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March 22, 2018

***Via Hand Delivery***

Ms. Lora W. Johnson  
Clerk of Council  
Council of the City of New Orleans  
Room 1E09, City Hall  
1300 Perdido Street  
New Orleans, LA 70112

***Re: Filing to Recommend the Shift of the Behavioral Energy Efficiency Program from an Opt-in to an Opt-out format (Resolutions R-16-184, R-17-623; UD-08-02)***

Dear Ms. Johnson:

On May 19, 2016, the Council of the City of New Orleans ("Council") approved Resolution R-16-184 regarding the Application of Entergy New Orleans, Inc. ("ENO") for approval of a Behavioral Pilot Program for the Energy Smart Program. In January 2017, ENO and Accelerated Innovations ("AI") began implementing the Behavioral Program by actively recruiting participants. Despite efforts to enhance the recruitment process, participation became stagnant at approximately 1000-1400 participants.

Due to low level of participation, in September 2017, ENO and AI discussed the potential of shifting to an Opt-out format with the Advisors to the New Orleans City Council ("Advisors") and other stakeholders during one of the Technical Conferences convened pursuant to Council Resolution No. R-17-176. After several additional months of seeing participation fail to increase to a satisfactory level, and considering the importance of Behavioral Program participation to achieving the Council's established savings goals for Program Year 8, ENO and AI recommend switching the Behavioral Program participation model from an Opt-in to an Opt-out model.

The attached documents, the "Opt-out Behavioral Program Memo" and the "Technical Memorandum – Approach for Opt-out Behavioral Program EM&V," contain the planned timeline and methodology for implementing and evaluating the Opt-out program model. ENO intends to discuss this issue with Councilmembers and the Council Advisors in the coming days to get direction with regard to implementation of the model. In order to begin the transition to an Opt-out model by April 10, 2018, ENO will need to receive direction no later than April 5, 2018.

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BY: 

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ENO respectfully submits the enclosed original and three copies of these documents supporting the shift to an Opt-out Behavioral Program. Should you have any questions regarding this matter, please contact my office at (504) 670-3680.

Thank you for your assistance with this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary E. Huntley". The signature is written in a cursive style with a large, stylized initial "G".

Gary E. Huntley

Enclosures

cc: Official Service List UD-08-02 (*via electronic mail*)

# Technical Approach for Opt-Out Behavioral Evaluation

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Prepared for:

*Entergy New Orleans, LLC*

Prepared by:



ADM Associates, Inc.

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# 1. Introduction

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Entergy New Orleans (ENO) launched the Behavioral Pilot (Pilot) during Program Year 7 (PY7) of the Energy Smart portfolio. Accelerated Innovations was retained by ENO to administer the Pilot. At the outset, the Pilot used an opt-in program design, in which participant households are recruited through program marketing efforts. Due to shortfalls in recruitment through PY7, it was concluded that the program could benefit from being changed to an opt-out design. In an opt-out design, the recipients of an educational home energy report (Treatment Group) are chosen at the outset of program implementation and are sent reports comparing their energy use to that of their neighbors. They continue to receive reports unless they contact ENO to request discontinuation.

This memorandum details the technical approach for evaluation, measurement, and verification (EM&V) of the energy savings from the opt-out program design, and addresses other issues pertaining to this change in program model.

## 2. Technical Approach

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### 2.1 Data Collection & Sampling

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The Pilot is designed to generate quantifiable behavioral savings that cannot be feasibly attained through standard DSM efforts. The program differs from standard energy conservation marketing efforts in that it provides unique reports to each customer, comparing their power bills against those of similar-sized homes in their neighborhood. The comparison against their neighbors is intended to leverage social norming effects; this is a long-known behavioral science tenet that individuals desire to be at a similar or better level than their peers, and thus the report drives high users to reduce their energy consumption.

In our evaluation, we expect to perform the following data collection activities:

*Table 1 Data Sources for Evaluation*

<i>Data</i>	<i>Source</i>
Recipient and control group billing data	Data request to ENO for all relevant billing data in the study period
Recipient and control group contact information	Program tracking data provided by implementer
Participation in other Energy Smart programs	Data request to ENO for all residential program participation in the study period

The intent of the program administrators is to launch two waves of the program: Wave 1 would launch in early 2018 and Wave 2 would launch in early 2019. These waves would be designed at the outset with Treatment (recipient) and Control (non-recipient) households specified. Table 2 summarizes the projected program waves for the Pilot.

*Table 2 Summary of Projected Program Waves*

<i>Group</i>	<i>Treatment Group</i>	<i>Control Group</i>
Wave 1	25,000	10,000
Wave 2	15,000	7,000
Total	40,000	17,000

\*Participation targets subject to change

The Control groups are composed of fewer accounts than the Treatment Groups. The Pilot design sizes for the control groups take into consideration the following issues:

- **Maximizing available accounts for program treatment.** By minimizing the size of the control group, more households are eligible to receive the benefits of the energy savings from program participation.
- **Prior evaluation findings support the validity of a smaller control group.** The rate of control group sizing (where the control group is roughly 40% of the treatment group) has

been shown to provide adequate comparability to support EM&V in numerous jurisdictions. Examples include:

- CenterPoint Energy Arkansas<sup>1</sup>
- Rocky Mountain Power Utah<sup>2</sup>
- Public Service Company of New Mexico<sup>3</sup>
- Efficiency Vermont<sup>4</sup>

The above examples present an array of behavioral programs with verified evaluation findings from ADM and other expert firms in the industry that demonstrate the viability of a reduced control group.

