

*"We are now looking beyond furnace operations to see where the system will allow us to reduce our energy costs even more."*

**Jerry Dale, Plant Manager, Foote Foundry**

## Case Study: Foote Foundry



### Powerit's Financial & Environmental Impact:



26% decrease in peak demand



ROI: 16 months



Avoided the generation capacity to power 380 homes\*



Equals generation capacity CO2 offset of 667 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.



**Foote Foundry** is a privately owned foundry that produces machineable castings in gray and ductile iron. With a history dating back to 1851, Foote Foundry has experienced steady growth over the years and completed a \$5.25-million foundry modernization and expansion in 1998. As one of the country's oldest continually operating green sand foundries, Foote Foundry now produces 250 to 270 tons per month of castings from a few ounces to 1,500 pounds for the agriculture, chemical processing, compressor, construction, heating and cooling, machine tool, material handling, metalworking, mining, oil and gas, pump, and valve industries.

### Foote Foundry, Fredericktown, Ohio

#### Initial Load Management Requirements:

- 1000 kW Ajax Induction Furnaces
- 1600 kW Ajax Induction Furnaces

#### Powerit Solutions Installed:

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

### **A Powerful Need**

Due to their energy-intensive operations, Foote Foundry needed an energy demand management system that would allow them to offset peak demand charges and stay in the game. They required a system that could monitor and control their 1000 kW and 1600 kW Ajax induction furnaces to increase the efficiency of their power use. It was also necessary to evaluate the amount of electricity they spent on making each part using continuous, real-time measurements and also optimize their furnace equipment. Powerit recommended an energy management system to seamlessly manage loads and correspondingly reduce Foote's energy bill without adversely affecting production, or the quality of their products.

### **A Powerful Solution**

Powerit installed a system specifically designed for their metal processing applications. The facility is now able to make very minimal and precisely timed interruptions to heating cycles reducing peak demand levels from the original electrical setpoint.

As a result, their electricity charges were reduced while the overall amount of time that it takes to heat the metal remained the same. Powerit Solutions' system has reduced the foundry's average peak demand by 26%. They received a full financial payback in only 16 months and their savings continue to grow each year.

