

*"We have achieved the forecasted savings and payback as predicted. We are especially pleased with the ease of resetting control parameters to balance production requirements and savings."*

**Kim Hutchinson, Project Engineer, Hitchiner Manufacturing**

## Case Study: Hitchiner Manufacturing



### Powerit's Financial & Environmental Impact:



11% decrease in peak demand



ROI: 10 months



Avoided the generation capacity to power 403 homes\*



Equals generation capacity CO2 offset of 709 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.



**Hitchiner Manufacturing SA de CV** provides frontend casting services in Santiago Tianguistenco, Mexico. The engineering quality that is the hallmark of Hitchiner production is as much in evidence in Mexico as in the company's stateside operations. Primary sales are in the high-volume automotive market. The modern facility boasts 20,400m of manufacturing space, the latest technological advances with robotics, conveyorization and automation, as well as Hitchiner's revolutionary countergravity casting process. Facilities for tooling, layout, non-destructive testing and heat treat are provided on-site.

### Hitchiner Manufacturing SA de CV, Santiago Tianguistenco, Mexico

#### Initial Load Management Requirements:

- 7 Furnace Loads

#### Powerit Solutions Installed:

- Energy Management Hardware and Software
- Konnekt™ Wireless IO
- Energy Sub-metering

### **A Powerful Need**

In 2006, Hitchiner SA de CV was asked by their electric company, Luz Y Fuerza, to stay below a defined demand level because the utility's transmission lines were approaching capacity limits. As Hitchiner continued to grow they quickly approached the restricted demand level. To stay below that level and avoid paying unnecessary and painful peak charges, Hitchiner was looking for a way to better manage energy usage to lower facility peak demand without compromising the functionality of connected equipment. Powerit was asked to conduct onsite energy assessments and identified seven furnace loads as prime targets for demand management. Powerit estimated that their system could reduce Hitchiner's average monthly demand by 400 to 650 kW through intelligent demand control.

### **A Powerful Solution**

Powerit's system was approved for installation based on a very quick, 10-month estimated ROI. The system coordinates Hitchiner's loads acting on individual and specific production rule sets for each furnace. When the system predicts a peak demand using real-time usage data collected from the utility meter, it automatically reduces consumption so as not to exceed a predetermined setpoint and optimizes energy processes. During each reduction event, the equipment operator is informed that a demand control action is taking place with an indicator light. Performance is then easily tracked using Powerit's operator software managed from any networked PC in the facility. With the intelligent energy management system, Hitchiner has seen an average monthly demand reduction of 545 kW with continued savings each month, just as predicted.

