

# Prevalon's Energy Management System



## Seamless Energy Management with insightOS™

Discover the power of insightOS, Prevalon's Energy Management System (EMS). Prevalon's advanced EMS, is designed to optimize and control energy storage systems with unmatched precision. Seamlessly integrating with your infrastructure, insightOS™ ensures efficient, reliable, and secure energy operations.



Our EMS simplifies management by handling everything from equipment safety to grid coordination and diverse use cases. It optimizes batteries, energy, and thermal conditions while serving as the interface between your system, operators, and the grid. With a dynamic suite of applications, intuitive control, and real-time insights, insightOS™ empowers you to confidently meet the demands of modern energy systems.

### Maximize Efficiency, Safety, and Availability with insightOS

insightOS goes beyond basic energy management, delivering a host of advanced capabilities to enhance your operations. From seamless integration to intelligent fault handling, insightOS is built to ensure peak efficiency and reliability at all times.

- **Efficient Control:** Hierarchical management of system assets ensures smooth and precise coordination across your energy storage operations.
- **Safe Operation:** Critical fault latching and time-delayed high-priority fault management protect both your infrastructure and personnel.
- **Increased Availability:** With SRE automation, effortlessly attach or remove ESS units to maximize system uptime and operational flexibility.

By enhancing system efficiency, reliability, and safety, insightOS ensures your energy storage system is always ready to deliver optimal results.

## Unlock the Full Potential of Your Energy Storage System with insightOS

Prevalon's advanced EMS, combines cutting-edge technology with a user-friendly design to optimize performance and simplify management. Whether scaling operations or managing complex grid demands, insightOS™ has the tools to help you succeed.

- **System Architecture:** Built for scalability and efficiency, insightOS™ features redundant core switches, OPC-UA, and MQTT protocols for fast, secure data handling.
- **Power Plant Controller (PPC):** Intelligent Site Rule Engine (SRE) manages grid events, ensuring seamless control of real and reactive power.
- **Gateway:** Transform SCADA data into actionable insights with a robust data acquisition system, integrated alarm management, and a reliable historian for post-event analysis—all accessible through a web-based interface designed for heavy workloads.
- **Lifecycle Management:** Maintain peak performance with regular security patches, automated backups, and remote system monitoring to ensure long-term reliability.
- **Cybersecurity:** Built to the highest standards, insightOS™ adheres to IEC 62443, IEC 62443-4-1, and NERC CIP requirements, securing critical infrastructure against evolving threats.
- **Hardware Cabinet:** Engineered for rugged environments, our industrial-grade 42U enclosures include a 1-hour UPS system to support auxiliary power and ensure continuous operation.

With insightOS™, Prevalon delivers the precision, flexibility, and security needed to thrive in today's evolving energy landscape.