

# DTE Insight Mobile App for Customers

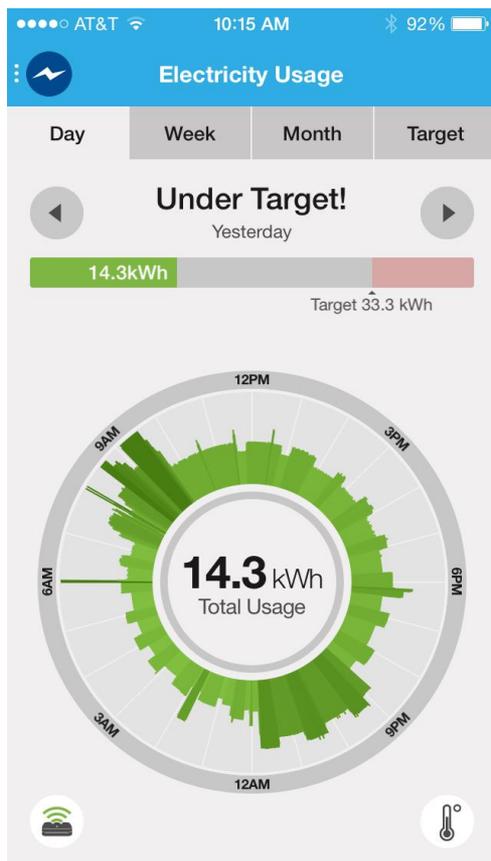
Ten Month Analysis Results Presentation to  
Energy Optimization Collaborative  
June 16, 2015



**DTE Energy**<sup>®</sup>  
Know Your Own Power<sup>®</sup>

**NAVIGANT**  
ENERGY

The DTE Insight app aims to achieve behavior-based energy savings from the use of the app, and to cause lasting changes in the energy efficiency market and increase adoption of energy efficient products, services or practices. Currently, the Insight app provides users with access to a variety of information and tools.

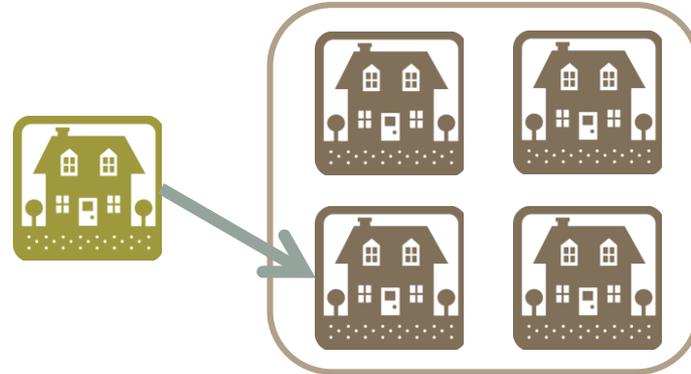


Source: DTE Energy

- DTE Insight is a part of DTE Energy's (DTE) diverse portfolio of residential energy efficiency programs to encourage market transformation.
- The Insight app is designed to cause lasting changes in the energy efficiency market and increase adoption of energy efficient products, services or practices.
- The app seeks to motivate users to save energy by providing access to a variety of information and tools including hourly (with a one day delay) interval data, target setting, weekly challenges and tips for completing various home projects that can save the user energy and money on their bill.
- The app became available for download on Apple devices in July 2014, and on Android devices in August 2014. In December of 2014, the app began showing gas usage data to DTE gas and combo customers.
- The app savings value included in this presentation is based on analysis of ten month of data from 11,617 participants.

