INTEGRATED TECHNOLOGY SOLUTIONS FOR SOLAR PV

PowerTrack™
SOFTWARE

MONITORING

CONTROLS

ASSET MANAGEMENT

HARDWARE + SERVICES
SOFTWARE

Industry leading Powertrack software is AlsoEnergy’s flagship product. Whether you are buying a standard DAS system or investing in a full SCADA package, your solution will include Powertrack software with access to the full range of features and benefits.

Increase Yield and Reduce Costs
Powertrack includes powerful tools for PV performance evaluation, and offers a CMMS platform to manage operations activities. Use Powertrack to optimize generation while reducing labor costs.

• Automated smart alerts for system performance
• Industry leading tools for performance modeling
• Real-time expected generation benchmarks adjusted for available sunlight
• Automated site validation reports for entire portfolio
• Operations Module for O&M: this optional CMMS offers work order ticketing, cost tracking, incident reporting, automated service dispatch, financial loss analysis, etc

With robust data analytics and a huge range of display options for system KPIs, users can get actionable insights from panel to portfolio.

Save Time and Money
Reduce administrative workload with tools for asset management and portfolio oversight:

• Automated stakeholder reports
• PPA invoicing (supports TOU rate schedules)
• Agency reporting service
• Safety and environmental compliance tracking
• Compatible with most common business systems
• Production guarantee tracking
• Flexible user permissions and endless display options, so all parties can work in the same software platform
• User ability to change alert thresholds, create charts, etc without paying for custom configuration services

Create online data displays and PDF reports with KPIs tailored to the assets and the interests of each client, stakeholder, end user, etc.

PowerTrack Family of Products
All these products work with the same PowerTrack back end server system, meaning that any actions executed in one platform will be immediately visible and actionable on the other platforms. Users may move back and forth among versions with no fear of losing work. Use as many or as few options as you like; there is no additional charge for using multiple PowerTrack products.

Powertrack Desktop

Required OS: Windows        Mac OS
Best for: Power Users (advanced analytics, reporting, dashboards)
Ideal for SCADA systems

Powertrack Mobile

Required OS:    iOS        Android
Best for:   Viewing data and on-site maintenance

Powertrack Web

Required Browsers:  Chrome            Firefox
Best for:  Everyday use (Analytics, Charting, Reporting, O&M)

PowerTrack IE

Required Browser:  Explorer
Best for: Power Users (advanced analytics, reporting, dashboards)

PowerTrack Feature Spotlight
The Rule Tool Performs Automated Site Validations to Check Communications and Data in Your AlsoEnergy Systems

This feature enables users to perform site validations on demand to check for communications, proper configurations, and healthy data. The Rule Tool also helps you keep track of progress as you deploy new systems, providing a checklist for commissioning milestones.
AlsoEnergy solutions provide access to PowerTrack software along with industry-leading support and professional services. Solutions may include fully integrated hardware systems engineered by AlsoEnergy to reduce installation costs and maintenance.

Commercial Scale Solutions
Commercial scale monitoring solutions from AlsoEnergy are affordable and easy to install. Core hardware components arrive mounted and wired in an ETL-listed NEMA4 enclosure, and may be combined with a weather station and other optional devices. Hardware is integrated with AlsoEnergy’s Powertrack software platform and combined with professional services and support.

Utility Scale Solutions
Utility scale solutions are custom designed by our engineers to accommodate each project. AlsoEnergy SCADA solutions can satisfy a wide range of control specs, from grid integration up to full power plant controller systems. Utility-scale solutions may also include options such as CAISO-compliant RIG telemetry, and integration with an auxiliary controller (Schweitzer RTAC).

Software
Every AlsoEnergy solution package includes access to the full PowerTrack software platform feature set. Use PowerTrack to increase yield, reduce costs, and save time & money on administrative workload. SCADA systems include control features in the PowerTrack interface.

Clients with SCADA systems will find intuitive, solar-specific control features conveniently located in their PowerTrack software interface. SCADA technicians may access control features and SCADA system data at on-site HMI workstations, or remotely.

