



When climate risks suddenly become relevant for asset operations.

How UNIQA Sustainable supports a renewable energy operator in Southeast Europe in identifying climate risks early, quantifying financial impacts, and deriving concrete measures to safeguard long-term operational performance.

Customer profile at a glance

Company: Renewable energy operator managing utility-scale assets in Southeast Europe.

Industry: Utility-scale solar PV & battery storage **Asset value:** € 100 million

Challenge: Quantifying the impact of climate risks

Solution: Climate Risk Analysis

Result: Evidence-based risk documentation supporting long-term operational continuity.

When renewable energy assets become exposed to a changing climate

Renewable energy assets are built for the long term. Yet climate conditions are evolving faster than many assets were originally designed for. Heatwaves, hailstorms, drought and wildfire increasingly affect operational performance, maintenance requirements and business continuity. For operators of utility-scale solar and battery storage facilities, climate-related disruptions

are more than an environmental concern. They can directly impact revenue generation, asset availability and financing assumptions. In this context, the operator needed a reliable basis for decision-making: **Which climate risks matter most, what could they cost, and which actions should be taken first to protect business continuity?**

“Climate variability is no longer a background consideration for the energy sector - it is a defining operational factor.”

Prof. Celeste Saulo, Secretary-General, World Meteorological Organization (WMO)



From climate data to investment decisions

Together with UNIQA Sustainable, the operator carried out a **Climate Risk Analysis** tailored to the site's location, equipment and operational profile. The objective was not only to identify climate-related risks, but to quantify them financially and prioritise practical mitigation measures. The assessment combined climate science, asset vulnerability analysis, financial modelling and risk engineering into a single decision-making framework.

The project followed a structured four-step methodology:

1.

Data collection:

Site documentation, technical specifications and operational information were collected and reviewed.

2.

Analysis of climate hazards:

Twelve climate hazards were assessed using multiple regional climate models.

3.

Assessment of risks and vulnerabilities:

The biggest threats to asset availability, revenue generation and business continuity were identified and prioritised.

4.

Development of adaptation measures:

Practical and cost-related resilience measures were delivered for the identified risks.

The four climate hazards with high impact on operations

The assessment revealed four hazards that could significantly affect long-term operational performance:

Wildfire

Hail

Drought

Heat stress

A major benefit of the analysis was the ability to express climate-related risks in financial terms rather than qualitative descriptions:

Up to € 3 million

in potential one-time business interruption losses.

Up to € 400,000 annually

in potential loss through recurring heat stress on battery systems.

Concrete measures to increase resilience

Based on the results, a prioritised adaptation roadmap was developed. Recommended measures included:

- Establishing **defensible vegetation zones** around battery storage areas
- Implementing **weather intelligence systems** and automated protective operating modes
- Increasing hail protection through **physical protection** and **spare-part strategies**
- Integrating **temperature-management protocols** into operating procedures

For further information, contact us at esg@uniqa-sustainable.com, to address risks in a targeted way and strengthen your company's resilience.

The added value for the customer:

- **Risks become visible:** Clear transparency on climate-related vulnerabilities and operational exposure.
- **Actionable recommendations:** Every identified risk is linked to practical resilience measures.
- **Better-informed decisions:** Stronger foundations for investment, maintenance and risk-management decisions.
- **Stronger stakeholder confidence:** Documentation that supports discussions with insurers and lenders.
- **Operational performance is safeguarded:** Measures help protect asset availability, revenues and long-term profitability.