

Cutting the cost of customer power

Powerit Solutions is a leading global technology provider of intelligent demand response and demand control solutions specifically designed for industrial facilities. Providing energy management technologies, Powerit Solutions reduces ongoing peak energy demand, and thereby generates significant cost savings and energy conservation for industrial customers.



Powerit Solutions offers a proven product solution to enable Intelligent Energy Management savings for foundries. Powerit's technology is already producing savings in thousands of installations globally in industries with traditionally high energy demands and those in need of more sophisticated energy solutions

Committed to helping customers manage their energy usage, implement intelligent energy solutions and realise significant cost savings without compromising production or quality, Powerit operates across a wide variety of industries. Through the application of its Energy Director technology, cost savings are achieved by using demand response and demand control techniques to reduce utility costs and make use of rate advantages associated with managing peak demand. Powerit's Energy Director™ creates ongoing reductions of 10 percent to 40 percent in peak demand charges, corresponding to a 7 percent to 15 percent reduction in overall electricity savings.

Foundry savings

Energy intensive processes

Because foundries operate some of the most energy intensive processes used in any industry they are a prime area of application for Powerit energy management technology. Melting furnaces, grinders, and annealing operations are examples of controllable loads where even small percentage reductions in peak demand can send large savings directly to the bottom line. Typical loads that the Energy Director optimises include large-scale foundry and casting operations, sheet rolling, stamping and extrusion, electro-plating and anodising, heat-treating, air handling and scrubbing, and ferrous and non-ferrous smelting and refin-

ing. Working with foundry loads, the Energy Director has paid for itself with immediate demand cost savings of 10-40 percent and payback on investment in less than 18 months, sometimes less than half a year.

Use of the Energy Director system in foundry environments has also shown that it is possible to control energy costs and efficiently increase the bottom line without disrupting day-to-day business. The solution to improved energy management becomes simple, with intelligent demand control and intelligent demand response technologies specifically tailored for foundries. In this way customers can use the system to monitor their operations and carefully interrupt loads within certain demand intervals, thereby reducing any peaks. Typical foundry loads the Energy Director can optimise include: holding, induction, arc melting and vacuum melting furnaces, air compressors, scrubbers, industrial grinders, temperature inputs, heat treatments and air handling.



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Original technology

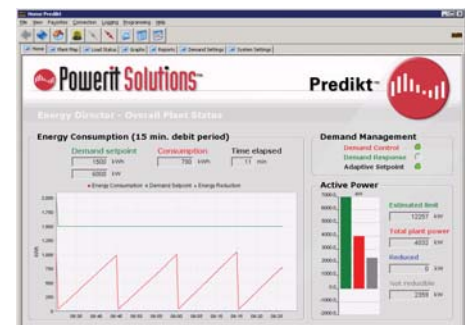
Development of the Energy Director in Sweden in 1994 created an energy management control system that predicts, regulates and lowers facility peak demand without compromising the functionality of connected equipment. The system is able to organise coincidental equipment loading while prioritising uptime, giving facilities the ability to predict and control their peak load profile without painful cutbacks in production or building comfort.

The Powerit system closely monitors a facility's use of power significantly by reducing overall energy costs and minimising risk by automatically reducing demand based utility charges. The system balances these actions with specific operational requirements to avoid compromising productivity. This results in lower peaks and measurable, month to month utility bill savings without impact on load performance.

Proprietary software programme

In achieving these increased efficiencies and significant cost savings, the Energy Director manages energy usage and peak demand by prioritising, optimising and controlling energy loads. As part of its operation the system uses Predikt™, a proprietary software programme that optimises energy processes. An important feature emphasised by Powerit is that because the Energy Director can be configured to meet the specific demands of particular facilities, neither product quality, facility output or building comfort is compromised.

As a leading provider of efficient energy management, Powerit has evolved its automated system to allow facilities to take advantage of demand response incentives and maintain demand control savings. The Powerit system is packaged as the Energy Director family of controllers: Kompakt™, Klassik™ and Intellekt™. In addition to providing the smart proprietary software GUI that configures each of the system controllers, Predikt also offers network access, centralised control, and advanced reporting. To further improve the performance of the system Powerit has introduced Konnekt™, an industrial grade wireless I/O system that distributes load control using a reliable connection technology designed specifically for industrial facilities.



Predikt software enhances the Energy Director energy management system with advanced features configured through an easy to use GUI interface. The software is user-friendly and customisable, enabling fast access to both real-time and archived energy use. Predikt is a vital tool for predicting and curtailing energy costs, centralising control of equipment, and provides advanced reporting

Current installations installed by the company are using the Energy Director to manage a wide diversity of equipment. This includes air conditioning, fans, melting furnaces, material handling systems, pumping, drying, and other equipment with high energy levels. Savings begin immediately upon system implementation and continue to improve over time as the user refines the settings. Typically, customers pay back their investment in less than two years, and sometimes within a few months of installation. Bills exceeding \$100,000/yr typically produce a payback period of less than 20 months, with larger facilities often realising project payback in half that time.

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