LEVERAGING UTILITY DATASETS FOR PROCESS EVALUATION:

INCREASING THE VALUE OF PROCESS EVALUATION WITH DEEP DATA INSIGHTS

PRESENTED BY:
KATIE CARY, EMI CONSULTING

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WHY ADD DATA ANALYSIS INTO PROCESS EVALUATIONS?
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2,149

number of C&I customers contacted through primary research efforts since 2016
WHY ADD DATA ANALYSIS INTO PROCESS EVALUATIONS?

82,626

number of total C&I participants
WHY ADD DATA ANALYSIS INTO PROCESS EVALUATIONS?

323,014

number of total C&I customers – including participants & non-participants
DATA ANALYSIS FOR PROCESS EVALUATIONS

FRAMEWORK

- Utilize rich, combined database
- Work collaboratively with program staff
- Apply best practices in visualization
- Incorporate interactive elements
- Reserve time for follow-up analyses
CASE STUDY:

INDUSTRIAL ENERGY PROGRAM
CASE STUDY: INDUSTRIAL ENERGY PROGRAM

BACKGROUND

Tailored to customers with large industrial plant operations

Intended to be a one-stop shop to meet variety of industrial needs

Provides facility walkthroughs, energy audits, leak surveys, and other services
CASE STUDY: INDUSTRIAL ENERGY PROGRAM

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PROGRAM DESIGN

EVALUATION NEEDS

• Understand which measures categories to prioritize in audits

• Understand when to expect new projects after audits are completed
CASE STUDY: INDUSTRIAL ENERGY PROGRAM
RESEARCH APPROACH

1. LINKED TO EXISTING TABLEAU DATABASE

2. SYNTHESIZED HIGH-LEVEL KEY FINDINGS

3. EXPLORED INTERACTIVE DASHBOARD
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3. EXPLORED INTERACTIVE DASHBOARD

Process recommendations were the most common suggestions. The types of recommendations given vary according to the industry of the company.
CASE STUDY: INDUSTRIAL ENERGY PROGRAM
RESEARCH APPROACH

1. LINKED TO EXISTING TABLEAU DATABASE

2. SYNTHESIZED HIGH-LEVEL KEY FINDINGS

3. EXPLOR ED INTERACTIVE DASHBOARD
Combination of traditional process evaluation and data analysis allowed for more detailed analysis of program components – both in content and in delivery.
CASE STUDY:

AGRICULTURE PROGRAM
CASE STUDY: AGRICULTURE PROGRAM

BACKGROUND

- Provides energy efficiency solutions for agriculture customers, including dairy farmers, crop growers, & greenhouses

- Includes rebates (both agriculture-specific and general business) & farm audits
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BACKGROUND

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PROGRAM DESIGN

EVALUATION NEEDS

• Understand how adequately its agriculture customers are served by contractors throughout the state, and where there were gaps in contractor coverage
CASE STUDY: AGRICULTURE PROGRAM

KEY ANALYSES

1. CUSTOMER DENSITY MAPPING

First, mapped the density of agriculture customers across the state.
2. CONTRACTOR MAPPING

Next, we mapped each contractor across the state.
3. SPIDER MAPS

Next, we created spider maps depicting the distance between a contractor’s regional headquarters and the locations of the projects they completed.
EMI Consulting had previously conducted targeted interviews with Agriculture customers & regularly included them as a stratum in participant surveys.

Previous research helped illuminate participants’ experiences with the program.
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Previous research helped illuminate participants’ experiences with the program

Filled a gap in the process analysis, which had focused on participant customers

Data analysis provided unique opportunity to answer questions related to barriers for non-participant customers and trade ally coverage
DATA ANALYSIS FOR PROCESS EVALUATION:

KEY TAKEAWAYS
CASE STUDIES: INDUSTRIAL ENERGY AND AGRICULTURE PROGRAMS
LESSONS LEARNED

KEYS TO SUCCESS

- Existing relational database and ability to quickly receive program data
- Developmental evaluation approach, with plans for an iterative research process
- Long-term partnership with client, allowing for the ability to build off past and future research
**CASE STUDIES: INDUSTRIAL ENERGY AND AGRICULTURE PROGRAMS**

**LESSONS LEARNED**

**KEYS TO SUCCESS**

- Existing relational database and ability to quickly receive program data
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**POTENTIAL IMPROVEMENTS**

- Incorporate additional early presentation of key findings, to allow for additional ideation & customization
- Integrate dashboards with live utility data to allow for continuous tracking & data manipulations
- Ensure the interactive framework is reflected in the analysis plan to allow for timely responses to new requests
LOOKING FORWARD