### **2.1.1 Program Attrition**

Behavioral programs have attrition that occurs over time due to customers moving residences. This is referred to as “program attrition.” In opt-out behavioral programs administered in Arkansas, attrition rates have ranged from 4% to 7% in a given program year.

## **2.2 Targeting of High-Use Customers**

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The Pilot will target high-use customers for Wave 1. Preliminarily, this is anticipated to include the top 50% of ENO residential customers by annual kWh use. The rationale for targeting high-use customers is that there is higher potential for savings per-customer, and that this would improve cost-effectiveness at the outset of the Pilot. Typically, programs such as this face upfront costs to develop the treatment and control groups, while the cost of administration then declines when future efforts are focused on maintenance of the selected group.

This approach will maximize the ratepayer benefits of the Pilot and will lay a foundation upon which the Pilot can be expanded to other lower-use groups in Wave 2.

## **2.3 Control Group Development**

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To launch Wave 1, ENO will provide ADM with billed use for 35,000 residential accounts. ADM will develop a control group via random assignment of 10,000 customers into the control cohort. Practically, this will be completed using the MS Excel RAND() function. This function assigns a random number between 0 and 1. The accounts will then be sorted in ascending order, resulting in the first 10,000 being randomly selected.

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<sup>1</sup><http://www.apscservices.info/EEInfo/EEReports/CenterPoint%202014.pdf>

<sup>2</sup><http://www.oracle.com/us/industries/utilities/navigant-rocky-mountain-utah-3697547.pdf>

<sup>3</sup><https://www.pnm.com/documents/396023/3157050/2016+Independent+Measurement+and+Verification+Report%2C+Part+1%2C+ADM+Associates%2C+Inc.pdf/011b6c03-4358-4396-acf8-73cd8a24009e>

<sup>4</sup><http://publicservice.vermont.gov/sites/dps/files/VT%202015%20HER%20Behavior%20Pilot%20Evaluation%20Report.pdf>

Once selected, this control group is then tested for comparability to the treatment group. This entails testing for statistically significant differences in usage between the treatment and control groups for each month. ADM will conduct a two-tailed T-test based on kWh used per day (which will normalize for differences in billing period length). ADM conducts this analysis as part-and-parcel of all of our randomized control trial behavioral evaluations; the outcome is a table detailing the difference and the  $PR > T$  estimate. The table below is an excerpt from our 2016 EM&V of the Public Service Company of New Mexico Home Energy Reports Program that serves as an example of how the data would be reported.

*Table 3 Example Summary of Control Group Validity Testing (kWh/Day)*

<i>Observation</i>	<i>Recipient Group Consumption</i>		<i>Control Group Consumption</i>		<i>Difference</i>	<i>PR &gt; T</i>
	<i>Mean</i>	<i>Standard Error</i>	<i>Mean</i>	<i>Standard Error</i>		
December 2012	45.33	0.093	45.46	0.24	0.125	0.6215
January 2013	41.33	0.081	41.39	0.23	0.061	0.7984
February 2013	36.46	0.065	36.65	0.20	0.185	0.3746
March 2013	31.18	0.060	31.08	0.15	-0.101	0.5231
April 2013	30.90	0.083	30.83	0.14	-0.070	0.6641
May 2013	40.79	0.100	40.74	0.19	-0.051	0.8136
June 2013	49.43	0.091	49.56	0.23	0.125	0.6206
July 2013	46.89	0.083	46.94	0.21	0.042	0.8527
August 2013	44.16	0.064	44.16	0.19	0.000	0.9993
September 2013	32.72	0.061	32.90	0.19	0.182	0.3618
October 2013	32.13	0.085	32.14	0.14	0.011	0.9482
November 2013	40.60	0.092	40.60	0.20	0.002	0.9924
December 2013	43.26	0.086	43.43	0.22	0.167	0.4796

In this table, a given month is considered valid if the  $PR > T$  estimate is greater than .1 (assuming 90% confidence and  $\pm 10\%$  precision).

It is possible that the random assignment may not yield a control group that passes this screening. If that is the case, the randomization will be repeated as many times as necessary in order to develop the appropriate control group.

## 2.4 Savings Calculation Methodologies

For the impact evaluation, the primary savings calculation method proposed is a post-only model with pre-usage controls. This model is recommended in the National Renewable Energy Laboratory (NREL) Uniform Methods Project (UMP)<sup>5</sup>. ADM will conduct multiple analyses to determine cohort-specific savings, including the post-program regression (PPR) and linear fixed effects regression (LFER) models.

<sup>5</sup><https://energy.gov/sites/prod/files/2015/02/f19/UMPChapter17-residential-behavior.pdf>



### 2.4.1 Post-Only Specification

The model specification is as follows:

$$\begin{aligned}
 Usage_{it} = & \alpha_0 + \beta * treatment_i \\
 & + \alpha_1 * PreUsage_i \\
 & + \alpha_2 * PreSummer_i \\
 & + \alpha_3 * PreWinter_i \\
 & + \gamma * mm_t \\
 & + \delta_1 * mm_t * PreUsage_i \\
 & + \delta_2 * mm_t * PreSummer_i \\
 & + \delta_3 * mm_t * PreWinter_i \\
 & + \varepsilon_{it}
 \end{aligned}$$

Where

- $i$  denotes the  $i$ th customer
- $t$  denotes the first, second, third, etc. month of the post-treatment period
- $Usage_{it}$  is the average daily use for read  $t$  for household  $i$  during the post-treatment period
- $PreUsage_i$  is the average daily usage across households  $i$ 's available pre-treatment billing reads.
- $PreWinter_i$  is the average daily usage over the months of December January, February, and March over household  $i$ 's available pre-treatment meter reads.
- $PreSummer_i$  is the average daily usage over the months of June, July, August, and September over household  $i$ 's available pre-treatment meter reads.
- $mm_t$  is a vector of month-year dummies

