

CASE STUDY:

**Advantage Laser Products
 Reduced its Energy Consumption
 Saving 24% of Monthly Utility Costs**



With the Empower Edge™ Solution, Empower Energy Technology helped Advantage Laser Products reduce its peak demand by over 25% and consumption by 11% - providing an overall savings of 24% on their monthly electrical bill. Not only does Advantage Laser Products recycle and remanufacture toner cartridges, they recycle everything that can be recycled. Now with the Empower Edge™ Solution, coupled with an Empower Energy installed solar array on their roof, Advantage is closer to their goal of becoming energy neutral in the near future.

Empower Energy showed us how the Empower Edge™ Solution would help reduce our energy consumption and save money while saving our planet, too. Being in the recycled toner cartridge business, everything we do needs to make environmental sense as well as business sense.

*Marvin Masson
 Operations Manager
 Advantage Laser Products*

Problem

Like many businesses, Advantage Laser Products was experiencing high energy costs. Energy consumption from heavy equipment loads, as well as HVAC demands, were causing high peak demands during certain periods of the day. Energy usage needed to be leveled out to reduce costs and usage on their utility rate plan.

Analysis

Engineers at Empower Energy analyzed past electric bills and were able to determine that due to Advantage's high demand peaks and resulting low load factor (the ratio of average use to maximum use), Advantage was paying a high rate per kWh for relatively low consumption.

Solution

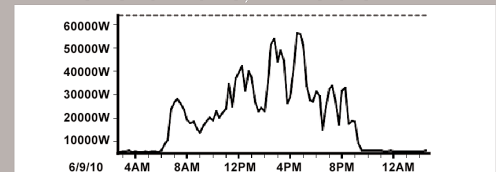
Empower Energy advised Advantage Laser to implement their advanced energy management system, Empower Edge™. The objective of Empower Edge™ is to efficiently spread out electrical usage throughout the day. Through analysis and engineering, an agreed upon power demand threshold is set. As the facility's power draw meets the threshold,

the system automatically reduces the demand by efficiently rotating off the designated non-critical systems.

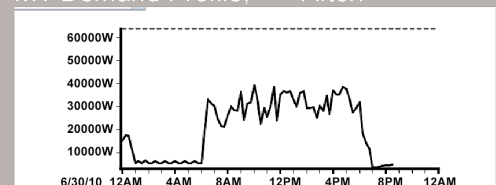
Advantage Laser agreed with the recommendation and contracted with Empower to install Empower Edge™. The system was installed in June, 2010 and Empower Edge™ immediately produced positive results for Advantage Laser Products.

Reduction of peak demand by over 25% and energy consumption by 11% providing a 24% savings on Advantage Laser Products' monthly utility bill.

kW Demand Profile, Before:



kW Demand Profile, After:



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Empower Edge™ is a powerful, effective tool for managing energy costs and monitoring electrical components and can provide a significant reduction in energy costs.

With Empower Edge™, customers can focus on Energy Savings and/or Energy Asset monitoring. They are not mutually exclusive activities – Empower Edge™ can do both.

*Mark Bell
President
Empower Energy
Technology*



An Eaton Green Solution



Empower Edge™ System

Empower Edge™ includes two major components, an Eaton Power Xpert 2260 power meter and a HAI Lumina Pro controller. The power meter monitors, in real time, the facility's electrical demand and communicates with the controller to take action, when necessary. The controller, based on Empower's methodology and resulting programming, rotates heavy demand loads off, thereby keeping the demand in check.

In the first month of implementation at Advantage Laser Products, Empower Edge™ was successful in maintaining the peak demand below 25% of the previous month's peak. It should also be noted that Atlanta (home of Advantage Laser) suffered an atypical hot June (highs in the mid 90's for 20 straight days), furthering the call for high peak demands. Moreover, due to its inherent ability to reduce peak demand, the Empower Edge™ system also reduced consumption by 11% - providing a 24% savings over their previous monthly utility cost. Because of these savings, Advantage Laser Products will see a payback on their investment in 24 months or less.

The "Brain Center" of Empower Edge™ is the capacity to actively manage power usage based on peak thresholds and energy capacity (renewable and conventional). "Smart" Power Meters allow constant monitoring of power usage to determine the need for usage cycling and aggressive management of electrical devices.

Empower Edge™ Business Benefits

- Achieve significant energy savings and ongoing analysis.
- Identify under and over engineered facilities relative to their power infrastructure.
- Ability to monitor multiple facilities and energy assets.
- Benchmarking capability of facility-to-facility, provides insight into "best practices".

Advantage Laser Products Now Has an "Advantage"

- Powerful, effective tool for managing energy costs and monitoring electrical components.
- A facilities-based, powerful, network centric reporting tool to realize significant reduction in their energy bills.
- Real-time monitoring and control of energy consumption with the ability to maximize energy assets.
- A comprehensive and ongoing view of their energy portfolio.

The HAI Controller provides energy savings by coordinating lighting, heating and air, and more. Coupled with Omnistat2 thermostats with advanced digital technology to learn the heating/cooling patterns of your business, you gain maximum energy efficiency and savings.



Empower Edge™ ... Saving Energy and Money