Case Study

Solar Provider Puts More Than 30 Sites on a Single SCADA Platform

Ignition Also Brings More Data, Improved Efficiency, and Lower Costs

Ecoplexus, a leader in the solar industry, had more than 30 solar sites with a variety of data acquisition systems (DAS) that weren't providing the depth of information the company needed. The sites also had systems from many different vendors, and subscription fees were required for monitoring and data access. With the help of system integrator NLS Engineering, Ecoplexus now has all the sites on one platform. This provides a consistent look and feel for all the sites — in addition to lower costs, greater efficiency, more data than ever before, and improved data analysis.

Ecoplexus, headquartered in San Francisco, works in development, design, engineering, construction, financing, operations, and ownership of renewable energy systems for the commercial, government, and utility markets. NLS Engineering is based in Stoney Creek, Ontario, Canada — and is one of the fastest growing companies in the country.

Ecoplexus needed a standardized, customizable SCADA system that could handle large solar and energy projects while also providing strong data acquisition and analysis. The company had a fairly tight timeline for bringing existing sites onto the single system, and it also needed the kind of data access that would appeal to potential buyers of its sites. NLS provided all this and more with Ignition by Inductive Automation®. Ignition is an industrial application platform with tools for building solutions in SCADA, human-machine interface (HMI), and the Industrial Internet of Things (IIoT).

"We really needed to have a data system that gave us much better information," said John Morrison, senior vice president for U.S. operations at Ecoplexus. "We needed something that was utility-scale, rich, and robust. NLS recommended Ignition.

Ecoplexus now has a more unified system and a lot more data.

They gave us other options as well, but after looking at what Ignition could provide, and the cost of the software, we decided it was the best choice for us."

Problems Solved

Ignition has given Ecoplexus exactly what it needed. "The amount of data we have now, and the ability to get better insight, has really enabled us to operate our sites much better," said Morrison. "And it's really helped folks in their jobs as we report to investors, and as we operate the farms. We're able to manage them much better than we were previously."

Ecoplexus had used an assortment of DAS providers. Standardization had not been possible, and the systems were not designed for a large-scale solar enterprise. The systems didn't have control capabilities and didn't provide the kind of deep data analysis that Ecoplexus was seeking. For potential buyers, more site-performance data

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was needed. Detailed financial analysis was also a must. With previous providers, costs for adding control capabilities and greater access to data were prohibitive. With Ignition's unlimited licensing model, there are no extra costs for additional sites, tags, users, devices, or projects.

"Today, Ecoplexus has a comprehensive O&M platform that allows them to operate and manage their fleet of assets," said Mike Crawford, vice president of business operations for NLS Engineering. "Ecoplexus found the customization aspect of Ignition to be extremely important. From templates to reports and security, Ignition was customized to meet their every need."

"The customization is very helpful," said Christopher Thomas, solar operations monitoring manager for Ecoplexus. "Before, we had some DAS solutions where we didn't have control over the customization and feature requests. With Ignition we have a lot more control, and we're able to customize HMIs, tag history, all sorts of things. Now we can build a solution that really fits the needs of our operations."

Better Future

Ignition's data collection and analysis capabilities have also been a big leap forward. "We can pull in more tags," said Thomas. "So we're able to look at more data and manipulate it and really dive into that data and perform some forensics. That gives us a better indication of plant performance, which really leads to predictive analytics."

"We've created a solution that Ecoplexus can own themselves," said McKenzie Santin, associate director of energy for NLS Engineering. "They can operate it and maintain it; it's open architecture. They can add any tags they want, any controls they want, and there's no need to pay a monitoring subscription fee."

The Ecoplexus dashboard developed in Ignition presents data in a way that was never possible before. "With the dashboard, operators can see the entire portfolio at a glance, and identify any potential issues," said Thomas. "You can click on any site, and see network health, operating status, individual inverter operations, alarms, reports, and other information. We can also go in and trend the data. And we can export that data and send it to customers or our folks in-house."

NLS was just as pleased with the results as Ecoplexus. "This project, in combination with our utility storage and solar experience, led to the development of nextDAS," said NLS' Crawford. "NextDAS is a highly versatile monitoring system designed for commercial industrial solar, wind, and energy storage." The solution is available for other customers, through NLS Energy. It's built on the new Ignition Perspective Module, which brings greater mobile capabilities. And it provides key metrics, site dashboards, live and historical data, alarm summaries, device status, weather data, and more.

NLS specializes in SCADA for renewable energy and water/wastewater projects. It provides SCADA, plant control, and commissioning services for solar, wind, and energy storage. For more information, visit nlsengineering.com.

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