

Utility Case Study: Tampa Electric



High Customer Satisfaction and Reduced Load through Tampa Electric Price-Based Demand Response Program



"Our average customer saves 8 to 10% annually, paying 87% less than the average residential energy rate. And 98% of our customers say the program exceeds their expectations. Tampa Electric credits the Energy PlannerSM Program with enabling the utility to accomplish its residential goals. The program—which is powered by Comverge—will continue to be a critical component of Tampa Electric's conservation efforts over the coming decade."

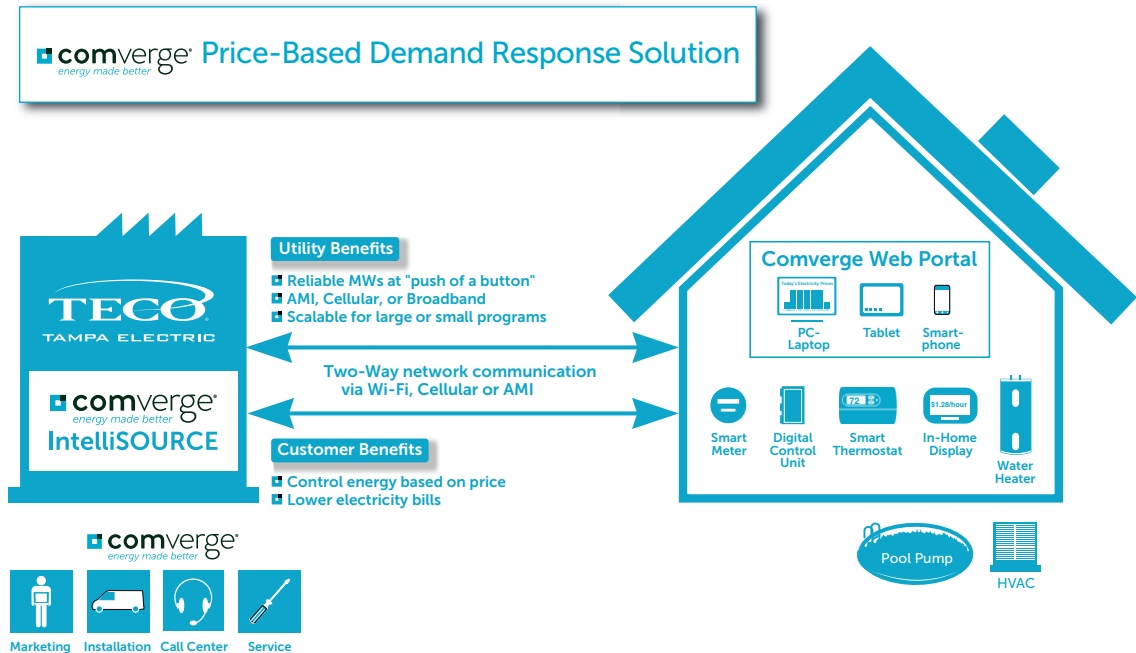
- Drema Hughes, Program Manager, Energy Planner, Tampa Electric

Background

Tampa Electric Company, a unit of TECO Energy, has a service area covering 2,000 square miles in west central Florida with more than 700,000 residential and commercial and industrial customers. Recognized as a pioneer in clean electricity production, Tampa Electric was the first investor-owned utility to offer a renewable energy program to its customers. Tampa Electric began its conservation program in the late 1970s—prior to any federal or state energy conservation requirements—and today offers several energy-saving rebate programs, as well as its innovative Energy PlannerSM program to enable residential customers save energy and money.

Energy Planner is a price-based demand response program that uses time-of-use (TOU) and critical-peak pricing (CPP) strategies without the deployment of advanced metering infrastructure (AMI). Price-based demand response programs provide better control for customers—what they pay and when they choose to use power. It allows them to save money and energy, and in turn, helps utilities reduce peak load.

We're poised today to see greater adoption of mass-market price-based demand response programs than ever before. The proliferation of distributed energy resources is driving utilities to look at retail rate



structures that are more closely tied to their costs. The accelerated deployment of AMI and the increasingly engaged energy consumer have set the stage for a widespread rollout of new rate structures. Regulators in California, Massachusetts, New York, and other states are considering defaulting residential customers to time-of-use pricing, moving millions of ratepayers to this model.

