatigue failure and corrosion damage
- Electrical failure
- Blade failure due to lightning strike

### KEY ENVIRONMENTAL ISSUES

- Potential biodiversity impacts
- Potential impact on shipping
- Sensitive siting required

## GEOHERMAL ENERGY—LOW TEMPERATURE HEAT

### KEY INSURED RISKS

- Pump failure
- Heat exchanger failure
- Generator failure

### KEY ENVIRONMENTAL ISSUES

- Some risks if land use not well managed
- Use of chemicals, but risks managed by closed loop systems

## HYDRO POWER

### KEY INSURED RISKS

- Damage to turbines due to water ingress
- Electrical failure
- Flood

### KEY ENVIRONMENTAL ISSUES

- Impact on river flow, water availability and downstream ecosystems
- Land take and displacement of communities and ecosystems

## WAVE AND TIDAL POWER

### KEY INSURED RISKS

- Fatigue failure of structure
- Water ingress and damage
- Power cable failure

### KEY ENVIRONMENTAL ISSUES

- Impact on marine environment
- Impact on shipping
- Sensitive siting required

*This information is from the RSA Group Report on Insurance and Renewable Energy.*