



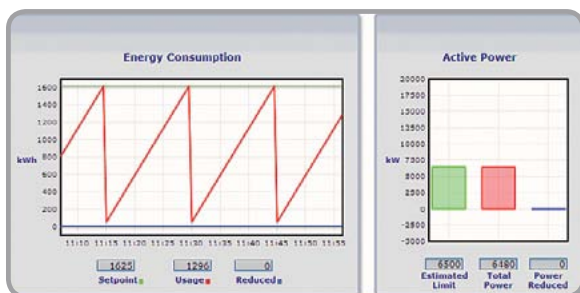
Spara Technology: Key Features

Powerit Solutions' Spara technology is an integrated hardware and software product that connects wirelessly to existing automation systems. Spara's easy-to-use web interface and graphical reporting tools allow foundries and metals processors to reduce energy consumption—and costs—throughout an entire facility without compromising production or safety.

Key features include:

➔ Adaptive Demand Setpoint

The adaptive demand setpoint ensures that the system always operates at the optimal peak demand setpoint. You can set aggressive starting points for each of 12 rolling monthly demand limits. During a given month, Spara will attempt to control demand to the preset level. If the system exhausts the loads it is authorized to curtail and peak demand reaches a new monthly high, Spara increases the setpoint accordingly by a preset percentage, avoiding unnecessary control actions for the rest of the month.



➔ Embedded Operator Intelligence

The knowledge your human operators have about managing equipment and systems curtailments is embedded in Spara through rules and priorities you set. The rules ensure that any load shedding strikes your desired balance between savings and productivity. Rules can be simple parameters such as maximum curtailment durations, or complicated structures that change based on time of day and other logical combinations. You can prioritize loads sequentially, by group, or by other factors.

➔ Customized Alarms

Spara's alarm utility notifies you of events that require attention, such as demand exceeding your savings setpoint, loss of a utility pulse, or a customized event related to a data point such as temperature. Customized alarms can be sent to your e-mail recipient groups, as SMS messages, or to pagers.



➔ Industrial Wireless I/O

Spara's Konnekt data communication technology lets you control and monitor facility loads without the cost and complexity of wired connections. You can capture and transmit digital and analog data across a wireless sensor network. The technology accepts digital inputs and analog process values such as temperature, energy, level, pressure, flow, and distance.

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➤ Web-based Architecture

Spara software runs on a Linux operating system and has an easy-to-use web-based graphical interface that lets you:

- Access Spara from any computer with a web browser and network connection
- Connect to Spara with the standard remote connectivity tools you already use
- Use robust, industry-standard security, such as encryption, Secure Shell (SSH) communication, and user authentication

➤ Utility Interval Management

Spara lets you automatically manage energy use based on how your utility calculates peaks, such as:

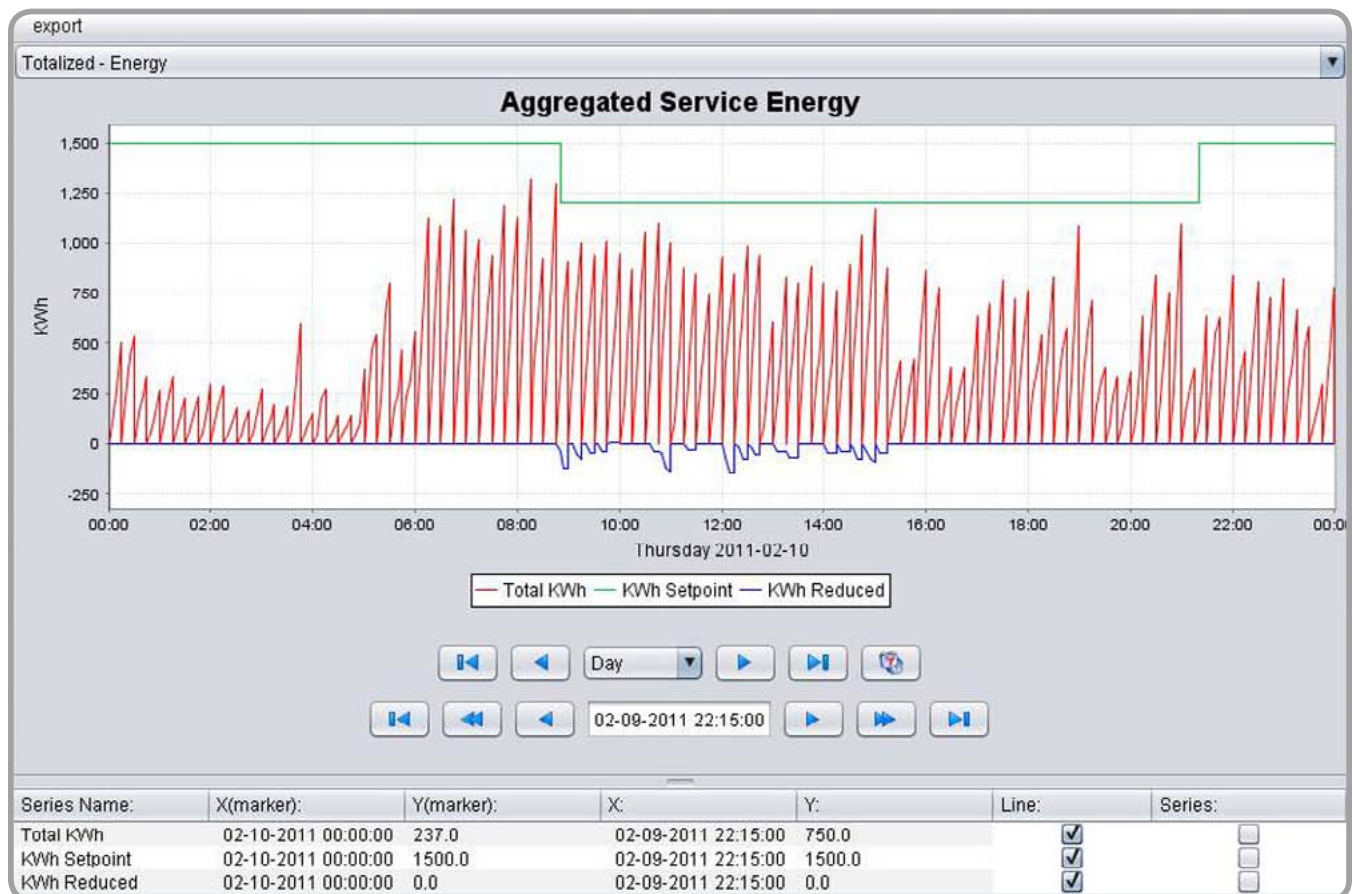
- 15-, 30-, or 60-minute intervals
- Fixed or sliding interval periods
- Multiple time-of-use rates
- Peak, off-peak, and partial-peak hours
- Summer, winter, weekend, and holiday rates

➤ Real-time and Archived Reporting

Spara generates graphical reports on energy usage, cost savings, and more. Standard reports include:

- Real-time energy use data
- Demand savings
- Demand utilization
- Demand performance graphs
- Energy metering graphs

Other reports include load-based status reports (which graph the run status and logged value of specific connected equipment over time) and reports on temperature, pressure, and other sensors that show logged values over time. Data is stored on a dedicated PC or your in-house server.



- This demand performance graph, available through Spara, provides a snapshot of a facility's energy usage over one day. It shows the accumulated kWh for each interval (in red), along with the demand savings setpoint (in green). The load-shedding performed by Spara shows as negative kWh (in blue).