

## Consumer Behavior Study Minnesota Power Company *AMI Behavioral Research Pilot*

### Abstract

Minnesota Power’s advanced metering infrastructure (AMI) behavioral research pilot is a consumer behavior study that evaluates customer acceptance and response to various forms and timing of information feedback about their electricity consumption.

### Consumer Behavior Study Features

**Goals and objectives** center on how customers respond to varying types of information and the mechanisms for delivering it. During the pilot, customers have access to usage information through different levels in frequency and resolution. Specific research questions include estimates of the incremental effects of customers with only Web access to their consumption information versus those with in-home displays. Minnesota Power is assessing whether or not customers make more frequent use of AMI-enhanced usage information compared to standard (monthly) on-line usage information and how the frequency with which customers view enhanced on-line information change over time.

**Study design** comprises a study sample of approximately 4,000 customers and a test period from January 2012 to October 2013. The study is conducted using a randomized control trial design; customers who opt-in to the study are randomly assigned to control and treatment groups among the various information feedback devices.

**Information technology treatments** include the deployment of an enhanced Web portal with monthly, hourly, and/or near daily usage information. In addition, treatment will include in-home displays, with hourly usage feedback frequency. These devices facilitate two-way information exchange and have the potential to enable customers to better manage their electricity bills through improved understanding of electricity consumption patterns of appliances and equipment.

### Key Milestones

Key Milestones	Target Dates
Minnesota Power pilot test period begins	January 2012
Minnesota Power provides Interim Evaluation Report	March 2013
Minnesota Power pilot test period ends	October 2013
Minnesota Power provides Final Evaluation Report	December 2013

### At-A-Glance

**Recipient:** Minnesota Power

**State:** Minnesota

**Timing:** January 2012 – December 2013

**Interim Evaluation Reporting:** March 2013

**Final Evaluation Reporting:** December 2013

**Sample Frame:** ~4,000 residential

**Number of Treatments:** 3

**Experimental Design:** Randomized Control Trial

#### Information Technology Treatments

- In-home Display
- Web Portal

**Minnesota Power Company** *(continued)*

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