

Web Energy

Hardware agnostic EMS combining energy consumption data and statistical models for real-time insights.

Highlights

Smart Forecasting & Monitoring

Combines metering data with operational schedules to generate reliable long-term forecasts.

Anomaly Detection

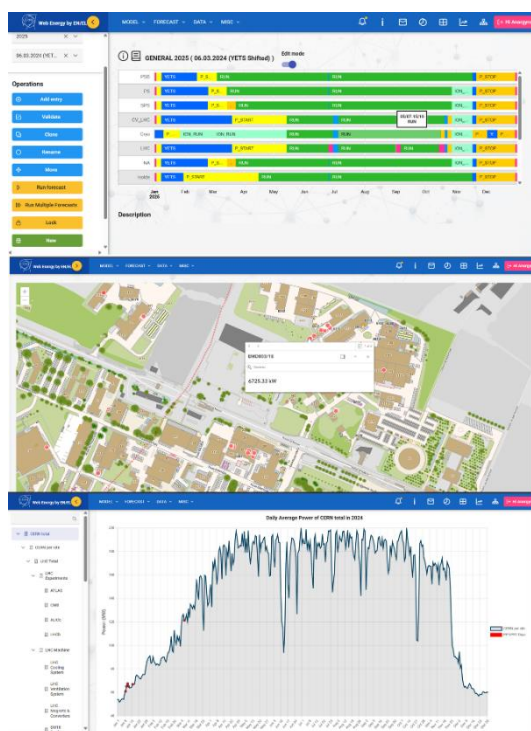
Applies advanced statistical methods to identify irregularities in metering and operational data.

ISO 50001 Compliance

Supports the implementation and maintenance of processes aligned with ISO 50001 energy management standards.

Keywords

Energy Management System (EMS), long-term forecasting, deployment flexibility, real-time monitoring.



Description

Web Energy is an energy management system designed to optimize energy use, reduce operational costs, and support sustainability goals across a wide range of facility types.

Built entirely on open-source technologies, it integrates electrical network layouts, operational schedules, and energy measurements to deliver both real-time monitoring and reliable long-term forecasting.

Proven in production at CERN for over a decade, Web Energy has enabled the organization to manage its energy use with precision and responsibility—demonstrating its robustness in a demanding, research-intensive environment.

An intuitive drag-and-drop editor allows users to build their energy graphs and apply custom configurations. Alternatively, configurations can be imported using open formats such as GEFX.

Key performance indicators (KPIs) help monitor facility performance in alignment with ISO 50001 standards, while a real-time view provides immediate feedback by comparing forecasted and actual consumption.

Multiple forecast scenarios can be generated in just a few clicks, making it easy to model alternatives, plan ahead, and make data-driven decisions—whether you're managing a single building or scaling across a portfolio.



Web Energy

Advantages

Unified forecasting + monitoring engine

Combines both forecasting and energy monitoring in a single model, enabling immediate feedback on the organization's energy profile.

Cloud-native, hardware-agnostic & vendor independent

Built on open-source, cloud native technologies with no dependencies on specific vendors or hardware. Just connect your data and configuration. Deployment is fast and straightforward

Flexible & Scalable

Web Energy's versatile architecture and data model support everything from a single building to multi-site research facilities, allowing to start small and scale without migrating tools.

Applications

Energy Management for:

- Research facilities
- Airports and large transit hubs
- Data centers and IT infrastructure
- Smart cities and municipal utilities
- Manufacturing plants and industrial sites
- Office buildings and commercial real estate

The applications listed above are examples of where Web Energy could be utilized. The versatility of the technology encourages further exploration and development. CERN experts can help in setting up and configuring the system in the frame of pilot installations.

Reliable energy forecasting and monitoring

For further information and licensing requests, please reach out to the CERN Venture Connect Programme Manager.

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10+ years

Reliable operation

2,000,000+

Energy Measurements