And parameter definitions are:

- $\alpha_0$  is an intercept term
- $\alpha_1, \alpha_2, \alpha_3$  are effects of control variables  $PreUsage_i, PreWinter_i, PreSummer_i$  on  $Usage_{it}$  in the reference month.
- $\delta_1, \delta_2, \delta_3$  are the effect of the control variables in each month-year ( $mm_t$ ) of the post period.
- $\varepsilon_{it}$  is an error term

### 2.4.2 PPR Specification

The PPR model combines both cross-sectional and time series data in a panel dataset. This model uses only the post-program data, with lagged energy use for the same calendar month of the pre-program period acting as a control for any small systematic differences between the participant and control customers. Energy use in calendar month  $t$  of the post-program period is framed as a

function of both the participant variable and energy use in the same calendar month of the pre-program period. The underlying logic is that systematic differences between participants and controls will be reflected in differences in their past energy use, which is highly correlated with their current energy use. The version we estimate includes monthly fixed effects and interacts these monthly fixed effects with the pre-program energy use variable. These interaction terms allow pre-program usage to have a different effect on post-program usage in each calendar month.

Formally, the model is

$$ADC_{kt} = \sum_j \beta_{1j} Month_{jt} + \sum_j \beta_{2j} Month_{jt} \cdot ADClag_{kt} + \beta_3 Participant_k + \varepsilon_{kt},$$

where,

$ADC_{kt}$  = The average daily consumption in kWh for customer k during billing cycle t. This is the dependent variable in the model;

$Month_{jt}$  = A binary variable taking a value of 1 when  $j=t$  and 0 otherwise;<sup>6</sup>

$ADClag_{kt}$  = Customer k's energy use in the same calendar month of the pre-program year as the calendar month of month t;

$Participant_k$  = A binary variable indicating whether customer k is in the participant group (taking a value of 1) or in the control group (taking a value of 0);

$\varepsilon_{kt}$  = The cluster-robust error term for customer k during billing cycle t. Cluster-robust errors account for heteroscedasticity and autocorrelation at the customer level.<sup>7</sup>

In this model,  $\beta_3$  is the estimate of average daily energy savings due to the program. Program savings are the product of the average daily savings estimate and the total number of participant days in the analysis. To test the robustness of the savings estimate to model specification, ADM will also estimate savings using the standard regression approach for estimating electricity savings for a Randomized Controlled Trial (RCT), a linear fixed effects regression (LFER) model. Until the most recent advances in this field using the PPR approach, the LFER approach was viewed as the most appropriate regression approach for RCT programs. According to both

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<sup>6</sup> If there are T post-program months, there are T monthly dummy variables in the model, with the dummy variable  $Month_{jt}$  the only one to take a value of 1 at time t. These are, in other words, monthly fixed effects.

<sup>7</sup> For examples of academic applications of the approach to energy behavioral programs see: Alcott, Hunt. "Social Norms and Energy Conservation", Working paper, Massachusetts Institute of Technology (MIT), Cambridge, MA, 2009. Ayres, I., S. Raseman and A. Shih. "Evidence from Two Large Field Experiments that Peer Comparison Feedback Can Reduce Residential Energy Usage", NBER working paper no. 15386, September 2009. Costa, D.L. and M.E. Kahn. "Energy Conservation "Nudges" and Environmentalist Ideology: Evidence from a Randomized Residential Electricity Field Experiment", NBER working paper no. 15939, April 2010.

LBNL (2012) and a M&V white paper produced by the Brattle Group (2011), this approach was the preferred method for the evaluation of the energy use impacts of behavioral programs.<sup>8</sup>

### 2.4.3 LFER Model

The simplest version of a LFER model, the One- Way LFER model, is one in which average daily consumption of kWh by customer  $k$  in bill  $t$ , denoted by  $ADC_{kt}$ , is a function of two variables: the binary variable  $Treatment_k$ , taking a value of 1 if household  $k$  is assigned to the treatment group, and 0 otherwise; and the binary variable  $Post_t$ , taking a value of 0 if the observation  $t$  is before the *program start date* and 1 if the observation is after the program start date.

Formally, the model is,

$$ADC_{kt} = \alpha_{0k} + \alpha_1 Post_t + \alpha_2 Treatment_k \cdot Post_t + \varepsilon_{kt}.$$

Three observations about this specification deserve comment. First, the coefficient  $\alpha_{0k}$  captures *all* customer-specific effects on energy use that do not change over time, including those that are unobservable. Second,  $\alpha_1$  captures the average effect among control customers of being in the post treatment period. In other words, it captures the effects of exogenous factors, such as an economic recession, that affect control customers in the post treatment period but not in the pre-treatment period. Third,  $\alpha_1 + \alpha_2$  captures the average effect among treatment customers of being in the post treatment period, and so for these households the effect directly attributable to the program is captured by the coefficient  $\alpha_2$ .

### 2.4.4 Double Counting Analysis

Measurement of savings from behavioral programs needs to account for other program participation in order to ensure that the Energy Smart residential portfolio is not double counting any savings.

The first step in this process is to cross-reference the account IDs for each treatment and control group customer with all other program participation in the study period. This will require comparison to all program tracking other residential Energy Smart programs. This will result in a total “other program kWh” per-group, per-wave, per-state.

