

Reliant Energy Retail Services, LLC

Smart Grid Enabled Consumer Participation

Abstract

Reliant Energy Retail Services' (Reliant) Smart Grid Enabled Consumer Participation project deploys new services and market offerings for retail customers in the Electric Reliability Council of Texas (ERCOT) region. Reliant is deploying in-home energy displays, smart appliances, and new time-based rate programs to customers within the ERCOT region. Furthermore, Reliant will inform the customers about their energy usage patterns through a Web portal and individualized weekly usage emails. These services and products provide Reliant's potential and existing customers with timely information and feedback about their electricity use, enabling them to optimize their energy usage and make informed choices. The project aims to provide customers with new information and services, which can lower their electricity costs and ultimately enable transmission and distribution service providers (TDSP) and independent power producers to optimize capital investment and their business operations. Due to Reliant's position as a licensed retail energy provider within ERCOT, it will utilize the Smart Meter Texas (SMT) data exchange to obtain meter data and communicate energy usage information with the customers. The meter data is provided to the SMT data exchange by TDSPs: Oncor, CenterPoint Energy, and AEP Texas, which are currently deploying advanced metering infrastructure (AMI) throughout the ERCOT region.

Smart Grid Features

Advanced electricity service options involve deployment of in-home displays and smart appliances as well as delivery of energy usage information to the customers through Web portals, weekly usage emails and other means to allow them to better manage their energy usage. ZigBee[®] Smart Energy-certified energy monitoring displays will provide real-time usage information and digital messages, including customized alerts from Reliant about electricity consumption, cost, and billing. These devices communicate directly through the home area network with the smart meter capturing current consumption and enabling communications through the smart grid network. A pilot deployment of smart appliances will enable applicable customers to better manage their electricity use and, when coupled with a time-of-use rate, reduce electricity bills through automated appliance control. Furthermore, Reliant will summarize the customers' energy usage information based on data provided by the smart meter, including interval usage and costs, costs to date, and projected bill amounts for delivery to the customers through interactive Web portals as well as weekly e-mail reports.

Time-based rate programs involve rate structures based on peak and off-peak demand schedules, such as time-of-use rates. In conjunction with other new pricing options such as a pay-as-you-go plan, the project will allow the customers to manage their utility bills while shifting energy use to off-peak times and reducing overall energy usage.

At-A-Glance

Recipient: Reliant Energy Retail Service, LLC

State: Texas

NERC Region: Electric Reliability Council of Texas

Total Budget: \$54,665,063

Federal Share: \$19,839,689

Transmission and Distribution Service Providers:
Oncor, CenterPoint Energy, AEP Texas

Project Type: Customer Systems

Equipment

- Customer Web Portal
- Personalized Weekly Usage Reports
- In-Home Displays
- Smart Appliances

Time-Based Rate Programs

- Time of Use

Key Targeted Benefits

- Reduced Electricity Costs for Customers
- Reduced Greenhouse Gas Emissions
- Optimized Generator Operation

Reliant Energy Retail Services, LLC *(continued)*

Timeline

Key Milestones	Target Dates
Program launch	Q1 2010
Weekly summary email launch	Q1 2010
Time-of-use billing plan	Q1 2010
Smart appliance pilot launch	Q2 2010
Web portal launch	Q4 2010
Pay-as-you-go payment plan launch	Q4 2010
In-home display launch	Q1 2011
Program end	Q4 2013

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