

Central Hudson Gas & Electric

Peak Perks Targeted Demand Management Program

OVERVIEW

Electric utilities have traditionally deployed demand response programs as cost-effective alternatives to peaking power plants for system-wide reliability. With its Reforming the Energy Vision (REV) initiative, the New York Public Service Commission has incentivized the state's utilities to leverage the targeted and coordinated deployment of distributed energy resources such as demand response to address problems traditionally handled by new investments in centralized generation, transmission and distribution infrastructure.

Central Hudson Gas & Electric Corporation's innovative targeted demand management program, Peak Perks, was designed in conjunction with the REV mandate. Central Hudson is incorporating the demand response program into its electric transmission and distribution planning to offset anticipated peak load growth in three distinct zones. This enables Central Hudson to defer new infrastructure projects in each of the three zones, helping reduce further rate pressure.

SOLUTION

To meet Central Hudson's 16 MW load objective across the three zones, Peak Perks targets all customer classes—residential, small- to mid-size businesses (SMB) and large commercial and industrial (C&I). For residential and SMB customers, the utility has deployed residential direct load control equipment, including two-way communicating IntelliTEMP Wi-Fi thermostats and IntelliPEAK load control switches. Customers with the installed Wi-Fi thermostats also receive the IntelliSOURCE-Customer™ portal from which they can remotely control their thermostats and optimize their heating and cooling schedules to maximize savings.

An enrollment award of up to \$85 for customers with central air conditioning with a recurring annual reward of up to \$100 per year for customers who choose 100% cycling and additional awards are available for pool pumps. For C&I customers, the utility has entered into customized curtailment agreements to support the necessary load shape for each zone.



CUSTOMER

Central Hudson Gas & Electric

SERVICE TERRITORY

New York State's Mid-Hudson River Valley

GOALS

- » Defer investment of new transmission and distribution infrastructure
- » Reduce rates for Central Hudson customers
- » Earn shareholder incentives for successful non-wires alternative projects under New York's Reforming the Energy Vision initiative

TECHNOLOGY

- » Distributed Energy Resource Management System (DERMS)
- » IntelliTEMP® smart thermostats
- » IntelliPEAK® load control switches



Itron's IntelliSOURCE Enterprise cloud-based software provides the foundation for the program, leveraging its integrated capabilities as a demand response management system, a customer engagement portal, and a customer care and work management system to ensure data is seamlessly linked across all program functions. IntelliSOURCE Enterprise also enables Central Hudson to build customized control strategies based on specific system requirements to allow precise delivery of execution for control events that deliver the required load shape.

The utility also uses Itron IntelliMARKET service for participant recruitment and IntelliSUPPORT® service for program administration and support.

RESULTS

Central Hudson's Peak Perks innovative targeted demand management program was designed to offset 16 megawatts (MW) of anticipated peak load growth in three distinct zones. Since the program focuses on specific zones versus an entire service territory, it requires high levels of penetration in order to achieve load objectives. Central Hudson achieved greater than 30% participation (of eligible customers) within the zone which has the most immediate need in just six months—significantly faster than the three years it typically takes to achieve such a high rate of penetration. The result was due to using household-level analytics to segment the population in order to optimize participant recruitment combined with a comprehensive marketing strategy.

Central Hudson also exceeded the first-year MW target for all three zones, achieving 5.9 MW of load reduction versus a target of 5.3 MW.

Innovative Approach to Compensation

Because the program aims to defer capital projects that would have otherwise resulted in earnings for Central Hudson, the utility collaborated with regulators to create a unique compensation model which ensures the program is financially beneficial for both the company and its customers. Instead of a traditional return on capital, an incentive-based model was implemented that rewards Central Hudson for implementing the least-cost, best-fit alternative to traditional infrastructure upgrades. The formula is as follows

Estimated Cost of Traditional Transmission & Distribution Solution

$$\begin{aligned} & - \text{Actual Cost of DR Solution} \\ & + \text{Savings From Reduced Wholesale Capacity Need} \\ & = \text{Program Financial Benefits} \end{aligned}$$

Central Hudson shares program financial benefits with all customers:

- » 70% of benefits will go to ratepayers through natural rate moderation
- » 30% of benefits will be provided to utility as incentive to run the program effectively

In April 2017, Central Hudson Gas & Electric Peak Perks program received the PLMA Program Pacesetter award, which recognizes outstanding demand response programs.



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CORPORATE HQ

2111 North Molter Road
Liberty Lake, WA 99019 USA

Phone: 1.800.635.5461

Fax: 1.509.891.3355