What is important in this analysis is to normalize the effects to the number of households in the group. The treatment and control groups are not precisely matched in customer count (often times, the control group is significantly smaller). As such, if we were to directly compare the other-program-kWh/kW of the treatment and control group, it is very likely that we would

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<sup>8</sup> LBNL 2012: Evaluation, Measurement, and Verification (EM&V) of Residential Behavior- Based Energy Efficiency Programs: Issues and Recommendations. Prepared by A. Todd, E. Stuart, S. Schiller, and C. Goldman, Lawrence Berkeley National Laboratory. 2012. <http://behavioranalytics.lbl.gov>. Brattle Group 2011: Measurement and Verification Principles for Behavior- Based Efficiency Programs. Sanem Sergici and Ahmad Fauqui. 2011.

overestimate the double count (a treatment group of 50,000 customers is most assuredly going to show higher savings than a matched control group of 25,000 customers). By comparing this on a per-household basis, we normalize to the reality of mismatched treatment and control group population sizes.

The final double count savings (calculated separately for each unique wave in each program year) is as follows:

$$\text{Double Count} = \left( \frac{OP\ kWh}{Hosehold_{Treatment}} - \frac{OP\ kWh}{Hosehold_{Control}} \right) \times \# Accounts_{Treatment}$$

Where,

$$\frac{OP\ kWh}{Hosehold_{Treatment}} = \text{Other program kWh per household in the treatment group}$$

$$\frac{OP\ kWh}{Hosehold_{Control}} = \text{Other program kWh per household in the control group}$$

$$\# Accounts_{Treatment} = \text{Total accounts in the treatment group}$$

The projects flagged for double counting will also have their time-of-year accounted for; it would be inappropriate to apply a full year of savings penalty to the program for the installation of a CFL if this CFL is installed 11 months into the treatment period, for example. To account for this, ADM will scale savings as follows:

- **Baseload measures:** this includes lighting, HVAC, and other measures that are not weather-sensitive. The energy use of these measures will be treated as flat and even across the 365 days of the year; as a result the scaling for time of installation will equal:
  - $(365 - \text{day count of installation}) / 365$
- **Weather-Sensitive Measures:** these measures will be divided into heating and cooling saving measures. This will include air conditioners, heat pumps, and weatherization improvements. For measures that save both in the heating and cooling season (due to electric heating), the individual savings will be parsed out to each respective season. These will then be scaled based on the percent of remaining heating degree days (HDD) or cooling degree days (CDD) in the calendar year. The CDD and HDD counts will be developed from Department of Energy (DOE) National Renewable Energy Laboratory (NREL) Typical Meteorological year V3.0 (TMY3) weather data<sup>9</sup>. ADM will apply TMY3 data as opposed to actual data because the annualized savings estimates of the other measures are normalized to TMY3 data.

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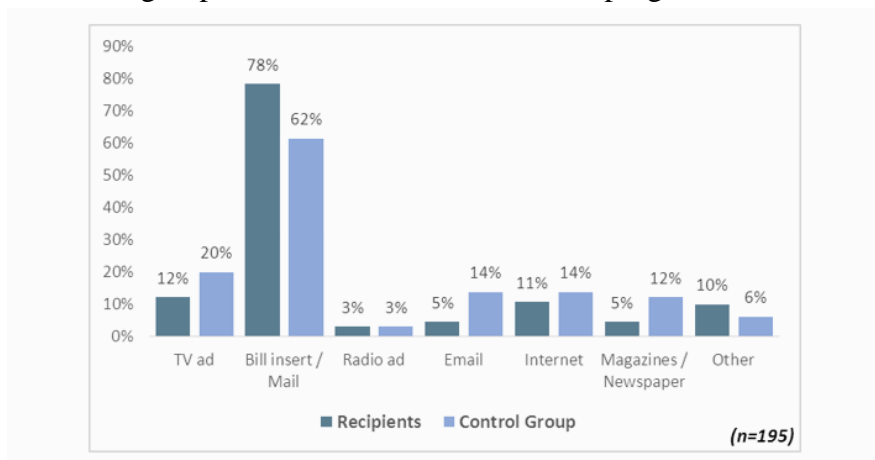
<sup>9</sup>[http://rredc.nrel.gov/solar/old\\_data/nsrdb/1991-2005/tmy3/by\\_state\\_and\\_city.html](http://rredc.nrel.gov/solar/old_data/nsrdb/1991-2005/tmy3/by_state_and_city.html)

## 2.5 Customer Survey Effort

Our evaluation will include delivery of a survey to a random sample of customers in each of the treatment and matched control groups. The control group will be surveyed to establish baseline behavior for control group participants in order to test differences in self-perception of energy use and in engaging in energy conservation behaviors. The survey to the control group will be administered as a “general energy awareness survey” and will not make any mention of the Pilot. We conduct control group surveys in this manner in order to preserve their status as “untouched” by the behavioral program.

ADM’s call center staff will target 80 customers for each sampling group: treatment and control groups for each of the three waves, totaling 960 completed telephone surveys and meeting 90% confidence and  $\pm 10\%$  precision. Below are typical sample questions used for determining these factors, accompanied by a sample of figures summarizing key results from a similar evaluation ADM performed for CenterPoint gas in 2015:

- How were treatment group customers made aware of the program?



- Did treatment households participate in the other Energy Smart programs as a result of the report?
- How do customers perceive their home’s energy use compared to others?

