

## **Solarlytics Unveils BOOST Platform: Revolutionizing Solar Energy Performance**

*Increasing Yields by 3-10% for Large-Scale Solar Plant Owners*

**Livermore, CA, April 8, 2024** — [Solarlytics](#), a leading tech firm specializing in solar energy solutions, today announces the launch of its groundbreaking product, the **BOOST Platform**. This innovative IoT solution is poised to transform the solar industry by addressing performance issues and maximizing energy yields and returns for large-scale solar plant owners.

### **Maximizing Performance**

The BOOST Platform addresses a critical challenge solar assets face across the globe - underperformance. Despite the industry's exponential growth, solar plants often fall short of their potential due to faulty equipment, poor design, inadequate maintenance, and a lack of data.

“The solar industry is starting to realize that we are failing our customers and investors,” said Rhone Resch, President and CRO of Solarlytics. “The [2023 Solar Risk Assessment by kWh Analytics](#) revealed that solar assets trail their P-50 levels by an average of 8%, with some performing even worse. This is unacceptable, but the good news is that there are new technologies that correct these issues and bring assets back to expected performance levels.”

Daniel Doimo, CEO of Solarlytics, emphasized the need for a solution and the significance of the BOOST Platform: “Our mission 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.”

### **Key Performance Challenges**

After several years of careful assessment and analysis, Solarlytics identified key contributors to asset underperformance and created the BOOST Platform to address these issues.

#### **Voltage Sag**

When the solar array peak power voltage becomes misaligned with the inverter's operating range, voltage sag results. This is a problem as the solar array ages, especially during warm weather. The BOOST Platform solves voltage sag and increases energy production by aligning the solar array's voltage with the inverter's operating range.

## **String Imbalance**

Central inverters produce the greatest amount of energy when all the connected strings are performing equally. When strings' performance differs from each other, a loss of energy production occurs. Sources of string imbalance include terrain, uneven aging, uneven temperatures, and the operation of mixed fields. The BOOST Platform overcomes the impact of string imbalance by maximizing peak power through Maximum Peak Power Tracking (MPPT) dedicated to the string as opposed to a single MPPT in the central invert common to all strings. The strings' output voltage is increased to a range compatible with the inverter, and energy that would otherwise be lost is recovered.

## **Replacing Failing Inverters**

The BOOST Platform allows seamless replacement of aged and failing 600V inverters. When replacement of a 600V inverter is necessary, a higher voltage inverter must be used because 600V inverters are no longer manufactured. These higher voltage inverters are not compatible with the system and the replacement process requires restringing. The BOOST Platform, however, increases the string voltage to allow the system to operate with a new 1000V or higher inverter, which eliminates the need for rewiring, reducing inverter replacement costs by 40% and minimizing plant downtime.

## **Maintenance**

Normally, solar site maintenance is conducted using visual inspection or through IR (infrared) sensors mounted on drones. Unfortunately, drones and simple visual inspections will not reveal significant problems like voltage sag or string imbalance and may not reveal all module or string failures. The underperformance attributable to poor maintenance can be significant, reaching 20% or more for neglected sites. BOOST<sup>®</sup> improves maintenance by providing high temporal resolution data. Voltage, current, power, energy, and temperature are passed to the Solarlytics Cloud every 30 seconds, enabling machine learning algorithms to spot problems. This allows O&M teams to address problems that would otherwise be impossible to see from visual inspections using drones or other means.

## **How BOOST Works**

The BOOST Platform eliminates string imbalances and voltage sagging 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.

John Abe, SVP of Engineering at Solarlytics, adds, “Our seamless solution is easy to install and even easier to use. BOOST collects data onsite, analyzes it, and corrects string imbalances, enabling large solar plants to generate more energy without expensive equipment replacement, disruptive rewiring, repowering, or complete redesign.”

### **Actionable Insights and Cost Reduction**

The BOOST Platform collects continuous string-level data and analyzes it through machine learning algorithms. The platform then provides the asset owner with actionable insights to improve performance and operating cost. From physical damage to shadowing issues, the platform detects, and pinpoints underperformance causes. Real-time insights and recommended maintenance are accessible on-demand empowering plant owners and operators to make cost-effective corrections.

### **Customer Satisfaction**

The BOOST Platform is successfully installed at multiple C&I and utility scale power plants. All BOOST Platform users share that their energy production has improved, they have more visibility regarding their plant’s functionality, and as a result are able to make better decisions about maintenance to optimize their performance. Solarlytics’ solution has transformed their energy production, allowing them to proactively manage their assets with peace of mind.

**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.

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