



NSTAR Electric & Gas Corporation Automated Meter Reading-Based Dynamic Pricing

Project Description

NSTAR and its partners will enable residential dynamic pricing (time-of-use, critical peak rates, and rebates) and two-way direct load control by capturing Automated Meter Reading (AMR) data transmissions and communicating through existing customer-sited broadband connections in conjunction with home area networks. This will enable recording and transfer of interval consumption data to NSTAR via a two-way communications pathway that can also be used for sending load control signals, measuring demand response loads, and conducting event-specific impact evaluations. Customers will be able to view their real-time energy consumption and costs through in-home displays and via a web portal. This approach has been validated in NSTAR's Smart Grid test lab. The project demonstration will include approximately 2,870 residential customers in Massachusetts. Data collection will span two summer (i.e., cooling) seasons and occur over a period of about 24 months.

Goals/Objectives

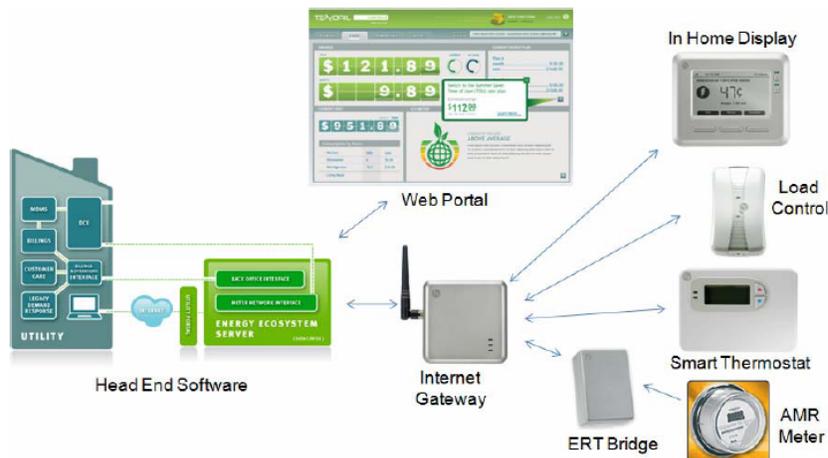
- Achieve peak load and energy reductions of at least 5 percent
- **Confirm the functionality of technologies for two-way communications**
- Enable time-differentiated rates and two-way communications without replacing AMR infrastructure
- Integrate with legacy billing and back-office applications without significant modifications eliminating the need to invest in new customer information systems

Key Milestones

- Initiate "Soft Launch" residential recruitment / equipment installation (June 2010)
- Complete back-office system integration (March 2011)
- Project "pilot operations" complete (December 2012)

Benefits

- Electric bills reduced by peak load reductions and load shifting to off-peak
- Electric grid reliability improved through peak load reductions
- Achieve much of AMI's functionality without incurring AMR stranded costs



CONTACTS

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PARTNERS

Tendril Networks Inc
Navigant Consulting, LLC

PROJECT DURATION

02/01/2010 – 03/31/2013

BUDGET

Total Project Value
\$4,877,989

DOE/Non-DOE Share
\$2,362,000/\$2,515,989

EQUIPMENT

Load control switches
Smart thermostats
In-home energy displays
Internet gateway
ERT Bridge

DEMONSTRATION STATES

Massachusetts
CID: OE0000292

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