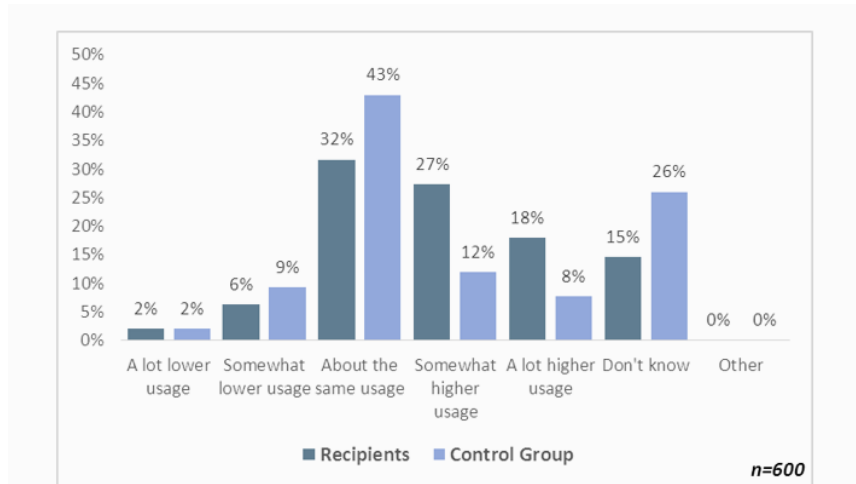
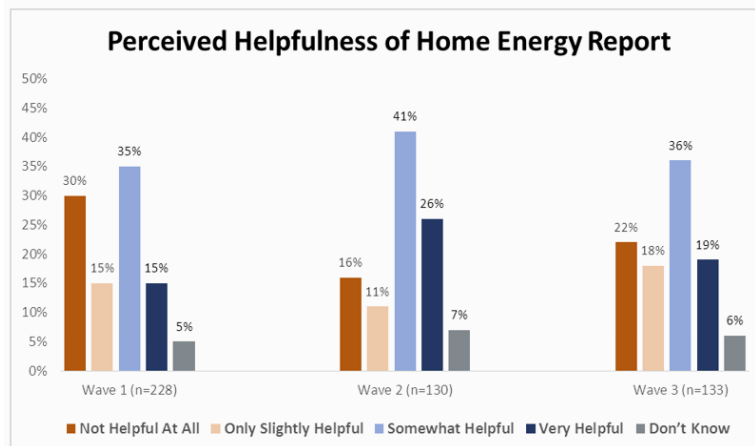


Figure 9-1 Self-Perception of Usage Compared to Similar Homes – Wave 1

- Do participants adopt specific behaviors in response to Pilot recommendations?
- How helpful do customers find the Pilot?
- What is the frequency and persistence of the adopted energy saving behavior?
- Which conservation recommendations were participants most likely to adopt?
- What percentage of actions taken in response to the report are repeated actions (turning off the lights when leaving a room), structural changes (installing an energy efficient air conditioner), or intermittent actions (replacing an air filter)?
- How helpful did recipients find the report?



## 2.6 Comparison to Opt-In Approach

A primary concern of an Opt-out program design is that sending reports unprompted to residential customers may result in dissatisfaction. Opt-in programs mitigate this by only delivering reports to households that request it. Accelerated Innovations will maintain the Opt-in component of the program, and evaluation of the savings from this program will continue unchanged from prior documentation detailing the approach. In the survey effort, ADM will collect data from a battery of satisfaction questions and will compare findings between the Opt-

out and Opt-in program mechanisms. This difference will be included in the EM&V report of the Pilot.

## **2.7 Accounting for Double Enrollment**

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The Pilot will retain the Opt-in mechanism used in the initial program design. One possible outcome of this is that a customer that is included in the Opt-out report may later enroll in the Opt-in program as well.

To account for this, the two participation cohorts (Opt-out and Opt-in) will be cross-referenced to flag any double-enrollees. This will be completed for both the treatment and control groups in the Opt-out program. The subsequent steps are as follows:

- First, the data will be examined to determine what percent of the Opt-out treatment and Opt-out control groups have enrolled in the Opt-in program. If these Opt-in enrollment rates are not statistically significant at the 90% confidence and  $\pm 10\%$  precision rate, then they will be retained in the model as the effects of their Opt-in participation will cancel out.
- Second, if it is found that the Opt-in enrollment rate in the two Opt-out groups does show a statistically significant difference, they will be removed from the Opt-out analysis and instead will be included in the Opt-in analysis group.


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# ENERGY SMART SCORECARD

PROGRAM YEARS 8 AND 9--TRANSITION TO OPT-OUT APPROACH

## Entergy New Orleans

January 10, 2018



Submitted by:



**Accelerated •  
Innovations**

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## OVERVIEW

The Energy Smart Scorecard program launched as a residential energy savings behavioral pilot program in January 2017. On February 13, 2017, in accordance with Resolution No. R-17-31, dated January 26, 2017, Entergy New Orleans (ENO) filed its Application for Approval of the Implementation and Cost Recovery Plan for Energy Smart Program Years 7-9. With the approval of this application, the Energy Smart behavioral pilot was rolled into a larger offering by program year 8 (starting January 2018). In accordance with funding levels, the Energy Smart suite of programs are required to attempt to increase savings by 0.2% annually and to put the suite of programs on a track to achieve kWh savings that amount to 2% of total annual sales.

In an effort to boost participation and achieve the targeted overall kWh savings, ENO and Accelerated Innovations (AI), the implementer of the behavioral program, propose to transition the behavioral program from a participant “opt-in” enrollment format to an “opt-out” enrollment format. In support of this transition and to ensure consistency and accuracy of impact analyses, third party program evaluator ADM is providing guidance and recommendations for this format amendment. This document is intended to serve as a revised Scope of Work and description of how AI will approach the enrollment format transition of the Energy Smart Scorecard program for program years 8 and 9. AI and ENO do not anticipate that the change from Opt-in to Opt-out will require any change in the Council-approved budget for the Behavioral Program.

