Real-Time Price Response Program Case Study - Wesleyan University

Wesleyan University, located in Middletown, Connecticut is a co-educational private university of liberal arts and sciences. It was established in 1831 and now serves 2,700 undergraduates and 150 graduate students.

Wesleyan University has always strived to be an environmentally conscientious and energy efficient "Green" neighbor. Starting in 1997, the University developed a plan to save energy campus-wide by installing energy efficient lighting and updating their building automation and energy management systems.

At that time, the University's facilities group was saddled with several different control systems of different vintages and state of repair. The systems did not provide the University's operations group with the seamless integration technologies that would be required to meet the challenges of maintaining their ever-expanding operations responsibilities and the future competitive electricity market.

The University selected Automated Logic Corporation (ALC) and their strategic partner RCMS Controls, Inc., of Wallingford, Connecticut, to provide a complete overlay and replication of their existing control systems with added points of control and operational features. RCMS Controls, Inc. offered technologies that surpassed their requirements while keeping within the project budget.

When the University was approached by Connecticut Light & Power to consider enrolling in ISO New England's Demand Response Program, the operations group seized upon the opportunity to use their ALC system to create even greater value for the University. "The Real-Time Price Response Program was a natural fit with what we were already trying to accomplish," explained Mark Chadsey, Wesleyan University's Manager of Mechanical Services & Energy Management

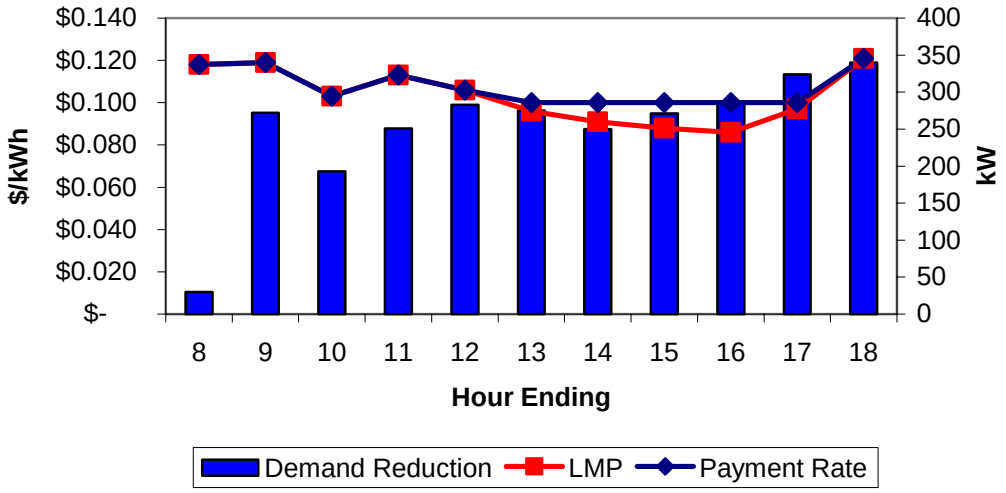
The University is able to use the ALC system in several ways to reduce electric load. The ALC system allows the University to reduce electricity consumption as needed by shutting down various pieces of equipment and resetting heating and air-conditioning temperatures. In addition, the ALC system automatically monitors loads at the University's electric sub-station and has the ability to turn off unnecessary equipment and lighting to limit electric demand. The system automatically notifies Wesleyan personnel when a pre-set demand level has been met. "Wesleyan is able with use of the ALC system to reduce loads when we receive an e-mail from the ISO that wholesale prices are expected to be greater than 10 cents per kWh." said Mark "We just do more of what we normally do when electric loads and wholesale prices are high. By doing this Wesleyan can get paid for our efforts."

The proof is in their performance. ISO New England activated the Real-Time Price Response Program on ten weekdays from March 3, 2003 to March 14, 2003 when wholesale electricity

© ISO New England Inc.

prices were forecasted to exceed 10 cents per kWh. The University responded by reducing their electricity consumption by an average of 206 kW. They performed at more than twice the level they originally enrolled at. In several hours their reduction exceeded 350 kW. By responding to wholesale prices the University earned over $1,400 in incentive payments.

The graph below illustrates how the University responded on March 11th from 8AM to 6PM. The Real-Time Price Response Program pays the greater of the regional wholesale price (LMP) or a guaranteed minimum payment of 10 cents per kWh.



"RCMS Controls has a long-term relationship with Wesleyan as a strategic partner and advisor for future energy, control and integration projects," said Joe Furman, Account Executive at RCMS Controls. "Our WebCTRL® software gives Wesleyan a powerful browser based window into their system and allows them to respond to peak demand and wholesale price events". Wesleyan was the first site in Connecticut to upgrade to this intranet/internet Web-browser based software.

By participating in the Real-Time Price Response Program the University receives several benefits. The most obvious is the University gets paid at wholesale prices for its demand response performance. In the long term, by reducing its electricity consumption in response to wholesale prices the University is becoming a more attractive customer to competitive electricity suppliers. Customers, like Wesleyan University, who can manage their hourly electricity consumption and respond to high wholesale price can help lower their competitive supplier's risk. Less risk, translates into a lower retail price.

Wesleyan University is currently controlling and monitoring 58 buildings with over 5,000 control points and plans to remain an active participant in the Real-Time Price Response Program.

For more information about the Real-Time Price Response Program please contact Bob Laurita at ISO New England at (413) 535-4398 or rlaurita@iso-ne.com

© ISO New England Inc.