



Energy Load Optimization for Peak Demand Limiting

Take greater control of energy costs – without compromising your building's performance

Electricity costs depend on a complex array of factors, including how much energy your building consumes, when the energy is consumed, and when your energy use is highest. That's why, as a commercial or industrial utility customer, you are likely accustomed to seeing charges related to peak demand and/or utility system capacity on your monthly energy bills. These fees, which are typically assessed based on the highest average periods of electricity demand, can account for a significant portion of your total electricity bill.

Siemens' Energy Load Optimization (ELO) for Peak Demand Limiting (PDL) helps your organization automatically manage energy use before demand peaks occur. This service means you can:

Reduce exposure to peak demand charges

Continuously monitor energy use and automatically adjust flexible building loads before demand spikes occur – brief reductions during these periods can produce substantial savings

Control utility costs

Reduce costly demand spikes while managing the impact of tariff-based charges and electrification efforts – helping to make your energy spend more predictable

Protect building performance and comfort

Working within predefined priorities and comfort parameters, your facility can proactively limit demand without sacrificing the conditions that matter to people and operation

Automatically respond to market and grid opportunities

Connect with utility curtailment programs, retail energy provider signals, and other programs to capitalize on potential savings and revenue-generation opportunities

Demand charges vary by utility market but typically range from 30-70% of a customer's total electrical bill.

Source: National Renewable Energy Laboratory

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Smarter energy management without unnecessary infrastructure replacement

Our approach helps you optimize your existing infrastructure while leveraging your existing building automation system investments. Energy Load Optimization for Peak Demand Limiting works within your current environment, and is compatible with Desigo CC, third-party BACnet building automation systems, and select legacy platforms.

How it works

Siemens uses edge-based infrastructure to continuously monitor building electrical demand and compare current conditions with defined thresholds and operating priorities. When demand approaches a target limit, the service automatically adjusts controllable loads according to predefined rules. It can coordinate assets such as HVAC equipment, lighting, and other flexible loads while preserving operational requirements. Critical assets and loads that cannot tolerate interruption remain safely outside load management strategies.

In supported electricity markets, the Siemens Energy Load Optimization system can be integrated to the utility, either directly or via a market participation provider. This allows the building automatically to enter a load-reduction mode when requested by the utility, generating significant payments for the customer.

Lighting



Heating



Air conditioning



Refrigeration



Ventilation



EV charging



Take control with a flexible energy strategy

Energy Load Optimization for Peak Demand Limiting helps you control when and how energy gets used, coordinate assets more intelligently, respond to changing conditions, and create a flexible energy strategy. Siemens provides this as a managed service, combining technology, energy expertise, system configuration, monitoring, and ongoing optimization support, including:

- Site assessment and system configuration
- Automated load control
- Performance monitoring, review, and recommendations
- Savings and operations reports
- Software updates
- Integration with demand response and curtailment providers (where available)

Built for connected, reliable performance

Building X enablement connects Energy Load Optimization to Siemens' broader digital building ecosystem, supporting ongoing service and performance capabilities. We can also monitor system performance to help maintain solution uptime, so your facility stays ready to manage peak demand when it matters.

Ready to get started? Visit www.siemens.com/ELO

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