

Powerit Solutions:

Frequently Asked Questions

Is Spara EMS® right for my organization?

Spara EMS is ideal for industrial and commercial facilities that have:

- annual energy bills of \$100,000 or more
- peak demand of 750kW or more
- a demand profile that is erratic or exhibits a high degree of variability

What Is Demand Control?

Demand control, also referred to as demand management, is the process of understanding where, when and why high-cost energy demand spikes occur and taking measures to reduce them. The goal is a reduction in demand charges, which can make up as much as 40% of an industrial user's utility bill. Demand control can be extremely difficult to manage manually.

What Is Demand Response?

Demand response is the concept of changing electric energy usage in response to changes in electricity rates or incentives provided by utility companies. Utilities initiate demand response programs to lower system-wide demand during peak times, eliminating the need to build additional infrastructure or buy expensive power on the open market. As with demand control, demand response can be even more difficult to manage without the aid of automation. However, the monetary incentives of participating in a demand response program can be significant, often paying for the cost of a technology solution in a matter of months.

What is Energy Efficiency?

Energy efficiency results from making changes in the way electricity is used such that overall costs decline while the amount of work stays the same

or increases. This can be achieved multiple ways including by manipulating equipment run times to operate during less-expensive periods, scheduling operations to coincide with a more cost-effective rate schedule, and by closely controlling equipment to ensure they only run during necessary periods.

How does Spara EMS work?

Unlike other products that simply provide information, Spara EMS continuously monitors energy usage within a facility and then manages demand by prioritizing, optimizing, and controlling energy loads based on rules and parameters defined by the user, creating a completely customized system that can be modified at any time. The result is increased efficiency yielding significant cost savings, all without losing control over productivity or building comfort.

What is Spara EMS?

Spara EMS is an online predictive energy management system that allows commercial and industrial users to reduce utility costs through intelligent demand control, demand response, and energy efficiency without compromising production or building comfort. Spara EMS continuously monitors energy usage and then manages demand by prioritizing, optimizing, and controlling energy loads based on rules and parameters defined by the user, creating a completely customized system that can be modified at any time.



Powerit Solutions:

Frequently Asked Questions (continued)

Don't enabling technologies like demand response manipulate equipment operations?

Only to a certain degree. These open loop control systems typically shut down a pre-determined list of loads and assume they can stay shut down for the entire event, however long or whenever that might be. This severely limits the number of loads that can be shed and, hence, the chance for success. But with Intelligent Demand Response all loads within the facility are considered if certain conditions are met. The system continually checks demand compared to the baseline and contracted demand reduction and makes adjustments as needed, including shutting off loads for only part of the event.

How much energy and money can customers save using Spara EMS?

The value Spara creates comes from many aspects of energy management — peak demand charge reduction, kWh savings, better demand response participation, and active load management in response to a real-time pricing schedule. On average, Spara EMS saves clients 10-30% on their peak demand charges. This results in an overall savings up to 15% on their electricity bill. Bills exceeding \$100,000 per year typically realize an ROI in less than 18 months with larger facilities often reaching payback in half that time. In addition to utility bill savings, clients who participate in demand response programs can realize savings in the form of incentives that may include partial or full rebates on technology costs.

What types of equipment can Spara EMS interface with to achieve energy cost savings?

Spara EMS interfaces seamlessly with most industrial equipment including air conditioning, fans, melting furnaces, material handling systems, waste

processing, food processing and freezing, pumping, drying, and other equipment with high energy levels. Additionally, Spara EMS connects with existing control systems to work with and even extend legacy systems.

Where do cost savings come from?

In a peak load reduction program, savings will come from a reduction in billed peak demand (kW). Since you are likely billed on a \$ per kW rate, every kW less of peak demand translates into real cost savings on the bill. Additional savings come from overall energy efficiency as well as participation in demand response programs.

Which Spara EMS product will best meet my organization's needs?

Spara EMS is available with a variety of feature sets to serve all types of users, from those requiring a basic standalone system to facilities with extensive automation and integration that seek not only cost savings, but also detailed visibility into energy consumption for strategic planning. Our engineers can perform an on-site audit to determine which of our three products best suits your facility's particular needs.

Don't the spikes in my demand occur when I start everything up in the morning?

Probably not. Peak demand is calculated in periods called intervals. These intervals are most commonly measured in 15-minute segments. During each separate 15 minutes of the billing period (month), the utility calculates your average electrical load for that period. So, your peak demand for the month will be that one 15-minute segment during which you used the most electricity, not necessarily the highest instantaneous amount.



Powerit Solutions: Frequently Asked Questions (continued)

I need everything running in order to maintain production, so how can I implement load shedding?

Our intelligent energy management system will create savings without affecting production, safety, or building comfort. Facility loads chosen for shedding are loads that can be reduced or shut down under certain specific circumstances or for very short periods of time. For instance, any loads using electricity to cool, heat, or manage the storage and distribution of solids or liquids are candidates for load shedding. Rules are established for each piece of equipment that limit the amount or timing of the load shedding events to a tolerable level and can be modified by the client at any time. The system places first priority on these rules to protect production. Because our system calculates peak demand in real-time, using the same averaging techniques as the utility, load shedding usually only occurs for a matter of minutes and even then only a few times during the entire month.

What happens if things change in my facility? How do I ensure I still get value out of my savings investment?

Our system is completely adaptable to meet your changing needs. Additional loads can be added or removed as needed. You may also upgrade to a different Spara EMS product to obtain additional functionality or take advantage of products such as Spara Konnekt, which wirelessly transmits data to monitor and direct field and other less-accessible loads without having to run expensive conduit.

I already have an energy management or building control system, so why do I need another one?

Most existing refrigeration, building, or energy management systems focus energy savings on reducing or scheduling kWh usage. They are rarely designed to manage peak demand and almost never automatically reduce it in a cost-effective manner. Spara EMS' intelligent technology is designed to manage demand in such a way as to produce savings far greater than generic systems can. Additionally, Spara EMS is compatible with most existing control platforms and can complement their performance for greater cost savings.

What does Spara mean?

Spara is Swedish for "to save" – a fundamental benefit of our products, which saves money, energy, and time by being simple to access and operate thanks to a flexible web-based architecture. Spara also pays homage to our roots as the company's original technology was developed in 1994 in Sweden, a country known as a world leader in the development of green initiatives and home to Powerit Solutions' European headquarters.

