



Solarlytics Sheds New Light on Performance Issues in 2024 kWh Analytics Solar Risk Assessment

Names Voltage Collapse as a Top Risk Management Challenge

Solarlytics' BOOST Platform eliminates Voltage Collapse

Livermore, CA, June 11, 2024 — [Solarlytics](#), a leading tech firm specializing in solar energy solutions, is pleased to announce it is a contributor to the [2024 kWh Analytics Solar Risk Assessment](#), a comprehensive report designed to provide an objective and data-driven evaluation of solar risk. The report identified 6 operational issues that increase the risk of underperformance in solar generation, including [Voltage Collapse](#), which Solarlytics directly eliminates.

Last year, the [2023 Solar Risk Assessment by kWh Analytics](#) revealed that solar assets trail their P-50 levels by an average of 8%, with many performing even worse. “This was a brutal wake-up call for the industry. This level of underperformance is unacceptable in every other sector of the energy industry, but in solar, it has become the norm. Customers and investors expect us to do better.” said Rhone Resch, President and CRO of Solarlytics. “The good news is that there are new technologies that correct these issues and bring assets back to expected performance levels.”

Operational Risk Contributors

The 2024 kWh Analytics Solar Risk Assessment identified six operational risk contributors to performance. Solarlytics' BOOST Platform can address five of the six.

1. Voltage Collapse
2. O&M Planning
3. Equipment-Related Downtime
4. Unmitigated Soiling
5. Inverter Failures
6. Accurate Forecasting

Operational Risk Mitigation – Solarlytics Maximizing Performance

After years of working with large asset owners and careful analysis of string level operational data, Solarlytics identified multiple contributors to asset underperformance. The company created its groundbreaking product, the BOOST Platform, to directly address these issues. Solarlytics is pleased to announce it can mitigate five of the six operational challenges mentioned in the kWh Analytics report.

Voltage Collapse

When the solar array peak power voltage becomes misaligned with the inverter's operating range, voltage collapse results. This is a problem as the solar array ages and modules degrade, especially during warm weather when solar modules overheat. Voltage collapse is also found on newer installations that experience wide temperature fluctuation over the year. As temperatures continue to rise, voltage collapse is becoming a significant performance issue across the country. **The BOOST Platform solves [voltage collapse](#) and increases energy production by aligning the solar arrays voltage with the inverter's operating range.**

O&M Planning

The underperformance attributable to poor maintenance can be significant, reaching 20% or more for neglected sites. **BOOST improves maintenance by providing high temporal resolution data to be used for O&M planning.** Voltage, current, power, energy, and temperature information are transmitted to the Solarlytics Cloud every 30 seconds, enabling machine learning algorithms to spot problems as they are just beginning. This allows O&M teams to plan better and **develop predictive and preventative maintenance plans** and to address problems that would otherwise be impossible to see from visual inspections.

Equipment Related Downtime and Unmitigated Soiling

Drones and simple visual inspections will not detect significant problems like string imbalance and may not reveal all soiling, module, or other equipment failures. Soiling and equipment issues create string imbalances, contributing to a loss of energy production. **The BOOST Platform detects anomalies at the string level and automatically corrects them** by increasing the string's output voltage, ensuring maximum production.

The **Boost Platform also collects and analyzes string-level data**, and, using machine learning algorithms, **informs the O&M provider of specific performance issues**, like equipment failures and soiling.

Inverter Failures

When replacement of an inverter is necessary, a higher voltage inverter may be necessary due to equipment availability. When these higher voltage inverters are incompatible with the system, the replacement process requires expensive and complicated restringing. The **BOOST Platform** increases the string voltage to allow the

system to operate with the new, higher-voltage inverter, **eliminating the need for rewiring, reducing inverter replacement costs by 40%**, and minimizing plant downtime.

How BOOST Works

The BOOST Platform eliminates string imbalances and voltage collapse at large solar plants using a proprietary, smart IoT power device. Regardless of changing light, temperature, equipment age, or location, the BOOST Platform achieves maximum power generation and a remarkable 3-10% net energy gain. Unlike black box algorithms, Solarlytics' smart IoT power device operates based on the physics of photovoltaic cells, considering real-life environmental conditions and multiple variables occurring in the field. The BOOST unit collects data every 30 seconds and uses machine learning and AI to analyze billions of records, providing smart solutions for asset owners to improve performance.

Daniel Doimo, CEO of Solarlytics, emphasized the need for a solution and the significance of the BOOST Platform: "Our purpose is to optimize solar field performance, maximize energy production, and ensure better returns for asset owners and investors. With the BOOST Platform, we are transforming the solar landscape, providing the world with more clean energy, and enabling every solar plant worldwide to operate to its full potential."

About Solarlytics: [Solarlytics](#) is a fully integrated energy solutions provider that helps large-scale solar asset owners harvest all available energy through an innovative IoT and software platform. Their automated solution provides string normalization, actionable underperformance analysis, and aging equipment replacement all in one package. Solarlytics works with its customers to provide the world with more clean energy by enabling every solar plant worldwide to operate to its full potential.

For media inquiries, contact:

Sarah Willis, Chief Marketing Officer, Solarlytics, Inc.

Phone: (714)749-8028

Email: swillis@solarlytics.net