

SMECO

Electric Cooperative Exceeds Demand Response Curtailment Goals Using Pay-for-Performance Model

BACKGROUND

Southern Maryland Electric Cooperative (SMECO) was formed in 1937 to provide electricity to homes, farms and businesses in sparsely populated rural southern Maryland counties that had been cost-prohibitive to commercial power companies. Today, still operated as a nonprofit electric distribution company for its 160,000 residential customers, SMECO is one of the ten largest electric co-ops in the nation and has ranked highest in residential customer satisfaction among midsize utilities in the eastern U.S. for seven consecutive years of J.D. Power studies.

In 2008, SMECO launched the Southern Maryland Reliability Project to upgrade its transmission capacity and improve the system's reliability. After evaluating more than 30 vendors, the company chose Itron to build out its existing load management program, basing their decision on Itron's experience, product quality, service and competitive price.

Tom Dennison, SMECO's Public and Media Relations Manager, spoke to SMECO's goals: "We will have more control over the cost of meeting our utility obligations with a more diverse resource mix. This also allows us to rely less on conventional supply-side resources with costs widely fluctuating from high fuel prices."

SOLUTION

Itron offered SMECO a pay-for-performance demand response solution targeted at achieving 50 megawatts of capacity by 2013, with a longer-term goal of achieving 75 megawatts of load by 2018. The program, designed, owned and operated by Itron, was designed to engage all three customer classes: residential, small commercial, and large commercial and industrial, with residential being the primary focus.



CUSTOMER

Southern Maryland Electric Cooperative

SERVICE TERRITORY

Sparsely populated rural southern Maryland counties

GOALS

- » Achieve 33% plan participation and reduce load by 50MW by 2013
- » Reduce load by 75MW by 2018

SOLUTION

Itron-hosted demand management software platform IntelliSOURCE® Enterprise™ equipped with IntelliTEMP® smart thermostats and IntelliPEAK® digital control units

RESULTS

- » Over 50% of program participation (17% higher than projected)
- » Nearly 60MW of load reduction for residential and commercial participants (20% more than the five-year target)

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—Tom Dennison, SMECO Public and Media Relations Manager

The SMECO CoolSentry program offered residents and small businesses the free installation of two technology options—either an IntelliTEMP programmable thermostat or an IntelliPEAK outdoor load control switch—to receive signals for a conservation event. Monthly bill credits were issued to participants during the summer cooling season months.

Itron IntelliSOURCE Enterprise software is the foundation for CoolSentry, as it automates every phase of the program to ensure seamless delivery and a uniform customer experience.

When the program started, SMECO had 132,000 residential customers, and an estimated 70,000 of them had central air conditioning or heat pumps. An additional 13,200 commercial customers were eligible for the program.

SMECO and Itron projected that 33% of the eligible residential and commercial customers would participate in the program.

STRATEGIES

The key to program success came through efficient, coordinated marketing and operations, as well as curtailment optimization and quality control.

The marketing plan called for simultaneous multi-channel roll-out. SMECO led a word-of-mouth campaign, sponsoring local community events, while Itron initiated a direct mail campaign to both new and legacy load management program customers, as well as a door-to-door information campaign to property managers of multiple dwelling units (MDU) and small commercial enterprises.

Timing was essential to coordinating enrollments with installations. Because SMECO's footprint is still largely rural, it was divided into five target areas, with mail drops staggered in two-week segments. This allowed installers contiguity in their routes, while avoiding annoying delays for customers.

As the program matured and direct mail responses dropped, a feet-on-the-street campaign was implemented with trained agents deployed for door-to-door recruitment.

While the curtailment plan initially called for 50% adaptive cycling for control switches and a three-degree setback option for thermostats, subsequent testing indicated cycling all devices yielded a higher load reduction.

A key component to the program's success is coordinated communication and deployment efforts between SMECO and Itron to respond to opportunities and customer concerns. Itron reconciles database information with SMECO bi-monthly, and provides SMECO with dedicated local resources to support their call center, assuring positive customer experiences. Itron field technicians vigilantly inspect equipment both before and after control seasons to mitigate any potential lost load. IntelliSOURCE Enterprise, Itron's demand response management system, is used to automate SMECO's program from analytics to load control.

RESULTS

After the first full program year rollout, more than 20% of eligible customers enrolled. In fact, three out of the first five years saw greater than 20% enrollment. With over 43,000 devices installed, more than 50% of eligible households currently participate in the program—well above the initial 33% projection. Total residential and commercial participants account for almost 60 MW of load— 20% more than the five-year target.

Jeff Shaw, SMECO's Environmental Programs and Energy Conservation Manager, said, "By 2010, we estimated our customers saw \$840,000 in savings from the program. Since then, enrollments have grown 200% and the savings just keep building. That speaks to not only the success of the program, but a brighter future for all of our customer-members."



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