

July/August 2007

www.energyinbusiness.com

Energy in Business

Energy news and advice for your business.



Small steps help JCPenney save big dollars

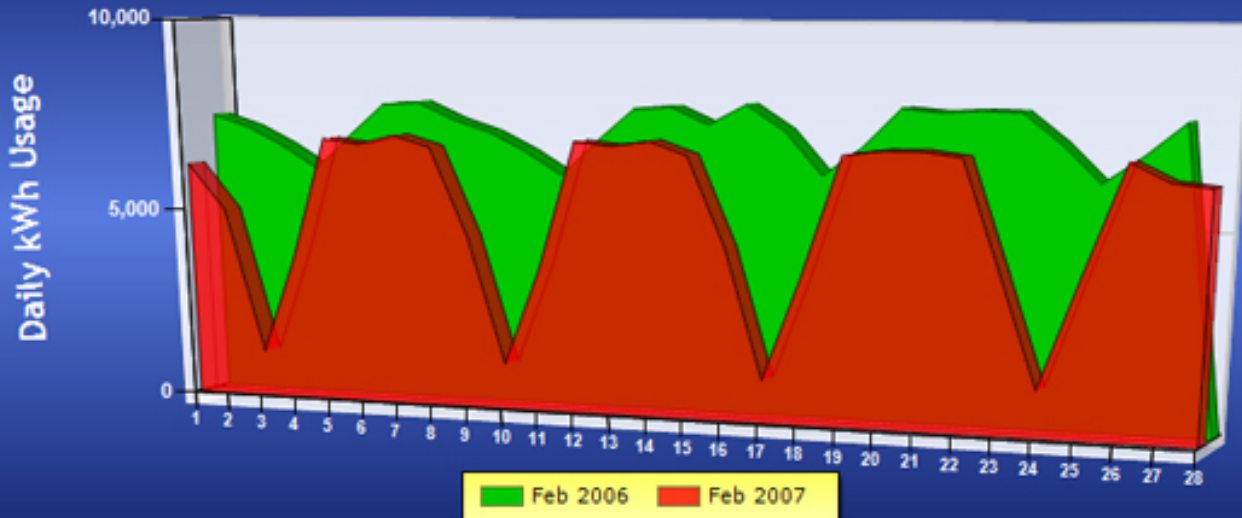
The Puget Sound area's nine JCPenney stores and the retailer's warehouse/distribution facility expect to save about \$250,000 annually in electricity costs - in large part because employees are learning how their individual actions and habits can dramatically impact energy consumption.



In an effort to cut energy usage through behavioral changes in its Seattle-area stores and warehouse, J. C. Penney Company, Inc. contracted with energy consultant New Energy Technology to implement Puget Sound Energy's (PSE's) Resource Conservation Manager Program (RCM). With a grant from PSE, the RCM program targets eligible PSE customers who manage multiple facilities, and helps them find energy savings through careful, systematic attention to cost accounting, benchmarking of facilities, and implementation of low-cost operational and behavioral changes.

JCPenney started rolling out the program in its stores this past March, but has already captured great success with its 315,000 square-foot distribution facility in Sumner, where the program began more than a year ago. In the first 12 months of the RCM program, the facility used 22 percent less energy, for a savings of about \$45,000. This should rise to \$60,000 for the second year. The stores are expected to achieve savings of 10 percent to 30 percent, depending on the unique characteristics of each store.

Comparison of 9018-Summer SSC, Feb 2006 and Feb 2007



FEBRUARY 2007
2/1/2007 to 2/28/2007
140,900 kWh

FEBRUARY 2006
2/1/2006 to 3/1/2006
203,215 kWh

Results	CO ₂ Emissions Reduction
62,315 kWh Saved!	41,816 lbs.
\$0.08 per kWh	
\$4,985 Saved!	

According to Charley Haupt, president of New Energy Technology, implementing the RCM Program was fairly simple: PSE agreed to pay \$20,000 to help cover the \$125,000 program cost. With that money, the three organizations worked with each facility to identify areas where low-cost/no-cost savings could be achieved, and developed conservation plans unique to each building. For each store, JCPenney recruited an RCM (Penney's calls them Energy Captains) assigned to project implementation. The RCM is usually the store manager or assistant. "Then we simply monitor the program to ensure people are following through with the plan and savings are achieved," Haupt said. The plans, according to Haupt, focus most heavily on using less lighting where appropriate (during cleaning and stocking for example) and asking employees to manually turn the lights off when they're not needed.

That part is fairly easy, Haupt says, because people are motivated and accountable. Thanks to PSE's 15-minute energy interval data, employees can view the previous day's energy use data and compare it with usage from the same day one year earlier. The stores post the information in their break rooms on paper, while the distribution facility actually pulls it up on a 19-inch monitor. Not only do associates see the previous day's 15-minute consumption provided by PSE, but New Energy Technology translates that information into cost savings and reduced carbon dioxide emissions (using PSE's energy resource mix to calculate the emissions impact). "If an employee neglects to turn out a light, they'll see the dollar and environmental impact the very next day," Haupt says.

"It was interesting to see how associates reacted to the monitor in the break room," said

Lee Bassage, Assistant Manager and Energy Captain for the warehouse. "I started to get questions very early in the process about what the graphs meant and how to conserve even further, and I had people making recommendations about how they felt we could save even more. In a business where fixed cost is very critical to the overall success of an operation, this ownership by everyone involved makes a huge difference."

In addition to motivating a change in behavior, the energy interval data also provides RCM's with a tool to ensure their equipment is functioning properly. "We're training the Energy Captains to compare and analyze the energy interval data and thereby identify consumption anomalies," says Rob Keller, JCPenney's Energy Management and Engineering Services Director. He uses failing air conditioning units and failing lighting systems as examples. When these systems fail, they're actually designed to "quit working" in the "on" mode. As a result, they don't turn off when they're supposed to, or when the "off" switch is flipped. "If you're not comparing your data, it may take months, if ever, to notice that your bills are higher," Keller said. "If you have an RCM tracking daily energy usage, he's going to notice the discrepancy immediately and can call a technician to determine the problem."

According to PSE's Associate Energy Management Engineer Jason Hyatt, PSE's RCM program is best suited to companies with a portfolio of facilities totaling one to two million square feet. He says the savings achieved at the JCPenney warehouse are not unusual. "Over the past 12 months they've saved 600,000 kWh through behavioral changes," he said. "Before starting the program, the facility used 100 percent of its equipment 80 percent of the time. They're now using it 60 percent of the time."

Hyatt says a customer's enthusiasm about the RCM program often leads to even further energy savings down the line. "JCPenney was so pleased with the RCM program that the company is now investing in a major lighting retrofit that will achieve even more dramatic savings," he says. This summer, the warehouse will replace its existing 400 watt high-intensity discharge metal halide lamps with the same number of more efficient T5 linear fluorescent high-output lamps with electronic ballasts. In addition to the lamp changes, the majority of the fixtures will have occupancy sensors on the fixtures themselves.

The lighting retrofit and controls are expected to save 900,000 kWh, or \$60,545 annually, and required an investment of about \$180,000. With PSE's \$89,886 grant, the project should pay for itself in less than two years, Keller says.

For more information about PSE's Resource Conservation Manager Program, please call a PSE Energy Advisor at 1.800.562.1482.

Energy in Business is published by: PSE *Energy in Business* E-newsletter; Attn: Vince Kammeyer;
PO Box 90868 EST-10W; Bellevue, WA 98009-0868