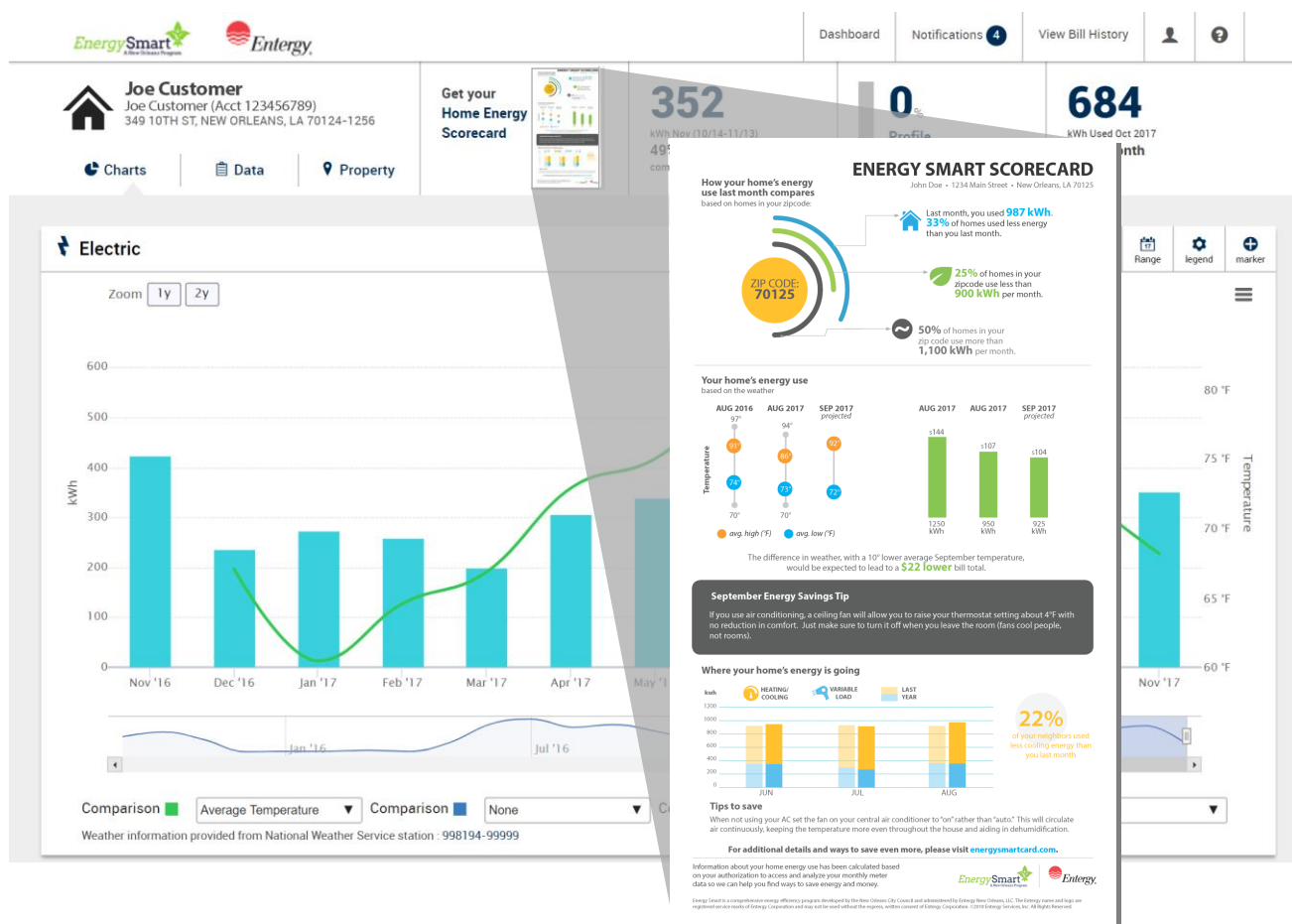
## PROGRAM DESCRIPTION

The Energy Smart Scorecard provides valuable information for Entergy customers to better understand their home’s energy use and how it compares to other homes in the neighborhood. Scorecard feedback is available through digital channels. Email serves as a primary channel to engage customers with Scorecards along with marketing content incentivizing customers to register at [energysmartcard.com](http://energysmartcard.com). Distribution of print reports is not considered part of the scope of this agreement.

### Scorecard Content

ENO’s participating customers receive a monthly Energy Smart Scorecard via email which provides them with energy performance feedback and personalized savings recommendations, along with links to engage with the platform’s interactive features. Using digital channels, AI will leverage a variety of marketing channels such as email, text messages, notifications, social media and digital advertising for program awareness and engagement. This approach helps reduce overall marketing costs while providing more targeted outreach to ENO customers. These digitally based marketing channels also can enable strategic cross-promotion of other Energy Smart programs. As a result, suggestions for energy efficient behaviors can be made in the context of customers’ actual energy use.

Energy Smart Scorecards can be combined with SMS texts for enhanced interaction and a robust customer experience.



The Energy Smart Scorecard provides targeted tips based on load disaggregation for each household and weather-driven home energy performance benchmarking. Each Energy Smart Scorecard is specific to the energy use of the individual customer.

