Identifying and Characterizing Fire Related Damage in Solar Modules

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Abstract:

Fires within a solar array may stem from internal module or system related defects or from factors external to the solar array. The inspection of rooftop and ground mount fires has been assisted by developing characterization methods for the assessment of the nature and extent of damage. These characterization categories may also be useful with site audits as means to assess emerging defects as a preventative measure. A framework for defect assessment will be presented.

Biography

Eric Daniels is Managing Director and founder of Suncycle USA (2015), a sister company of Suncycle GmbH (2007). Suncycle specializes in after-sales support, solar cell, module and system diagnostics, system repair, connector replacement, performance optimization, storm & fire damage assessments and appraisals (asset valuation) for module manufacturers, EPCs, utilities, insurers, owners, lawyers and operators. Field audits in the USA are approaching 2 GW of capacity and include thin film and crystalline solar technologies, residential, commercial and utility scale ground mount, rooftop and tracking systems. Mr. Daniels is also CEO and founder of Field Energy Ops, a company developing solar field inspection techniques and equipment. He also serves as board advisor for PV-Diagnostics, India.

Before Suncycle USA, Mr. Daniels served as the regional president for Robert Bosch LLC's North American solar division. There he introduced structured financing, PPAs, loan and lease products to promote solar system sales.

Prior to Bosch Solar Energy, Mr. Daniels served as Chief Technology Officer for BP Solar. In addition to managing over $100 million in solar system field inspections. He and his team developed and introduced numerous advanced and patented technologies including Quasi-mono, IntegraBus, ThermoCool, and ½ cell modules, increasing the reliability, longevity and performance of solar modules. He received many technology and commercial awards from BP Group including the top innovation award for advanced solar module technology in 2010 and rural solar powered irrigation systems for Mexico.

Mr. Daniels received an MBA in the Management of Science, Technology and Innovation from George Washington University and a BS from St. Mary's College of Maryland. He attended BP's, Stanford & Kellogg University's continuing executive education series on innovation management, sales and marketing.

Mr. Daniels also holds a patent for an advanced DC-microgrid Smart Home and Building architecture that integrates solar with storage, HVAC, EV charging and micro-wind generators and has patents pending for bolt-less solar module support structures.

Volunteer activities include serving on the Sustainability Committee and solar power technology advisor for the City of Frederick, Maryland.

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