Field Failures and Extreme Weather: PVEL's Findings from Field-Testing Damaged Solar Assets

Jenya Meydbray, PV Evolution Labs (PVEL)

Abstract:

As installed solar capacity grows and the climate changes, PV assets are increasingly exposed to wildfires, hailstorms, high winds, hurricanes and other potentially destructive natural disasters. This session will cover findings from PVEL's experience conducting field EL imaging and testing for >1 GW of damaged solar projects, including trends in damage for specific events and common issues observed at project sites. It will also provide insights into PVEL's collaboration Lawrence Berkeley National Labs to analyze field EL images with artificial intelligence and machine learning techniques.

The presentation will begin with an overview of the data collection and analysis process that highlights recent learnings for coordinating effective responses to force majeure events. Next, key trends in damage that PVEL has identified across multiple hail and wildfire-affected projects will be shared through anonymized case studies. The session will conclude with an overview of the challenges and benefits of utilizing field data for insurance claims from both an asset owner and insurer perspective.

Short bio:

Jenya Meydbray is CEO and cofounder of PV Evolution Labs (PVEL), the leading independent lab for the downstream solar and energy storage market. Since entering the solar industry in 2006, Jenya has pioneered bankability testing for PV and energy storage equipment and risk mitigation methods for power plants. Jenya holds an MS and a BS in Electrical Engineering and as well as two photovoltaic-related patents.