Professional Services
AlsoEnergy site clients benefit from a range of standard and optional services:
- System design and engineering *
- Single line diagrams *
- Full construction drawings
- Dedicated project management
- On-site commissioning oversight
- Software configuration and training *

- Advanced software configurations and custom development
- API integration with client business systems
- Agency reporting
- Industry-leading support *

* standard with all solutions

Hardware
Solution packages with integrated hardware provide customers with a single source for a complete end-to-end solution. AlsoEnergy hardware systems are configured, wired, and mounted in weatherproof enclosures, thus reducing installation costs. Integration with PowerTrack software enables remote diagnostics to expedite maintenance over the life of the system.

Every hardware device sourced by AlsoEnergy is extensively tested and fully warranted by AlsoEnergy. Alternatively, AlsoEnergy can work with customers to leverage existing hardware on assets being migrated to PowerTrack.

Hardware devices that may be sourced from AlsoEnergy include:
- Gateway device
- Weather station sensors
- Local historian data server
- UPS system
- Cellular modem
- Revenue grade meters
- Transformer I/O
- PDL metering
- Auxiliary power plant controller (Schweitzer RTAC)

Choose Your Solution
Solution packages from AlsoEnergy are identified by the device used for data acquisition and control functionality. Choose based on support for local data hosting solutions, environment (indoor vs. outdoor), and overall system size and complexity.

PowerManager 2000
Advanced Data Controller
- For utility-scale and large commercial systems
- Full SCADA functionality
- Cloud-based data hosting
- Outdoor rated
- Supports CAISO-compliant PowerRIG solution

PowerServer 3000
Supervisory Control Server
- For large-scale utility
- Full SCADA functionality
- Supports local data hosting
- Indoor only
- Supports CAISO-compliant PowerRIG solution
AlsoEnergy Client Benefits

AlsoEnergy works closely with a wide range of client types. This experience helps us deliver integrated technology solutions with benefits for all project stakeholders:

**PROJECT PLANNING AND DEPLOYMENT**

**Engineering Expertise**
Our extensive experience with a huge range of customers and projects enables AlsoEnergy to deliver systems that meet all regulatory requirements and design imperatives with the most cost-effective options.

**Mitigate Project Risk**
AlsoEnergy has worked with a wide range of contractors, reporting agencies, ISOs, etc. We can help ensure there are no surprises as we help our customers complete the final stages of their projects.

**Reduce Time to Market**
AlsoEnergy delivers the industry’s lowest lead times for most DAS system deployments. Our experience with a wide range of project helps us work efficiently to meet our clients’ deadlines on all projects.

**PERFORMANCE OVERSIGHT / O&M**

**Robust System Hardware**
Every hardware device we sell is extensively field tested and fully warranted by AlsoEnergy. You may rely on continued service from your AlsoEnergy hardware even if you change service providers or expand your system.

**Responsive & Experienced Support**
AlsoEnergy has long been an industry leader for effective support resources. Advanced support features include dedicated support technicians for key clients, along with advanced site configuration services.

**Increase Yield with Performance Analytics**
Industry-leading performance modeling features include optional array mapping and other informative displays, along with support for shading modules, multiple inverter modules, and PVSyst.

**More Efficient & Effective O&M**
Robust data analytics help O&M remotely identify and diagnose production issues, so they can deliver better results using fewer labor hours.

**ADMINISTRATIVE WORKLOAD**

**Integration with Client Business Systems**
This is one of the best opportunities to save time and money. Our software can seamlessly integrate with common programs such as Excel, Salesforce, and OSI PI; plus our easy API process makes it possible to integrate most other business systems.

**Save Time & Money on Asset Management Workflow**
Our software can automate a wide range of administrative tasks, leading to a significant reduction in labor costs. The feature suite includes tracking for performance guarantees, safety, and environmental compliance, along with FPA invoicing with TOU rate schedules.

**Software User Empowerment**
AlsoEnergy software users can set and change alert thresholds and user permissions, as well as generating charts and scheduling automated reports. AlsoEnergy offers employee onboard training and ensuring their clients get the most out of our software solution.

