



Lack of standardization is expensive to maintain and difficult to integrate into your enterprise.



Portfolio Mix: Assets and Automation

Mark Brown
Yokogawa Electric Corporation
Business Development

Declining levelized costs of energy and rising capacity factors for renewable energy assets continue to drive industry growth globally. The steepest cost decline has been with battery storage—24% in 2019. **These developments make intermittent resources increasingly competitive with more traditional, “dispatchable” energy sources.** More than 95% of the net new generation capacity is expected to come from wind, solar, and storage in 2020; the landscape will become a dizzying mix of OEM assets and technology.

Natural cycles include new additions along with mergers and acquisitions; this mix of assets and technology is unavoidable, and it presents

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challenges for owners and operators. Portfolios will consist of technologies from a broad array of OEMs such as GE, Vestas, Siemens, Gamesa, SunPower, and First Solar. It is a certainty that each facility will have a different SCADA or other automation control system from the next.

Not only is this lack of standardization expensive to maintain, it can be difficult to efficiently integrate into enterprise operations. The same OEM solution deployed across multiple facilities could lack any standard implementation or configuration. Clearly, having a standard automation strategy that consists of both hardware and software will help extend the life of existing technology while reducing the total cost of ownership.

Many existing automation platforms lack the advanced capabilities and interfaces to support evolving business models. As owners continue to search for ways to increase the value of their assets, robust data acquisition, analysis, and control capabilities will be critical to realizing value beyond kWhs. Fortunately, the industry can look to non-OEM automation platforms that integrate seamlessly with any asset and natively provide advanced capabilities for which the OEM platform simply wasn't designed.

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By nature, renewable assets are remote. Unlike in a traditional fossil fuel power plant, solar and wind power generation facilities are not teeming with operations and maintenance personnel. Because of this, remote operations centers, or ROCs, are becoming a necessary aspect of an owner's overall strategy.

The ROC exemplifies the challenges of a mixed portfolio. Whether performed internally or by a third party, leveraging a single interface to monitor all remote assets helps improve asset performance and reliability. With the responsibility to operate diverse assets and dispatch personnel to address issues at each facility, a shared automation and asset management infrastructure maximizes operational value while driving down maintenance costs.

As owners expand their portfolios, they should not be constrained by asset type, existing OEM automation, integration capability, or the lack of ability to scale functionality as their business models change. Developing a strategy that employs a standardized automation and integration platform will address the issues highlighted here and enable more effective enterprise-level asset performance management (APM) and workflow functions.



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