

SGIG Consumer Behavior Study Lakeland Electric *Smart Metering Infrastructure Initiative*

Overview

Lakeland Electric (LE) is a winter peaking municipal electric utility with ~120,000 customers in its ~260 square mile service territory that covers the city of Lakeland, Florida. The utility’s SGIG project includes a consumer behavior study that evaluates customer acceptance of and response to a seasonal three-period TOU rate under different enrollment approaches. The utility is targeting AMI-enabled residential customers throughout the service territory for participation in the study.

Consumer Behavior Study Features

Goals and Objectives— This study focuses primarily on evaluating the timing and magnitude of changes in residential customers’ peak demand and energy usage patterns due to exposure to a seasonal three-period TOU rate. LE is also interested in assessing residential customer acceptance, retention and response associated with different enrollment approaches (opt in and opt-out) to the seasonal three-period TOU rate.

Treatments of Interest— Rate treatments include a seasonal three-period TOU rate, where the definition of the peak period (weekdays and non-holidays) differs between summer (2 – 8 p.m. April – October) and winter months (6 – 10 a.m. November – March) as does the definition of the shoulder period (Summer: 12 Noon – 2 p.m. April – October; Winter: 10 a.m. – 12 Noon & 7 – 10 p.m. November – March).

All customers participating in the study receive web portal access, customer support and a variety of education materials.

LE Rate Levels (¢/kWh)

Period	TOU
Off-Peak	2.435
Shoulder	7.420
Peak	11.130

Experimental Design— The design for the study is a randomized controlled trial with delayed treatment for the control group. Two different enrollment approaches are tested: opt-in and opt-out.

LE first randomly allocates ~75% of the eligible AMI-enabled residential customers in the service territory to a pool of study participants. From this pool, LE then randomly allocates 90% for inclusion in the opt-in part of the study, leaving the remaining 10% to be eligible for the opt-out part of the study, subject to the provisions described below.

Opt-in: The pool of eligible AMI-enabled residential customers in the service territory allocated for this part of the study receive an invitation to opt in to the study where participating customers receive the rate treatment, with the understanding that the application of this treatment could be delayed by one year. Customers who opt in are then randomly assigned either to receive the rate treatment or to remain on their existing inclining block rate (IBR). Those who remain on the existing IBR act as a control group during 2012 for those immediately assigned to the treatment. All participating customers receive the rate treatment in the second year of the study (i.e., 2013).

Lakeland Electric (continued)

Opt-out: The pool of eligible AMI-enabled residential customers in the service territory allocated for this part of the study receive notification that they have been chosen to participate in a study where participating customers receive the rate treatment. Customers who don't opt out are then randomly assigned either to receive the rate treatment or to remain on their existing inclining block rate. Those who remain on their existing IBR act as a control group during 2012 for those immediately assigned to the treatment. All participating customers receive the rate treatment in the second year of the study (i.e., 2013).

Enrollment Incentives and Retention Activities— Participating customers receive bill protection that ensures that they pay no more than what they would have paid under the existing flat rate during the first six months of participation in the rate treatment. After this six month period is over, the bill protection is removed.

Participating customers will also receive enhanced bills that include shadow billing comparisons to familiarize them with the financial implications of time-based rates relative to their existing inclining block rate.

Sample Size Requirements—Sample size requirements are shown in the table below.

LE Sample Size Requirements

Experimental Cell	Opt-in	Opt-out
TOU Rate Treatment in Year 1 and 2	600	600
TOU Rate Treatment in Year 2 Only	600	600

Key Milestones

Key Milestones	Target Dates
Study begins	April 2012
Interim evaluation report submitted	July 2013
Study ends	March 2014
Final evaluation report submitted	September 2014

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