**Rincon 1: SCADA Solution for 18MW System**

**Challenge:** Southern Balancing Authority requires Rincon Solar 1 follow voltage schedules per bulk power operations procedure # BPO-1.

**Solution:** AlsoEnergy PowerManager 2000 SCADA system provides closed loop voltage control solution.

The Rincon 1 solar power plant is owned and operated by AES Distributed Energy. The project plan required that the Rincon solar plant follow voltage schedules from Southern Balancing Authority per bulk power operations procedure # BPO-1. AES would receive GenComm requests from the Southern Balancing Authority and remotely adjust the voltage set point schedule.

AlsoEnergy delivered the SCADA system for Rincon 1 in a tight time window, enabling all project partners to meet their project deadlines. Since AES has other systems on the PowerTrack software platform, they are able to incorporate Rincon Solar 1 into several portfolio-level displays and reports. This reduces asset management workload for AES and contributes to efficient office workflow.

**Monitoring for Large String Inverter Jobs**

**Challenge:** Design a monitoring solution to manage huge data sets from large string inverter systems.

**Solution:** Custom PowerTrack development creates mapped data displays and meaningful performance alerts.

GCL New Energy, Inc owns and operates 8 solar farms in North Carolina, totalling over 83 MWDC of production. GCL has implemented a string inverter system from Huawei for these solar farms. The combined systems utilize 2,467 Huawei string inverters.

AlsoEnergy performed custom development with Huawei in order to capture and display direct data from their string inverters.

AlsoEnergy performed custom configurations to create dashboard displays and alerts personalized for O&M providers and for portfolio asset managers.

**Benefits of Standardizing on PowerTrack Platform**

**Challenge:** Standardize on a single monitoring provider to expedite O&M workflow and diminish asset management workload.

**Solution:** AlsoEnergy utilizes API and custom software configurations to create seamless integration with client business systems.

Ahana Renewables was looking for ways to save time and money on asset management activities for a 59 system portfolio totaling over 45 MW of production. Administrative tasks such as accounting, agency reporting, and performance guarantees were scattered among a host of software programs.

AlsoEnergy won a competitive bidding process, and worked with Ahana to migrate the full portfolio to the PowerTrack platform in about 18 months.

One year later, an internal audit by Ahana revealed an annual savings of 1,000 work-hours using AlsoEnergy software. (This survey covered data gathering and accounting activities only; this calculation does not reflect other savings due to greater operational efficiencies, etc.)
AlsoEnergy provides monitoring and control technology solutions for energy systems. We offer solution packages for solar PV, battery storage systems, power quality, and more. We monitor 6GW of power at more than 17,000 independent sites across 40 countries. Solution packages range from C&I DAS systems to utility-scale SCADA systems. AlsoEnergy is home to the PowerTrack family of software applications. Turnkey solutions bundle hardware and services with PowerTrack software. PowerTrack software helps O&M providers increase yield and reduce maintenance costs. PowerTrack includes a full range of asset management features to reduce administrative workload.

AlsoEnergy is ranked by GreenTech Media as the #1 Independent Software Vendor (ISV) for solar monitoring in North America, #5 ISV worldwide.

CLIENT TESTIMONIALS

We look to AlsoEnergy for reliable hardware, fast communications from the field to data center to our network operations center, and solid technical support. Timely commissioning helps us to bring sites online and producing immediately because the AlsoEnergy hardware package arrives configured and ready to go.

Brad Zollner
Energy Monitoring Systems Manager
NexAmp

AlsoEnergy’s Powertrack platform has allowed ConEdison Solutions to gain crucial insight into asset health and to optimize our nationwide fleet of solar plants.

Steve Ondishin
Mgr, Renewable Assets & Proj Dev
ConEdison Solutions

AlsoEnergy has made it possible for us to monitor our solar systems installed on schools, and respond quickly to outages and performance issues. However, the greatest asset at AlsoEnergy are the employees, who are always willing to help and consistently go above and beyond our expectations.

Jimi Diaz
Electrical Engineer, Resource Mgmt
Arizona Public Service