



foresight

MANAGEMENT

Demand Study

WHY

Many companies get frustrated by ever-increasing costs for electricity. Once understood, demand management is an accessible and low to no-cost solution with a cost reduction potential up to 15%.

Unlike residential electricity, which is only billed based on consumption, most industrial facilities are billed based on their consumption (kWh or Kilowatt-hours) as well as demand (kW). Consumption could be thought of as a distance you want to travel, and demand is how quickly you can travel this distance. You can travel at 1MPH for 70 hours, or you can go 70MPH for an hour. You travel the same distance either way, but traveling 70MPH requires a bigger engine and more horsepower to accommodate the demand.

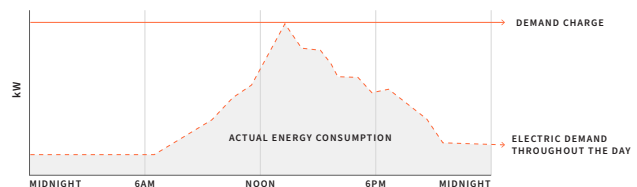
Similarly, a power company must have more infrastructure in place (the bigger engine) to deliver that one time draw of a facility's highest peak demand. In order to support this infrastructure, the utility company bills industrial facilities at the highest peak of their demand. This peak sets the demand rate for the month and, in some cases, 12 months.

Demand charges can account for up to 60% of an industrial facility's energy bill. Demand management involves finding ways to modify your facility's power usage to lower demand peaks and decrease your demand cost. While demand management may not change your facility's consumption, your overall energy costs can be cut by as much as 15% simply by lowering the peaks of your demand.

HOW

Foresight will help you identify and understand how you use power in your facility. Most utility companies record your usage data every 15 minutes. We take this interval data and assess all of the data points for the previous 12 months (that's over 35,000 data points!). We work with your team to ensure you are not setting demand peaks unnecessarily. When you have peaks, we can help you identify behavioral and operational changes to reduce them. Excellence in demand management looks like assessing when equipment is turned on, monitoring how many pieces of equipment are running simultaneously, and staggering startups to avoid peaks when your facility opens each day.

Demand Charge Calculation



BENEFITS

- Cost savings on your energy bills
- Low to no implementation costs... demand management has significant ROI potential
- Behavioral changes in your operations
- Higher levels of awareness of the impact of behaviors

CASE STUDY

Client Profile

National food distributor

Before Foresight

An industrial facility with multiple large ovens experienced a power outage. When the power was restored, they hurried to get everything back online to recoup lost production time. All of the ovens drew their start-up electricity simultaneously, causing a significant peak in their demand. While they were able to resume full production rapidly, this decision cost them an extra \$30,000 over the year. If they had phased this start-up process by turning on and heating one oven at a time, they could have flattened this peak and avoided incurring the additional charges.

After Foresight

Foresight stepped in to evaluate the rhythms that influenced the demand charges. We began by collecting interval data from the utility company, giving us a snapshot of energy usage every 15 minutes through an entire year. With nearly 35,000 data points, our team of experts analyzed the peaks and cross-referenced with coinciding operational behaviors. With this knowledge, we strategized solutions with their facility managers and implemented functional changes to their procedures to lower demand peaks throughout the year.

FREQUENTLY ASKED QUESTIONS

Does this save us that much?

In many cases, demand charges can account for up to 60% of your bill. Understanding how energy is used in your facility can empower you to make simple changes that save you money!

Do I need to invest a lot to manage demand peaks better?

No, most of the recommendations are simple behavioral changes.

Should every facility think about demand management?

If demand charges are part of your utility bill, then yes. Having an expert in energy usage evaluate your facility is an excellent way to lower operating costs and become more sustainable.

How much does it cost?

Typically between \$5,000–15,000 per facility. The cost varies depending on the number of facilities, how big the facilities are, what type of equipment is used in each facility and how much equipment is operational. We'd love to look at your situation and give you a custom quote!