Energy insights are provided based on a combination of weather data and energy usage as it relates to HVAC, and variable loads. Customers receive a report on monthly trends in their HVAC use as compared to average and efficient similarly-sized homes in their area. Tips specific to the customer's cooling and heating energy use are displayed to give insight into how they can reduce consumption to lower their energy bill.

The Energy Smart Scorecard provides a seasonal home efficiency assessment so customers can gain insight into how weather conditions affect their home's HVAC usage. This is important because it explains to the customer why their usage may be higher than nearby homes and what they can do to reduce their consumption based on how their home responds to weather.

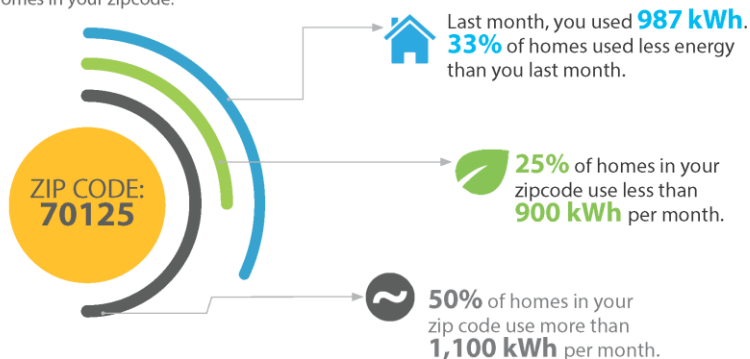
Customers are encouraged to interact with the [energysmartcard.com](http://energysmartcard.com) portal to check their usage and at weather impacts on their energy use during the time between the monthly reports.

A full screenshot of an Energy Smart Scorecard example is featured on the following page.

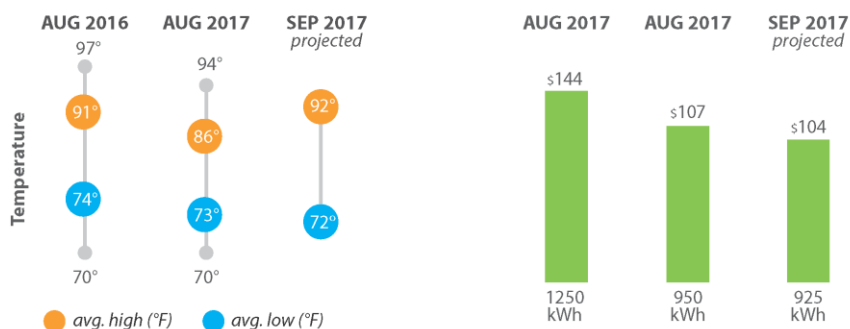
# ENERGY SMART SCORECARD

John Doe • 1234 Main Street • New Orleans, LA 70125

**How your home's energy use last month compares**  
based on homes in your zipcode:



**Your home's energy use**  
based on the weather

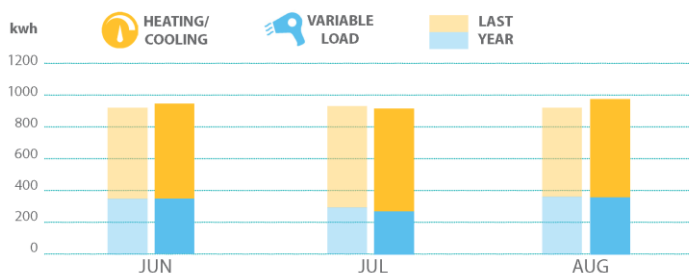


The difference in weather, with a 10° lower average September temperature, would be expected to lead to a **\$22 lower** bill total.

## September Energy Savings Tip

If you use air conditioning, a ceiling fan will allow you to raise your thermostat setting about 4°F with no reduction in comfort. Just make sure to turn it off when you leave the room (fans cool people, not rooms).

## Where your home's energy is going



**22%**  
of your neighbors used less cooling energy than you last month

## Tips to save

When not using your AC set the fan on your central air conditioner to "on" rather than "auto." This will circulate air continuously, keeping the temperature more even throughout the house and aiding in dehumidification.

For additional details and ways to save even more, please visit [energysmartcard.com](http://energysmartcard.com).

Information about your home energy use has been calculated based on your authorization to access and analyze your monthly meter data so we can help you find ways to save energy and money.



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## Energysmartcard.com Portal

In addition to email distribution, scorecard feedback is available via the ***energysmartcard.com*** platform portal, a dynamic digital experience to accommodate the multiple digital channels that consumers interact with for their personalized data and reports. Customized disaggregated load and usage information is accessible via the ***energysmartcard.com*** portal.

The portal comprises a number of tools for customers to understand the drivers of their energy use and take action to realize savings. Energy Markers provide a means for users to track significant events that may impact energy use such as home renovations, appliance upgrades, or changes in occupancy. Users can select from a number of pre-defined event categories, add the relevant time and date details, and provide a description for reference. The system will provide metrics on energy use before, during (if applicable), and after the event.

Comparisons to changes in temperatures, the customer’s historical energy consumption, and neighborhood averages provide additional insights. In addition to its current neighborhood comparison, the ***energysmartcard.com*** portal and Energy Smart Scorecard incorporate zip code-level comparisons to give customers a more meaningful metric on their home’s relative performance.

### Additional Features

ENO has the ability to customize messaging to drive awareness and cross-promote its other Energy Smart programs. The ***energysmartcard.com*** portal property profile features can gather customer attributes and energy end use information directly from customers, making this information available to the utility for reporting, analytics, and targeted marketing. Our ability to cross-promote programs will increase customer awareness of the multiple energy efficiency options offered through the Energy Smart suite of programs, improving customer satisfaction. The engagement portal makes program performance and participant-provided information available to AI’s utility partners through dashboards and various analytical tools so ENO can extract trending information and use the data to gain insight into home energy end uses and efficiency improvement opportunities.

