

# Oklahoma Gas & Electric Co.



## Overview

OG&E knows that any gap between energy demand and energy production cannot be met simply by adding power generation resources.

To keep supply and demand in balance, OG&E is combining new renewable generation from wind with energy conservation to curb demand during times of peak load. The company made a bold decision to partner with its customers for peak load reduction, providing them with tools to understand and manage their electricity usage. The program not only gave OG&E's customers valuable tools – it also gave the utility itself increased visibility into when and how its customers use energy.

In two summers of trials, OG&E's customers were able to average between 11% and 33% reduced peak demand – a dramatic savings made even more impressive because OG&E used only price messages, and no direct load control, to achieve that reduction. Once the program is in full swing, OG&E expects to reduce energy usage by as much as 176 MW during peak demand in summer months. OG&E has also benefitted from closer relationships with its customers – 98% of participating customers are saving money by reducing their peak energy usage, and a survey of customers showed 88% believed OG&E was trying to help them use energy more efficiently.

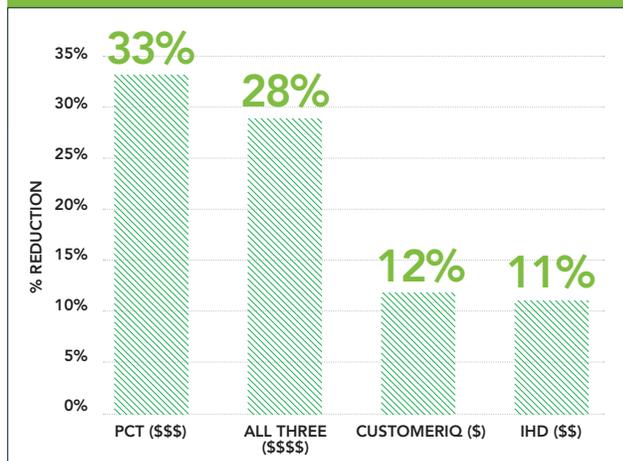
The utility expects the program to reduce demand by 70 MW in the first year of its rollout and as much as 176 MW overall by the third year. Such savings will enable OG&E to delay the building of two peaker plants until at least 2020, deferring significant capital investments.

OG&E is implementing a three-year program to reduce energy usage during summer months when consumption is at its peak. The utility's demand response (DR) program, SmartHours™, assessed the impact of various types of enabling technology combined with different dynamic pricing rates on a customer's energy consumption. OG&E is achieving these savings by providing its customers the tools necessary to manage their energy usage and incentivizing them to reduce use during peak periods.



MyOGEpower.com Energy Use & Cost Screen

### Peak Demand Reduction by Technology Type



Averages for highest priced days on variable peak pricing (VPP) rate (note: 2010 data)

After a successful 2010 pilot study consisting of 3,400 DR customers in Norman, OK, OG&E expanded the program to include surrounding areas of Oklahoma City. Approximately 3,200 additional customers were enrolled for the broader 2011 study, for a total of 6,600 customers in 2011. Residential customers were assigned one of two rate options for this study. Based on their random assignment, participants received either a Variable Peak Pricing rate with a Critical Price (VPP-CP) option or a Time-of-Use rate with a Critical Price (TOU-CP) option. Customers randomly assigned to a control group were left on their existing standard rates.

OG&E tested four technology options, including a web portal, an in-home display (IHD), a programmable communicating thermostat (PCT), and a combination of all three. In the study, 98% of participating customers saved money and reduced peak energy usage by 11% to 33%. The success of the pilot study program encouraged OG&E to broaden the program and make it accessible to all customers in their service territory – an industry first to make smart grid-based DR available to everyone.

OG&E promotes the SmartHours program intensely each spring, using a number of vehicles including radio and television advertising, direct mailers, and social media. Customers interested in signing up for the program are primarily directed to OG&E's website but also have the ability to contact OG&E customer support and enroll over the phone. While the ability to save money is a key motivation for enrolling, an added incentive is the free PCT that accompanies enrollment, a device that consumers retain even if they subsequently leave the program.

The utility had enrolled nearly 42,000 customers in the program by the end of 2012, with the ultimate goal of enrolling as much as 20% of the 794,000 households in its service territory.

### Smart Study TOGETHER™

OG&E's decision to expand its DR program to all customers in its territory is the culmination of close collaboration with Silver Spring Networks. Scaling this deployment to all customers highlights the confidence OG&E has in both the effectiveness of the Silver Spring DR solution needed for residential peak reduction and the device interoperability enabled by the ZigBee Smart Energy Profile specification.

Silver Spring is delivering the end-to-end DR solution to OG&E, including the UtilityIQ® application for back-office DR functionality; CustomerIQ™, the customer engagement solution; installation services, software, and tools to support customer recruitment and in-premise installation; in-home devices; and on-going program

support. Unlike alternative DR solutions that require a broadband Internet connection and the addition of a costly home gateway, the Silver Spring DR solution operates entirely across OG&E's smart grid network. Silver Spring has partnered with Corix for in-home device installation and Energate for PCTs.

### Education is Important

One of the key findings from this program is that customer and employee education is critical to broad acceptance. OG&E branded its customer partnership program, Positive Energy®, and educated its customers and employees through a multi-channel marketing campaign that included an extensive TV and radio media campaign, mailer, and community outreach.

The utility also found that a web portal is critical and is the most cost-effective customer tool. OG&E relies on the Silver Spring CustomerIQ web portal to communicate energy consumption data and price alerts to its customers. OG&E chose the web portal for its ability to explain time-of-use pricing and to suggest ways to cut energy consumption, eliminate waste, and ultimately reduce customer bills.

### Next Steps

OG&E is continuing to deploy its DR program to more of its customers, signing up approximately 1,000 customers per week. OG&E continues to offer PCTs to customers free of charge as an added incentive to enroll in the program. However, OG&E no longer supports the in-home devices because, by themselves, these devices did not empower a sufficiently large energy savings to justify the additional expense.

