Acumen EMS™
Energy Management System

Acumen EMS controls software combines behind-the-meter value streams to generate the highest revenues for your Energy Storage project. Acumen utilizes artificial intelligence to forecast and optimally operate energy storage systems to ensure maximum value.

MAXIMIZE YOUR STORAGE ASSETS WITH ACUMEN EMS

✔ **One-Stop Shop.** Energy Toolbase enables modeling, purchasing, procuring, commissioning, and monitoring for your energy storage systems paired with Acumen EMS.

✔ **Optimized.** Robust operating modes optimized for bill savings, revenue generation of your assets, and critical backup capabilities.

✔ **Forward-Looking.** Participating in current and future value stream opportunities.

✔ **Compliance.** OEM warranty and incentive program (e.g., ITC, SGIP) compliant operations.

✔ **Flexible.** Acumen EMS integrates with a variety of top tier Energy Storage Hardware platforms tailored to your project’s specifications.

✔ **Standards.** Supports all industry standard communication protocols.

✔ **Proven Track Record.** Acumen EMS has a history of successful deployment and optimization, a dependable brand for your projects.
PROJECT-LEVEL SUPPORT SERVICES

ESS Hardware Procurement → Commissioning Support → Microgrid Support → Incentive Administration → Demand Response Participation → Ongoing Monitoring

ACUMEN EMS ALL-IN-ONE SOLUTION

Our turnkey, fully wired enclosure houses all of the necessary hardware components in a single box, enabling a streamlined installation and commissioning. Pre-configured for the specific project and application.

 ✓ Turnkey ✓ Revenue Grade Metering ✓ Rugged Outdoor Enclosure ✓ LTE 4G as an Option

ETB MONITOR REAL TIME PERFORMANCE

Our full-featured ETB Monitor solution comes standard when deploying our Acumen EMS controls software. Real-time insights into the operational performance and savings of your solar + storage systems.
# Technical Specifications for North America

## Operating Modes
- Demand Charge Management, Time-of-Use Arbitrage, Solar Self-Consumption, DC Clipping Recapture, Demand Response Programs, Critical Load Resiliency, Signal-Based Dispatching

## Certification
- **EMS Certifications**: UL1741 (SA/SB)
- **Storage Partner Certifications**: UL9540 (A)
- **CE & FCC Class A**
- **UL Listed Device**
- **Sunspec IEE 2030.5**

## Metering
- Integrates with Modbus TCP enabled Revenue Grade Meter
- High Accuracy CT’s (ANSI .06 or Better)
- Data Capture from Solar PV, Storage, Utility Metered Load

## Resilience
- Autonomous operation for limited periods of time with no internet
- Sustained operations during power interruptions

## Communications
- RS-485 or Ethernet/ TCP Networks
- Modbus RTU
- Modbus TCP
- Sunspec/Mesa Modbus API

## Connectivity
- Wired Ethernet
- Embedded LTE

## Compatibility
- ETB Monitor - a single monitoring platform for all ESS hardware deployed at site with Acumen EMS
- Integrated with tier one hardware vendors

## Environment
- Operating Temperature: -25°C to 70°C
- Relative Humidity: 10% to 95% (non-condensing)