

Solar irradiation protection

Innovative weather risk transfer solutions for all industry sectors

Munich Re is a market leader in the modelling, pricing and trading of weather derivatives. These market-based **bespoke solutions** compensate for our clients' weather-related losses if the realised weather outcome falls outside an established range.

Your challenge

- Your **business performance** is negatively impacted by high solar outputs
- Unseasonably high solar outputs are a challenge for your business
- You would like to **protect yourself** against volatile or unfavourably high irradiation scenarios

Use case

- A power utility in the Netherlands
- High solar outputs cause lower than expected revenues, while low solar outputs result in **overperformance**
- A **swap** between low and high solar outputs is sought

Solution

- A **suitable weather index** is defined based on a third-party solar power production index
- A derivative structure is designed to progressively pay as solar irradiation goes above a threshold, referred to as the strike, in exchange for a payoff to Munich Re in the opposite case

Example of product definition and associated performance

Costless swap on solar power generation

Index

Measured solar irradiation

Strike

On request (S_{Strike})

Risk

Too high

Location

Amsterdam, the Netherlands

Risk period

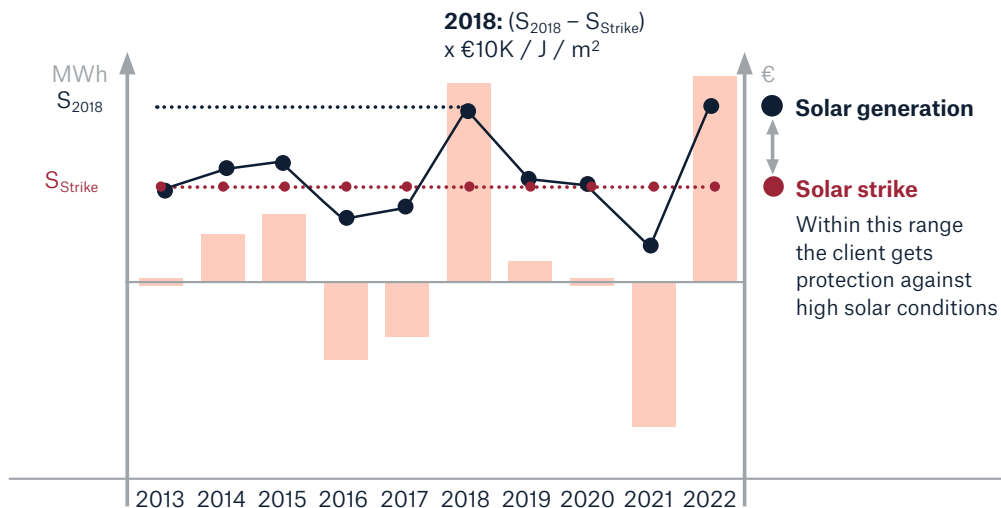
Summer (May - Sep)

Notional

€10K / Joule (J) / m²

Premium





0



When the index rises above the strike, the client receives a payout. The level of the payout is equal to the difference between the index and the strike, multiplied by the agreed notional.


We offer a range of bespoke weather-contingent risk management solutions

1 Weather perils

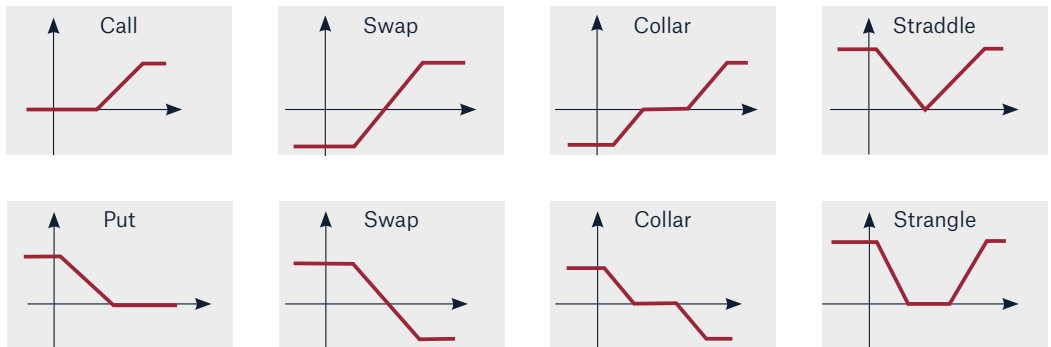
<p>Wind</p> <ul style="list-style-type: none"> - Wind speed - Wind power generation - Wind direction 		<p>Solar</p> <ul style="list-style-type: none"> - Hours of sun - Solar irradiation - Solar power generation 		<p>Temperature</p> <ul style="list-style-type: none"> - Avg. / Min. / Max. temperatures - Heating or Cooling Degree Days (HDD, CDD) - Sigmoid function for energy demand 		<p>Water</p> <ul style="list-style-type: none"> - River height - Streamflow - Water power generation 	
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Other
Contact us about any weather-related risk you are exposed to.

2 Where

<p>Global coverage</p> <ul style="list-style-type: none"> - Weather stations - Lat./Long. coordinates 	<ul style="list-style-type: none"> - Speedwell indices - Third-party data feeds 	
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3 Select and customise the structure suitable for your business



Contact



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