The ***energysmartcard.com*** portal presents detailed data and analytics so that customers can understand their energy use. Studies have shown that 40% of customer calls to a utility are related to high bills, a leading driver of consumer dissatisfaction. Enhanced customer support tools within the Energy Smart Scorecard program improve the customer experience and enable customer service representatives to educate customers about their bills and offer ways to save.

## PROGRAM TRANSITION TO OPT-OUT APPROACH

### Participation Targets

The transition to an opt-out program model will involve the design and implementation of a randomized control trial (RCT) participant enrollment and energy-savings evaluation methodology. The program will identify and engage a participant (i.e., Treatment) population while also analyzing the energy use of a non-participant (i.e., Control) population targeted to be of sizes shown in the table below:

Group	PY8	PY9	Total
Treatment	25,000	15,000	40,000
Control	10,000	7,000	17,000

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\*Participation targets subject to change

\*\* PY9 figures are incremental to PY8

In addition to customers selected for the treatment group, access to the program will be granted to any customers outside of the treatment group who voluntarily enroll at ***energysmartcard.com***. For inclusion in the RCT groups, the customer will be required to have at least 12 months of historical consumption data at the current premise. Double-enrollees, (customers who opt-out and opt-in) will be cross-referenced and flagged in both the treatment and control groups as follows:

- Data will be examined to determine what percent of the opt-out treatment and opt-out control groups have enrolled in the opt-in program. If these opt-in enrollment rates are not statistically significant at the 90% confidence and  $\pm 10\%$  precision rate, then they will be retained in the model as the effects of their opt-in participation will cancel out.
- Should the opt-in enrollment rate in the two opt-out groups show a statistically significant difference, they will be removed from the opt-out analysis and instead will be included in the opt-in analysis group.

AI's goal is to maximize the cost effectiveness and evaluability of the energy savings impacts, while also ensuring inclusion or exclusion of appropriate customer segments. Given that our focus is to pursue a digital Energy Smart Scorecard distribution model, customers with known email address contacts will be the most cost effective to pursue. In addition, the selection of the initial treatment group, AI will target higher energy use households to ensure the program is as cost effective as possible. This approach is generally effective in other behavioral programs as there is higher potential for savings per-customer, and that this would improve cost-effectiveness at the outset. Higher costs at initial launch are typical in programs such as this due to upfront costs to develop the treatment and control groups. However, the cost of administration declines when future efforts are focused on maintenance of the selected group.

This approach will maximize the benefits of the program while establishing the framework upon which the program can be expanded to other lower-use groups in Program Year 9.

### **New Enrollment Onboarding**

Upon identification of the initial treatment group, AI will distribute an onboarding email to the selected participants with a program introductory message, description of program benefits and advantages and an overview/preview of what is included in the monthly Scorecard and the ***energysmartcard.com*** portal.

Considering the multi-channel engagement approach, having visibility into performance metrics including page views, email open rates, opt-in registrations, Scorecard views, profile completions, support requests and communications alerts across each channel and engagement platform provides insights on participant segmentation, targeted marketing effectiveness, and customer activities. These insights will guide outreach and marketing strategies and enhance the customer experience to maximize participation and engagement. In order to maximize program engagement, AI will conduct regular analyses and provide metric reports on communication/email bounces, opens, click-through rates, and opt-outs. AI will also conduct A/B Subject testing so as to identify and pursue the most effective messaging.

## Marketing and Education

In addition to materials in use for the current Energy Smart Scorecard behavior pilot, AI will continue to create program promotional content, marketing assets and copy to market the program with oversight and approval from ENO Corporate Communications staff.

Leveraging the full catalogue of communication mediums (from social and earned media to field exhibits and direct outreach) AI will continue to engage and influence targeted customers with both objective and subjective messaging.

## Marketing Channels/Tactics

- Field Engagement: Working in collaboration and with the services of the Energy Wise team locally in New Orleans, the Energy Smart Scorecard program will be promoted by Energy Smart program representatives in the field. Activities will include, but not be limited to:
  - Field visits: community sites and/or events with ENO staff, vendors, contractors, and community leaders
  - Community center outreach, association open houses, and other community events and meetings
  - Customer care center visits and interactive displays
- Promotional material distribution
- Low- or no-cost social media channels:
  - Online marketing - promotional emails
  - Facebook, Instagram, Twitter
  - NextDoor.com
- Customer engagement portals/websites
  - Energysmartcard.com
  - Energysmartnola.com
  - Entergy New Orleans MyAccount
- Advertising and Media
  - *ENO's Circuit newsletter*
  - *Earned media*
  - *RTA general market display campaign (buses, stations, shelter/kiosks, streetcars, benches)*
- Partner Collaboration, Coordination and Cross Promotion

## Transition Milestones

The following program transition milestones will be tracked closely within the teams. Dates will be adjusted accordingly.

<i>Deliverable</i>	<i>Date</i>
Treatment Group enrollment data selected	1/22/2018
Onboarding email distributed to new participants	3/1/2018
First full-month Scorecard delivered to new participants	Week of 4/9/2018
RTA Advertising campaign	2/19/2018 - 3/23/2018
Second round Treatment Group enrollment data selected	12/15/2018
Onboarding email distributed to new participants	1/1/2019
First full-month Scorecard delivered to new participants	2/5/2019

\*\*Dates subject to change