

## Consumer Behavior Study Marblehead Municipal Light Department *Residential Dynamic Pricing Pilot Program*

### Abstract

Marblehead Municipal Light Department's (MMLD) residential dynamic pricing pilot program consists of a consumer behavior study that evaluates customer acceptance and response to time-based rate and enabling technologies.

### Consumer Behavior Study Features

**Goals and objectives** center on the acceptance of time-based rates and evaluating peak demand and energy impacts from the program. Customers also have access to an enabling technology to help control their end-use equipment.

**Study design** includes a study sample of approximately 500 residential customers and a test period from June 2011 to May 2013. The design of the pilot involves a randomized control trial with delayed application of treatments (i.e., "recruit and delay") where half of the participating customers begin treatment on the critical peak pricing (CPP) rate in year one while the remainder serve as a control group on the existing flat rate in year one and begin treatment in year two. Study participants are provided with 100% bill protection in the first year they are exposed to the CPP rate treatment in order to encourage participation and minimize attrition. In the second year, they are exposed to the CPP rate treatment; however, the bill protection is removed. This allows MMLD to study the incremental effects of bill protection on customer acceptance and response. All study participants are eligible to receive an enabling technology in the second year of the study.

**Rate treatments** include the application of a CPP rate that utilizes up to a 6-hour period for critical events from June through August. Customers are notified of critical events, which are called in conjunction with ISO New England demand response events, by 5 p.m. the day before. Study participants can receive notification of up to 12 critical peak pricing events each year of the study.

**Control/Information technology treatments** include the deployment of enabling technologies in the second year of the program to assist study participants in controlling end-use devices and better managing their electricity bills. All participants receive access to a Web portal providing granular information on energy usage and educational materials designed to educate customers about the CPP rate, energy management, and program benefits.

### At-A-Glance

**Recipient:** Marblehead Municipal Light Department

**State:** Massachusetts

**Timing:** June 2011 – May 2013

**Interim Evaluation Reporting:** July 2012

**Final Evaluation Reporting:** July 2013

**Sample Frame:** 500 Residential

**Number of Treatments:** 1

**Experimental Design:** Randomized Control Trial with Delayed Application of Treatments

#### Rate Treatments

- Flat-rate w/ Critical Peak Pricing Overlay (opt-in)

#### Control/Information Technology Treatments

- Enabling Technology
- Web Portal and Education Package

#### Additional Study Elements

- Bill Guarantee Applied for First 12 Months Only

**Marblehead Municipal Light Department** *(continued)*

**Key Milestones**

Key Milestones	Target Dates
MMLD program test period begins	June 2011
MMLD provides Interim Evaluation Report	July 2012
MMLD program test period ends	May 2013
MMLD provides Final Evaluation Report	July 2013

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