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

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

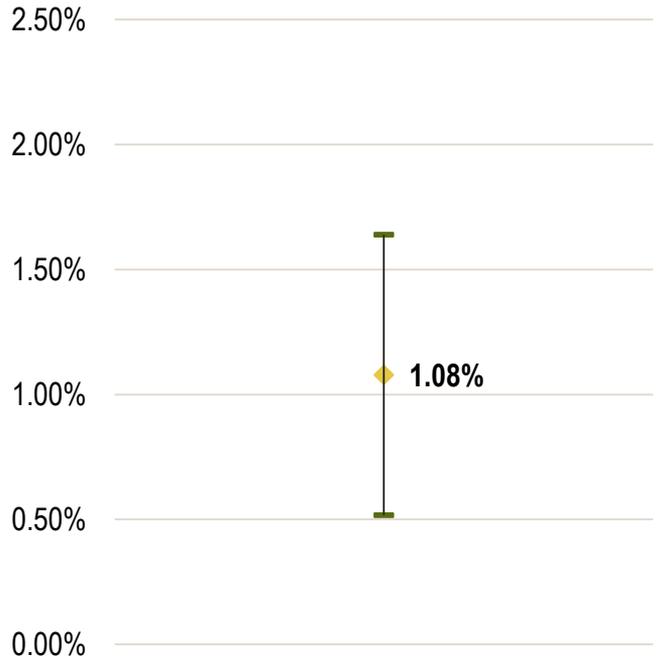


**In the first ten months of the program, Insight successfully channeled participants into other DTE energy efficiency programs. This also indicates joint energy savings between Insight and the relevant EE programs that should not be counted for both programs.**

- Analysis of DTE's program tracking data reveals that the Insight app channeled a total of 186 participant customers into other DTE energy efficiency programs.
- Joint savings – the amount of savings subtracted from the annual Insight savings to avoid counting savings twice (in both Insight and the other program) – equaled 17 MWh, or 2% of the total Insight app savings, during the study period.
  - Savings from other EE programs are based on one year of savings, but for the Insight App, savings are estimated on an average of 6 months of using the app.
  - To make an accurate adjustment for joint savings Navigant adjusted the annual savings from the other EE program data to account for only 6 months of savings.
- These incremental savings resulting from increased participation in other programs caused by the Insight App are subtracted from estimated savings to avoid double-counting savings, therefore the savings estimate will be net of double-counted savings.

After adjusting for joint savings with other EE programs from the analysis, estimated electric savings for the DTE Insight app in the first ten months are 1.08%.

App Electric Savings Adjusted for Joint Savings  
(with 90% Confidence Interval)



# of participants = 11,617  
# of matched controls = 9,727  
Avg # of months after download = 6  
Total Adjusted MWh Savings = 874

Source: Navigant analysis of energy usage data

**A deemed savings estimate based on the evaluation to-date may over- or under-estimate savings due to self-selection bias, seasonal effects, the savings life cycle and cohort effects.**

| 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 indicate that estimates of app savings are subject to self-selection bias.   |
| Seasonal Effects    | The app was available for download in July 2014 and this analysis only covers July 2014 through April 2015. Due to ramp up, the savings estimate does not include electric savings associated with the peak cooling season.   |
| Savings Life Cycle  | Navigant has observed that customer engagement with web portals decline over time, particularly when the platform is static (e.g., users need to take action to access feedback rather than receiving active notification from the platform). Planned updates to the app are expected to enhance engagement and may increase 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.   |

**There is a precedent for developing a deemed savings estimate for behavioral measures. Calibration activities can address limitations of current savings estimate (seasonal effects and cohort effects, in particular).**

### Prescriptive Measure

- There is a precedent in Michigan for deeming savings associated with behavioral measures in which *observed* impacts inform the next year's deemed savings.
- For example, 2016 deemed savings for Home Energy Reports is based on evaluated savings from May 2014 through April 2015. In this case, 2016 deemed savings for the Insight App would be based on evaluated savings from July 2014 through April 2015.
- As noted previously, the current savings estimate may over- or under-estimate true 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.
- Incremental savings resulting from increased participation in other programs caused by the Insight App are subtracted from estimated savings to avoid double-counting savings. The deemed savings estimate will be the estimated savings net of double-counted savings.

- Deemed savings are subject to MEMD calibration research. Navigant recommends regular calibration.
- Annual savings would be calculated using the formula below:

$$\text{Savings Rate} \times \text{Number of Active Participants} \times \text{Average Usage from Matched Controls for the Prior Program Year}$$

where:

- the number of active participants is defined as 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
- matched controls are defined as a group of non-participants selected for the control group using the matching method described on page 7 of the white paper submitted on June 1, 2015.

# Questions?