Solution

When Tampa Electric initiated the Energy Planner program in 2005, they did so with the help of the leader in demand management—Comverge. The relationship between Tampa Electric and Comverge produced what continues to be an innovative and exceptionally successful residential TOU/CPP program. Tampa Electric Energy Planner is among the largest automated, price-based DR programs in the country.

Tampa Electric's goal for the Energy Planner program was to create an interactive energy management system to give residential customers control over their energy purchases while providing Tampa Electric an alternative for load reduction during times of system peak demand. Tampa Electric provides the more than 3,700 participants in the Energy Planner program access to a web-based portal for control over their household consumption and spend. Comverge's IntelliSOURCE enterprise software platform commissions devices as they are installed, defining the scheduling for the four electricity price tiers (low, medium, high, and critical) so that devices follow them autonomously. Accessing the portal from home or on the go using a mobile device, customers can schedule the runtime of their central heating and cooling systems, electric water heaters, and pool pumps by choosing to prioritize time of day or price tier, depending on their comfort and the current cost of electricity. The program is structured so that 87 percent of the time participants pay a lower price for electricity than they would on Tampa's standard residential rate.

With critical-peak pricing, Tampa Electric leverages IntelliSOURCE to execute control events when the utility is in need of capacity. Customers are also able to use the portal to control their response to a CPP event.

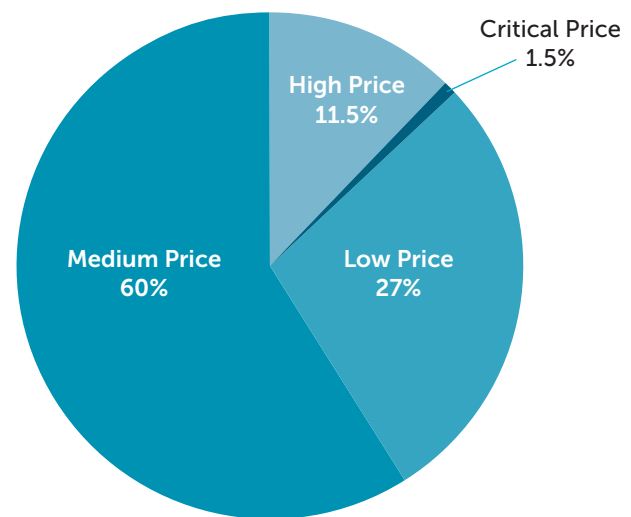
Comverge collects metering information to calculate bills for Energy Planner participants. Meters are read through IntelliSOURCE and integrated with Tampa

Electric's billing system to enable accurate multi-tier billing without AMI. In association with the data collected for billing, IntelliSOURCE also provides Tampa Electric premise-level interval data for load profiling to monitor the effectiveness of the program.

Results

The Energy Planner program has delivered measurable demand management gains, including enabling Tampa Electric to execute a dynamic critical-peak rate within minutes. Since 2008, the utility has reliably shed 3.1 kW during winter peak and 2.0 kW during summer peak per customer—not only helping Tampa Electric balance supply and demand but increasing the accuracy of their planning efforts, as well. In addition, Energy Planner participants enjoy increased control over their energy costs and average annual savings of eight to ten percent on their electricity bills.

Residential Service Variable Pricing Rate



Percent of Annual Hours in Effect

Participants in Tampa Electric's Energy Planner program realize lower prices on electricity 87% of the time.

(Results, continued)

Besides saving electricity and money, Energy Planner delivers a high level of satisfaction to its participants. Recent surveys show:

- 99% of participants are satisfied overall with the Energy Planner program
- 95% would recommend the program to friends or family

By deploying the IntelliSOURCE platform and energy management devices from Comverge, Energy Planner will continue to empower residential customers to gain greater control of their energy usage and save money on their electric bills, while reducing consumption during times of peak demand.

Learn more about Tampa Electric's Energy Planner program at tampaelectric.com/energyplanner.

About Comverge

Comverge is the industry's 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 1.8 million residential customers into mass-market demand management programs. In July 2015, Navigant Research ranked Comverge the industry's number one demand response provider. For more information, visit www.comverge.com and follow us on Twitter at @Comverge.

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