

Utility Case Study: [Southern Maryland Electric Cooperative](#)



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 135,000 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 in the advanced metering infrastructure (AMI) space, the company chose Comverge to build out its existing load management program, basing their decision on Comverge'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."

Utility Case Study Executive Summary

Southern Maryland Electric Cooperative

Background

SMECO is a customer-owned electric cooperative distributing electricity to 135,000 residential customers in Charles County, St. Mary's County, and parts of Prince George's County and Calvert County in southern Maryland.

Goals

SMECO selected Comverge in 2008 to implement Comverge's DR technology and services to reduce peak load during the summer cooling months. The five-year plan projected 33% participation and 50 MW of load saving.

Comverge Solution

Comverge developed the CoolSentry program, offering customer-members a choice of indoor or outdoor control equipment along with installation and monthly credits. Comverge also worked closely with SMECO counterparts to engage customer-members in the importance and financial value of the program in a "spread-the-word" marketing campaign.

Results

After five years, customer participation grew to almost double original projections, with 20% more load reduction than targeted. The program is still going and growing strong.

Solution

Comverge 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 Comverge, was part of a broader rollout to engage all three customer classes: residential, small commercial, and large commercial and industrial, with residential the primary focus.

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.

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.

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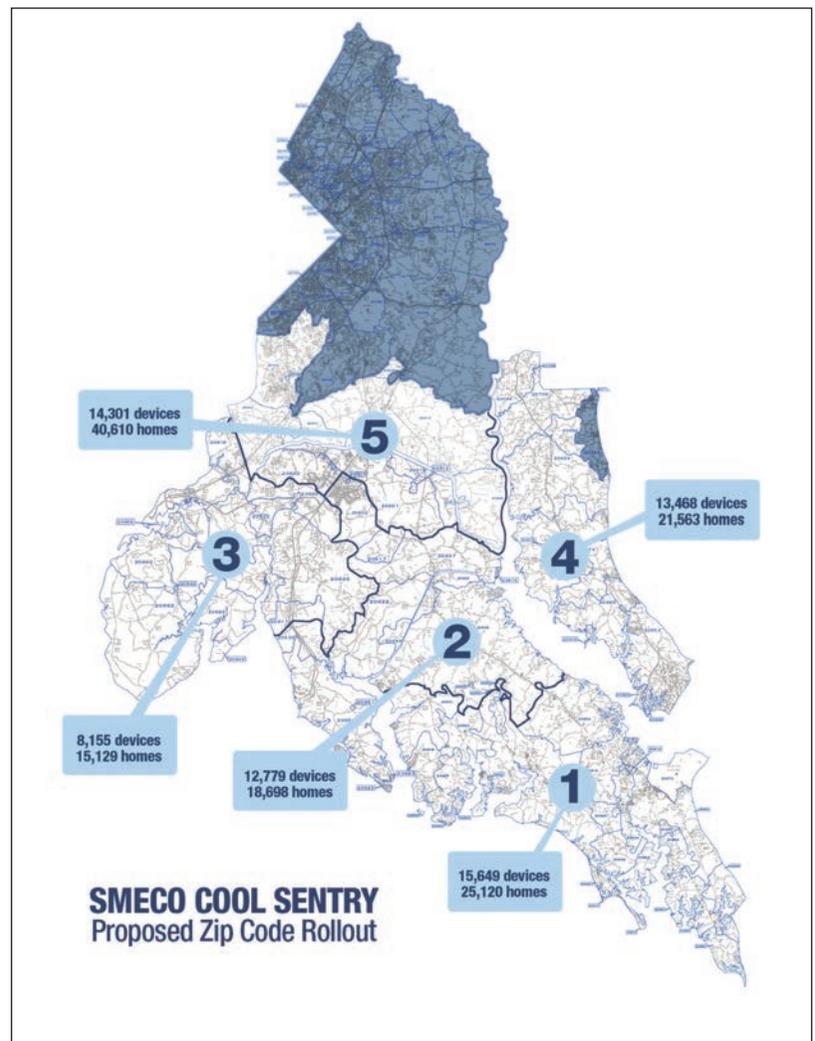
SMECO and Comverge projected that 33% of the eligible residential and commercial customers would participate in the program.

Doug Sansom, Comverge's General Manager, said, "Consumers choose hardware and how their load will be controlled. For those with multiple A/C units, they don't have to place controls on all the units. Customers appreciate choice, which drives satisfaction with the program. The net result: Happy customers stay longer, thereby reducing expense by not replacing significant losses."

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 Comverge 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. [See map.] 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.

The greatest imperative is coordinated communication and deployment efforts between SMECO and Comverge to respond to opportunities and customer concerns. Comverge reconciles database information with SMECO bi-monthly, and provides SMECO with dedicated local resources to support their call center, assuring positive customer experiences. Comverge field technicians vigilantly inspect equipment both before and after control seasons to mitigate any potential lost load.

IntelliSOURCE, Comverge'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 41,000 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."

About Comverge

Comverge is an industry-leading provider of integrated demand response, energy efficiency and customer engagement solutions that enable electric utilities to ensure grid reliability, lower energy costs, meet regulatory demands and enhance the customer experience. Through its combination of software, hardware and services, Comverge helps utilities optimize every aspect of a demand management program, from participant recruitment and device installation to call center support, control events and measurement and verification. Comverge has worked with hundreds of electric utilities to deploy nearly six million energy management devices and enroll more than 1.6 million residential customers into mass-market demand management programs. For more information, visit www.comverge.com and follow us on Twitter at @Comverge.

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