



**SOMPO  
INTERNATIONAL**

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## Recognising The Risks Of Renewables

***Renewable energy is an issue that has been moving up the news agenda and deeper into the public consciousness. Prior to the outbreak of COVID-19, climate change had become one of the defining issues of our time, with its effects becoming more apparent by the day. Now that policymakers are looking to deliver a green recovery from the global pandemic, this will inevitably accelerate the shift to renewable energy.***

Renewable power capacity worldwide had already been forecast to expand by 50% between 2019 and 2024, according to a report by the IEA.<sup>1</sup> This increase is equivalent to the total installed power capacity of the United States today. Solar photovoltaic (PV) alone accounts for almost 60% of the expected growth, with onshore wind representing one-quarter, hydropower one-tenth, and offshore wind and bioenergy each contributing around 4% of the increase.

### **New technology bringing new risks**

While this shift to greater dependence on sustainable energy is to be welcomed, it brings with it a range of risks. The rapid evolution of technology, particularly in the wind and solar sectors, means that the renewable energy market is increasingly exposed to project risks involving emerging technologies, which can result in issues around manufacture, installation and maintenance.

For example, in the case of solar PV, there has been an increased focus on strengthening solar panels. Historically, the panels could withstand hailstones the size of golf balls, but technological advances are now increasing design capabilities. This means they can now withstand an impact of almost double the size. Solar panels are now also increasingly being built on trackers so they can follow the sun. They are also able to self-stow – turning away automatically from a storm before it hits – massively reducing potential damage.

Although this ability to change the angle of the panels is a big development, it does not mean they are indestructible as evidenced by the relatively new phenomenon of microcracking. Virtually unrecognisable to the human eye, solar panel microcracks can occur at any time but often

come to light in the aftermath of a storm. Wind damage may be obvious in some panels but upon closer inspection microcracks are discovered in others. The issue then becomes a question of whether the cracks have been in place since manufacture or installation, gradually worsening, or are the direct result of a storm. As it is often impossible to come to a definitive answer, we have seen insurers implement a market-wide exclusion for microcracking.

Wind power is also exposed to a range of risks, often associated with contractor negligence and workmanship. In onshore operations there have been an unacceptably large number of turbine failures due to locking pins at the top of turbines not being correctly engaged. There have been issues across all of the major suppliers; this has not been specific to any one supplier or model. This is a problem that occurs during installation and maintenance as contractors have failed to check that pins have been engaged. If they have not been, turbines won't be able to withstand heavy loads and will simply topple over, causing significant damage and hefty losses.

***Against this background of a changing risk environment, mitigation has never been more important, yet the renewable energy insurance market is at an inflection point.***

The offshore market is on the cusp of taking off, especially in the US where challenges around permitting and planning have now largely been removed and a number of large projects are ready to go. There are risks here too, including exposure to natural catastrophes and mechanical breakdowns. However, the biggest challenge at present affecting offshore wind farm development and operations is failing subsea power cables, which account for approximately 80% of insurance claims in the industry.<sup>2</sup> Faults may develop due to poor management or damage inflicted during manufacture or installation. Cables are often laid in good faith with problems only coming to light once operations commence.



# Recognising The Risks Of Renewables

## A changing insurance market

Against this background of a changing risk environment, mitigation has never been more important, yet the renewable energy insurance market is at an inflection point. The last few years have seen higher than expected loss events including turbine fires and significant breakdowns. There has also been an increase in severe catastrophic events such as windstorms in the Caribbean, Gulf Coast and East Coast of the US, the earthquake in Mexico and the 2018 hailstorm in Texas that resulted in a US\$70 million insured loss – the largest to date experienced by the renewable energy sector.

Meanwhile, the renewables insurance market had been suffering from a prolonged period of intense competition and under-pricing that simply was not sustainable. Following the Decile 10 review at Lloyd's, underwriters have scrutinised their operations and capacity has been scaled back. This combination of reduced capacity and increased claims has resulted in a period of rapid price increases that began at the end of last year.

Overall, there has been a significant change in the way the insurance market is operating. There were several company market insurers who were writing large lines up to 100%, which made it easy for brokers. With many underwriters now opting for much smaller lines, this has left brokers with much more challenging placement requirements.

Terms and conditions are tightening up too: sublimits for windstorm, earthquake and flood have reduced significantly and for the first time ever in the renewables insurance market, there have been sublimits introduced for hailstorm damage.

Renewable energy is here to stay and the challenges we are facing now should be seen as an opportunity for policyholders, brokers and insurers to work more closely together to ensure that the right risk transfer solutions are in place to support the growth of the sector.

## LEARN MORE

Our specialised underwriters, claims professionals and risk control specialists can help you address the exposures created by today's rapidly changing marketplace.

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1. <https://www.iea.org/reports/renewables-2019>

2. <https://www.offshorewind.biz/2019/07/16/keep-calm-and-reduce-cable-failures/>

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## ABOUT SOMPO INTERNATIONAL

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