

# Power Monitor

The Pulse of Power Management Today

January 2003

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## Eaton Acquires Power Systems Business of Commonwealth Sprague

Eaton Corporation has purchased Commonwealth Sprague's power system business, which includes power factor correction assemblies and harmonic filters.

This acquisition expands Eaton's power quality and energy management solutions offering. Translation: more opportunities for customers to upgrade power reliability and reduce facility energy costs, thereby improving profitability.

For further information visit [www.cutler-hammer.eaton.com](http://www.cutler-hammer.eaton.com)

## PowerNet: The Foundation of an Exceptional Manufacturing Operation

*Cost allocation and forecasting ensure optimal energy supply decisions*

A global manufacturer of high-end automobiles ramped up North American operations over a three-year period, culminating in full, linear operation in 2001. Initially the drive train, paint, body and final assembly processes were supplied with outsourced parts while the four-building campus was commissioned. Maintaining operations during this rapid and continuous expansion process called for reliable and constant power monitoring.

The site management selected a Cutler-Hammer PowerNet system from Eaton Corporation to support its expansion efforts and focus on quality and efficiency.



PowerNet's ability to trend loads at substations to locate and deploy capacity enabled management to make informed decisions about the utilization of electrical distribution equipment. The PowerNet data showed that the existing electrical distribution equipment was adequate

to support large capital equipment expansions. The plant avoided the unnecessary expense of purchasing and installing additional equipment, and the efficiency of the electrical distribution system increased while new processes were employed more quickly than anticipated.

Plant operators make informed decisions daily regarding the use of purchased power vs. generated power. The local utility posts the price of energy 24 hours in advance via a password-protected web site. Operators compare this information with the generated power costs calculated using the allocated load demand data provided by PowerNet to determine when it is most cost-effective to use their 4.8 MW of total generating capacity.

Shortly after startup, the main assembly line experienced robotic malfunctions. With no apparent mechanical cause determined, the investigation turned to the quality of the power. Analysis of alarm and trend historical data from an IQ Analyzer and PowerNet confirmed that voltage sags occurred at precisely the same time as the robotic malfunctions. After the plant notified the utility of the cause, the utility provided sag correction equipment to eliminate the malfunctions.

The pervasive use of the PowerNet power management system has provided numerous benefits to this automotive manufacturer, including accelerated project schedules, reduced distribution equipment and associated engineering activities, power quality identification and resolution, and tools for making informed decisions.

## Sneak Preview: IQ 100



A new meter will soon join the family of IQ Metering Products. The compact and cost-effective IQ 100 is

designed for applications where basic voltage and current monitoring is desired.

All IQ 100 models provide true RMS measurement, fully programmable PT and CT ratios, and a highly visible LED display with a user-friendly menu structure. There are two models in the IQ 100 meter line, the IQ 110 and the IQ 115. The IQ 110 measures up to 11 electrical parameters including three-phase currents and line-to-line and line-to-neutral voltage measurements. The IQ 115 model provides the same functionality as the IQ 110, and it also monitors system frequency. All IQ 100 meters are designed to fit into a standard ANSI 100mm circular cutout, making new and retrofit installations easy.

The IQ 100 will be available in February 2003. For further information about this meter, contact Dan Ellis at [DanielLEllis@Eaton.com](mailto:DanielLEllis@Eaton.com).

## At Your Service

Cutler-Hammer's ever-expanding network of manufacturing representatives is now poised to serve Georgia and Texas with the addition of Kemp Instruments. This firm is not new to electrical distribution products and services; in fact, it has served the industrial, commercial and utility markets in Dallas for 45 years and in Atlanta for 25 years.

Jim Hale of Kemp Instruments in Atlanta focuses on power quality and other power-related products. He can be reached at (770) 277-9818; his counterpart in Texas, Bryon Hale, can be reached at (972) 437-9100.

## 2003 Training

Cutler-Hammer experts once again will host technical seminars in various locations beginning this March. The schedule will include the popular *Power Quality (PQ) Seminars* and new *Energy Management (EM) Seminars*. The PQ seminars address power quality concerns and possible solutions. Topics include causes of surges, sags, swells and harmonics; power quality metering fundamentals; and new mitigation technologies. The EM seminars address both supply- and demand-side electrical energy management with emphasis on case studies and cost reduction. Attendees earn 0.6 CEUs.

The seminar schedule will be published in future issues of Power Monitor. To register your interest in attending one of the seminars, e-mail your name, address, company and phone number to [SueWalker@Eaton.com](mailto:SueWalker@Eaton.com).

*Product-Specific Training* will be offered on the following dates. For registration information, go to [www.cutler-hammer.eaton.com](http://www.cutler-hammer.eaton.com). Select the Learning button and then search for the course that interests you.

### PowerNet Basics

March 4-7, Pittsburgh

### PowerNet Advanced Networking

March 18-21, Pittsburgh

### IQ Meters and Protective Relays

April 29-May 1, Pittsburgh

### PowerNet Basics

June 3-6, Los Angeles

## Another Winner!



Laurie Tompkins of Neill and Gunter in New Brunswick, Canada won a Compaq iPAQ in the PowerNet satisfaction survey random drawing.

Thanks to all who completed the survey. Stay tuned to Power Monitor for the next survey announcement and your chance to win.

## The IQ 7000 Solution

A preeminent California university with a 1,200-acre campus recently constructed a new dining hall and office facility. A high-end power quality and revenue meter was required on the incoming electrical line. Remaining consistent with the institute's world-class reputation, the university chose the Cutler-Hammer IQ 7000 for its ability to capture trending data and provide precise energy measurements.

The IQ 7000 provides a complete monitoring solution for the electrical distribution switchboard in the new building, which was integrated into the existing power management system monitored from a remote location. The IQ 7000's power, flexibility, and ability to communicate using the Modbus protocol permits the integration of the new facility into the existing system for metering of detailed load information and power quality data.

The IQ 7000 meter provides the total picture of power usage and quality and can be used at any point within a power distribution network. For more information about the IQ 7000, e-mail [BobJBeck@Eaton.com](mailto:BobJBeck@Eaton.com).



## Power Monitor

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