DTE INSIGHT: APP GAS SAVINGS

WHITE PAPER SUBMISSION FOR THE 2017
MICHIGAN ENERGY MEASURES DATABASE

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The DTE Insight app aims to achieve behavior-based energy savings by providing customers with access to a variety of information and tools including daily gas usage data, target setting, weekly challenges and tips for completing various home projects.


Source: DTE Energy

DTE Insight is a part of DTE Energy's diverse portfolio of residential energy efficiency programs. The app seeks to motivate users to save by providing access to a variety of information and tools including daily gas usage data, target setting, weekly challenges and tips for completing various home projects that can save energy.

The app began showing gas usage data to DTE gas and combo customers in December of 2014. The app was originally launched with electric data only in July of 2014.

The app savings value included in this presentation is based on analysis of 13 months of data from 8,891 participants.

Navigant selected the control group matches by identifying the non-participant that had the closest gas use to the participant in the 12 months before the participant joined the program.

If two customers (match and participant) have very similar gas use profiles in the 12 months before a program begins, then the match will provide a good approximation of the participant's counterfactual gas use during the program period.
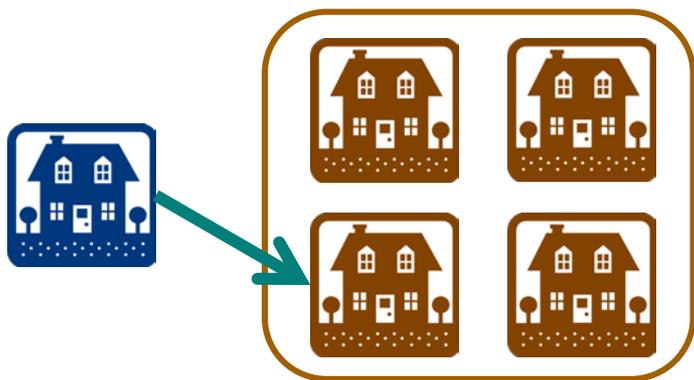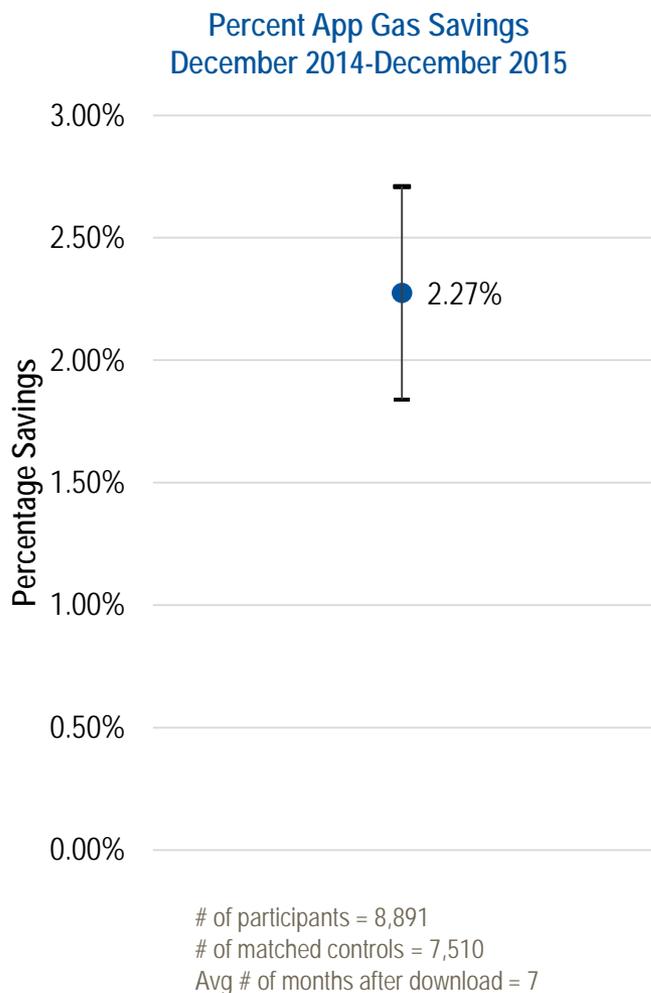

