Michigan Energy Optimization Collaborative Research Sub-Committee: Update

Presentation to Energy Optimization Collaborative

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DTE Energy

Consumers Energy
Count on Us

NAVIGANT

CADMUS

EMI CONSULTING

Agenda

1. Presentations of Existing Research
2. Next Steps

Topics for EO Collaborative

- "Expanding Calibration Research" Sub-Committee included in the first stage screening process a requirement that the research *does not replicate or duplicate* existing research underway by DTE Energy or Consumers Energy

- Both utilities will share findings from their independent research throughout 2016 in support of the collaborative research objectives

- EO Collaborative Presentations
  - ✓ March – Utility Coordination (DTE)
  - ✓ June - Think! Energy Evaluation (Consumers)

Existing Research Conducted by DTE Energy and Consumers Energy

Research Topics
Emerging Technology Field Demonstration
In-House Savings
Strategic Energy Management
Market Transformation
C&I Gas Research
IRP Support
On-Site Energy Managers
Residential Building Code Enhancement Study
Measurement & Verification 2.0
C&I Energy Efficiency Auction
Use of Evaluation Research to Improve Programs
Commercial Customer Market Characteristics Study
Contractor Advisory Panel
Behavioral Demand Response

Outcome of the Vote

Research Topics	Score
IRP Support	9
On-Site Energy Managers	7
Behavioral Demand Response	7
Strategic Energy Management	6
In-House Savings	5
✓ Market Transformation	5
Commercial Customer Market Characteristics Study	5
Contractor Advisory Panel	5
Use of Evaluation Research to Improve Programs	4
Emerging Tech Field Demonstration	3
C&I Gas Research	3
Measurement & Verification 2.0	3
C&I Energy Efficiency Auction	3
✓ Residential Building Code Enhancement Study	2

Next Steps

- DTE and Consumers will work with the EO Collaborative to develop a schedule of presentations for 2016

Appendix

Existing Research Conducted by DTE Energy

- Emerging Tech Field Demonstration

  Review lessons learned from C&I HVAC field demonstrations (in a region similar to DTE) to collect information on costs, performance, and field experience.

- In-House Savings

  Explore how in-house (at generation or line loss reduction) can be claimed toward energy efficiency, find best practices of this occurring.

- Strategic Energy Management

  Conduct a review of Strategic Energy Management (SEM) programs documenting best practices and identifying critical success factors. SEM is a focused process to work in-depth with large customers to plan and identify EE savings over a long-term cycle. SEM integrates capital upgrades, process improvements, maintenance, and employee engagement to yield deeper, more sustainable savings.

- Market Transformation

  Design and research an approach for claiming whole market savings. Identify potential new market transformation measures (e.g., Wi-Fi enabled thermostats, LEDs, Heat Pump Water Heaters, etc.) that are best candidates for market transformation.

- C&I Gas Research

  Research to identify natural gas energy efficiency measures that can add to commercial and industrial energy efficiency program portfolio to replace existing measures phasing out in 2016 and beyond.

- IRP Support

  Benchmarking review of how other utilities are incorporating energy efficiency into their IRP processes. Determine where utilities included energy efficiency as a resource and how it has worked.

Existing Research Conducted by DTE Energy

- On-Site Energy Managers

  DTE Energy has certified energy managers that work with its largest customers. Their purpose is to help the customer in becoming energy efficient and help manage demand. Research explores and defines how energy savings can be claimed and how costs should be accounted.

- ✓ Residential Building Code Enhancement Study

  Research seeks to answer whether or not there is sufficient savings opportunity for DTE Energy and Consumers Energy to run a building energy codes support program.

- Measurement & Verification 2.0

  DTE's AMI network may provide an opportunity to derive more value from residential energy efficiency programs by obtaining more timely and more granular estimated impacts from advanced evaluation approaches, including packaged software tools and custom econometric analysis. The objective of the M&V 2.0 research is to evaluate these approaches, relative to traditional impact evaluation techniques.

- C&I Energy Efficiency Auction

  Energy Efficiency Auctions, also known as reverse auctions, are designed to reduce the cost of delivering electric and gas savings and identify the customers' minimum acceptable incentive amount. Research aims to understand how Energy Efficiency Auctions work, how they are managed and evaluated, and whether they are cost effective.

Existing Research Conducted by Consumers Energy

- Use of Evaluation Research to Improve Programs

  Consumers Energy makes ongoing efforts to translate evaluation results to measureable program improvements. This would include presentation of examples of from both the residential and commercial research-driven program improvements.

- Commercial Customer Market Characteristics Study

  The objective of this study was to assess the prevalence of energy efficient equipment in commercial facilities in CE service territory. As part of the research, 203 on-site visits were completed to inventory HVAC equipment, lighting, and other equipment along with building characteristics and future capital purchase plans.

- Contractor Advisory Panel

  Consumers Energy had created a Contractor Advisory Panel (CAP) of trade allies participating in their contractor facing programs. The 100+ CAP members are asked to complete an on-line survey every 6-8 weeks with questions about incentives, customer engagement, training, and other program topics. CAP members may periodically be asked to participate in other research activities including focus groups and in-depth interviews.

- Behavioral Demand Response

  This study looks at the demand and energy savings impacts from a Behavioral Demand Response (BDR) pilot in which customers were notified of peak demand events, asked to reduce energy consumption during peak hours, and provided feedback on their efforts.