

An aerial photograph of a large industrial facility, likely a battery energy storage system (BESS) plant. The facility consists of several long, rectangular buildings with flat roofs covered in solar panels. Various pipes, conduits, and industrial equipment are visible on the roof and around the buildings. The surrounding area includes some greenery and other industrial structures in the distance.

Collaborating to Scale Renewable Energy

How RoviSys Commissioned an Existing Design for Repeatable BESS Optimization

Forming a trusted partnership. Battery energy storage system advancement to harness renewable power sources and enable grid enhancement

A global energy company is transforming from a regional electricity provider into a leading renewable energy operator with projects across the United States. As it expands its battery energy storage system (BESS) portfolio to strengthen grid reliability, it must coordinate multiple vendors while ensuring every site is safe, compliant, and ready for operation.

Successful BESS deployment requires specialized SCADA expertise. The company needed a trusted partner to lead commissioning, validate complex system integration, and establish a repeatable approach for future projects.

It selected RoviSys to commission its existing technical infrastructure into a fully tested, grid-ready facility that meets technical, contractual, and regulatory requirements, and create a scalable foundation for continued BESS expansion.

The Challenge

Commissioning a repeatable, reliable process

U.S. electricity demand is expected to grow significantly over the next two decades, fueled by advanced manufacturing, data centers, and the electrification of transportation and buildings. To meet this demand, the energy company is investing in battery energy storage systems (BESS) that transform intermittent renewable generation into reliable, dispatchable power that strengthens grid stability.

Achieving this growth requires more than technology. The company needed a partner to lead commissioning, coordinate a complex network of vendors, and establish a repeatable approach that could be deployed across every new site.

Project objectives:

- Developing a standardized commissioning process using custom tools for loop checks, inverter testing, and data validation aligned with ERCOT requirements
- Accelerating BESS deployment with dedicated, full-time commissioning engineers
- Coordinating multiple vendors, including Samsung batteries, SMA inverters, Ulteig SCADA, plant controls, and the electrical contractor (RES)

Providing on-site technical leadership to reduce project risk, improve execution, and keep schedules on track

RoviSys

Converting existing BESS design into a repeatable, grid-ready operation.

The energy company selected RoviSys for its expertise in integrating existing control systems, coordinating multiple vendors, and providing experienced, responsive commissioning engineers who would take ownership in the field. Specifically, this project required understanding of the existing architecture and creating a scalable, repeatable foundation for future BESS deployments.

Three RoviSys differentiators:

1. Ability to start with an existing, multiple-moving-parts system

RoviSys worked within an existing primary system to ensure new and existing controls, equipment, and software work together as one coherent architecture.

2. Connectivity, standardization, and data visualization

RoviSys leveraged industrial connectivity software (Ignition SCADA) to centralize data and provide clear visualization for operators. Custom commissioning tools completed loop checks, inverter testing, and data testing to support commissioning and align with requirements.

3. Change management and incremental digitalization

RoviSys engineers worked alongside the existing system, carefully analyzing and enhancing existing systems. Incremental add-ons were designed to layer digital capabilities onto existing programs to support plant operations before the plant was fully commissioned, making it possible run the plant enough to identify any technical issues during the commissioning period.



The Solution

Energy team develops the future of BESS

The project spanned one year, with the primary integration and energization activities completed during a three-month on-site phase. RoviSys provided a team of dedicated engineers both on site and off site, and delivered a safe, predictable, sustainable and scalable solution. Core elements of the RoviSys SCADA integration and commissioning support include:

- Supervised coordination among all vendors
- Provided an on-site commissioning agent for clearing bottlenecks quickly
- Validated against intricate ISO standards
- Provided SCADA integration support for the customer-designed and provided architecture
- Provided control solutions for issues identified during the commissioning
- Coordinated and executed SAT and grid acceptance testing (ERCOT)

The Result

Production streamlined & solidified for scalable growth

- This project ensured a reliable and operationally usable asset, enabling operators to run and monitor the BESS plant and subsequent plants as planned. Additionally, a scalable, repeatable foundation for future BESS deployments was established.
- Successful transition to a battery facility with coordinated subsystems - battery controls, plant equipment, protection, and supervisory control.
- Operator visibility into system status, alarms, and key performance information, enabling them to run the asset confidently under various grid and plant conditions.
- Conversion of a complex, multi-vendor project into a functioning, thoroughly documented, resilient asset that the energy company can trust in day-to-day operations.

Building What's Next

Partnering with RoviSys

This manufacturer operates with a clear sense of urgency because every device shipped represents the possibility of a life saved. RoviSys helped ensure the manufacturing systems supporting that mission could scale with demand, maintain compliance, and support long-term growth without slowing production.

The RoviSys approach remains consistent:

- **Start with understanding.** Deep operational discovery translates manufacturing processes, compliance requirements, and growth goals into a scalable MES strategy.
- **Stay on-platform.** Solutions are designed within the native MES framework whenever possible, creating systems that are maintainable, validatable, and easier for customers to own and expand over time.
- **Stay engaged.** RoviSys remains involved through go-live and beyond with continued engineering, support, and operational partnership because MES is not simply a project delivery, it is a long-term operational foundation.

Partnering with RoviSys: a proven playbook for BESS expansion

RoviSys provides power and energy industry solutions that are logical, incremental, and sustainable over the full lifecycle — design, commissioning, service and long term support. On this BESS project, that translated into a control and integration pattern the energy company can replicate on future sites, evolve as industry demands change, and support as part of a growing storage and renewables portfolio. This approach resonates across many industries: Starting with solutions, not products, and a focus on understanding goals, requirements, roadmaps, and success metrics.

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