Gas App Matching Results
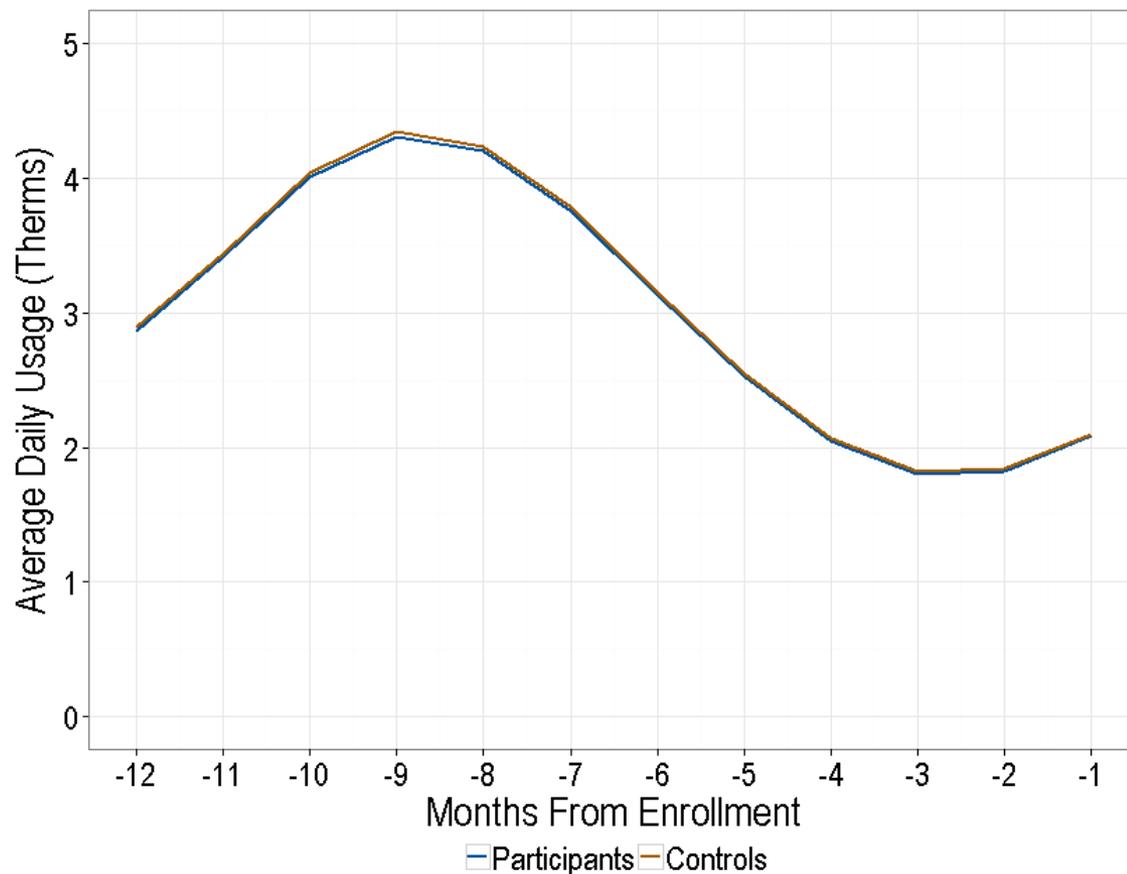
Source: Navigant analysis of customer billing data

Average per participant gas savings from December 2014 through December 2015, after adjusting for uplift, were 2.27%.

Percent App Gas Savings
December 2014-December 2015

# of participants = 8,891
# of matched controls = 7,510
Avg # of months after download = 7

- In the first 13 months of the program, the Insight app successfully channeled 227 gas participants into other DTE programs.

- This indicates joint energy savings between Insight and the relevant energy efficiency programs that should not be counted for both programs.

- Joint savings – the amount of savings subtracted from the annual Insight gas savings to avoid counting savings twice (in both Insight and the other program) – equaled 62 MMBtu, or 0.4% of the total Insight app gas savings, during the study period.

- Both single-family and multi-family customers can participate in the DTE Insight program. As a result, the savings estimate represents average savings for both single and multi-family customers.

Source: Navigant analysis of customer billing data

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A deemed savings estimate based on the evaluation to-date may over- or under-estimate future savings due to the savings life cycle, seasonal effects, and cohort effects. Future calibration activities will address these considerations.

Considerations	
Self-Selection Bias	In the absence of a randomized control trial, the evaluation approach uses the best available methods for addressing self-selection bias. Survey results related to electric app savings indicated that estimates are possibly subject to self-selection bias.
Seasonal Effects	Gas usage information was available in the app starting in December 2014; this analysis covers December 2014 through December 2015. Although a full year of data is used, it is possible the savings will differ when weather differs from the conditions observed in the analysis period.
Savings Life Cycle	The evaluation team has observed that customer engagement with feedback programs often decline over time without prompts to stimulate engagement. DTE plans to make future updates to the app that are expected to enhance engagement which may influence savings.
Cohort Effects	If early adopters achieve higher or lower savings than those customers that download the app later, the deemed savings value may be an over- or under-estimate.

The evaluation team recommends including the DTE Insight App as a gas measure in the 2017 Michigan Energy Measures Database.

The evaluation team recommends including single-family and multi-family gas savings of 2.27% for the DTE Insight App in the 2017 Michigan Energy Measures Database (MEMD).

As noted previously, the current savings estimate may over- or under-estimate savings due to seasonal effects, cohort effects and savings life cycle. To address the savings life cycle, Navigant recommends developing annual savings estimates (i.e., Year 1 savings, Year 2 savings, etc.) similar to Home Energy Reports.

In addition, deemed savings are subject to MEMD calibration research. Navigant recommends regular calibration for this measure.

Annual savings would be calculated using the formula below:

Savings Rate x Number of Active Participants x Average Usage from Controls for the Prior Program Year

where:

o the number of active participants is defined as gas or combo single or multi-family customers with AMI meters who download the app, linked the app to their DTE account, and had an active account with DTE on the last day of the program year

o matched controls are defined as a group of non-participants selected for the control group using the matching method described on page 3 of this white paper.

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