

"Powerit Solutions provided our business with a system that controls our electrical demand very well and they were able to meet our tight delivery requirements at a competitive cost."

Doug Smith, Project Engineer, Rochester Metal Products

Case Study: Rochester Metal Products



Powerit's Financial & Environmental Impact:



25% decrease in peak demand



ROI: 3 months



Avoided the generation capacity to power 3,700 homes*



Equals generation capacity CO2 offset of 6,500 acres of fir tree forests

*Based on the US DOE Residential Energy Consumption Survey, 2003, and based on the definition of a single-family home.


Rochester Metal Products, Rochester, Indiana

Initial Load Management Requirements:

- 3 – 1500 kW Ajax Induction Furnaces
- 2 – 7000 kW Brown Boveri Induction Furnaces

Powerit Solutions Installed:

- Energy Management Hardware and Software
- Konnekt™ Wireless IO
- Energy Monitoring and Reporting



Rochester Metal Products is a gray and ductile iron foundry in Rochester, Indiana. Fulfilling casting requirements from .75 pounds to 50 pounds, Rochester Metals produces 70+ net tons of gray iron castings and 166+ net tons of ductile iron castings per day. They also offer casting design assistance for new products, from original concept to prototyping and final production. In operation since 1937, Rochester Metals currently supplies products throughout the nation in the air compressor, medical/dental equipment, automotive, off-road and heavy equipment, construction, oil field, conveyer, plumbing and heating, diesel engine, hydraulics, rail, lawn and garden, marine, and other industries.

A Powerful Need

In 2005, Rochester Metals learned that their utility company, Cinergy, was forcing them to move from their existing real-time pricing tariff with no demand charges to a new tariff with a significant demand charge. To maintain a competitive advantage, Rochester Metals needed to reduce their electrical costs without affecting production. They determined the best solution would be to implement a demand management system by early 2006, before the new rate schedule took effect. Additionally, due to varying production requirements, Rochester Metals needed the ability to prioritize gray iron vs. ductile iron production based on casting schedules.

A Powerful Solution

Powerit's energy management system was installed at Rochester Metals in February 2006. The system enables the furnaces used for the melting process to operate as one cohesive system, and Rochester Metals can prioritize the operation at any given time. When the system predicts a peak demand will occur, it sheds loads by reducing the lowest-priority furnace first.

Prior to implementing the system, Rochester Metals' typical monthly peak demand was 21,000 kW. They tested the system for a month at 18,000 kW, and when they were able to maintain production, they adjusted the setpoint to 17,000 kW. Again, there was no production loss, so they readjusted the setpoint to 16,000 kW, which is where it remains today with no production loss. The financial payback period was three months.

