



C1901: C&I SECTOR-WIDE PROCESS EVALUATION KICKOFF MEETING

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Agenda

- Study Objectives and Background
- Overview of Study Activities
- Data Collection Activities
- Analysis and Reporting
- Anticipated Challenges & Solutions

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Study Objectives and Background

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Energize CT's C&I Programs

Energy Opportunities (EO)

- Umbrella offering for existing building retrofits
- Provides incentives and technical services to encourage replacement of functioning equipment with energy efficient unit
 - Includes Upstream Lighting offering

Business & Energy Sustainability (BES)

- Seeks to integrate EE into day-to-day operations
 - Business Sustainability Challenge
 - Energy Usage Assessments
- Process Reengineering for Increased Manufacturing Efficiency (PRIME)
- Retro-Commissioning/Continuous Commissioning
 - Operations & Maintenance Services

Energy Conscious Blueprint (ECB)

- Targets all commercial new construction, major renovation projects, and new equipment

Small Business Energy Advantage (SBEA)

- Turnkey solution for small businesses, including installation of EE measures and on-bill financing
 - **Not included in this evaluation**

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Study Need - Sector-Wide Evaluation

- Siloed evaluations of individual programs may overlook opportunities for improvement
- Portfolio-level study offers efficiencies by evaluating programs concurrently
- Energize CT's portfolio targets different types of projects but businesses may participate in multiple programs
- Desire to understand how suite of offerings combine to meet customers' needs and where gaps exist
- Key topics and research questions are cross-cutting
 - Decision-making around energy efficiency and drivers of/barriers to participation can affect all programs

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Background

- Past C&I process evaluations were program-specific and not cross-cutting
 - C14 - EO (2011 program year)
 - C20 - ECB (2013-2014 program years)
 - C1639 - SBEA (2013-2016 program years)
- Past studies highlighted gaps for C&I programs, including:

<ul style="list-style-type: none"> ▪ Promotion and uptake of non-lighting upgrades ▪ Awareness of financing 	<ul style="list-style-type: none"> ▪ Preferred financing terms ▪ Synergies among programs ▪ Awareness of program offerings
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Study Objectives

- The RFP identified key outcomes for this evaluation.

How to
increase...

Portfolio cost
effectiveness and
optimization of
expenditures

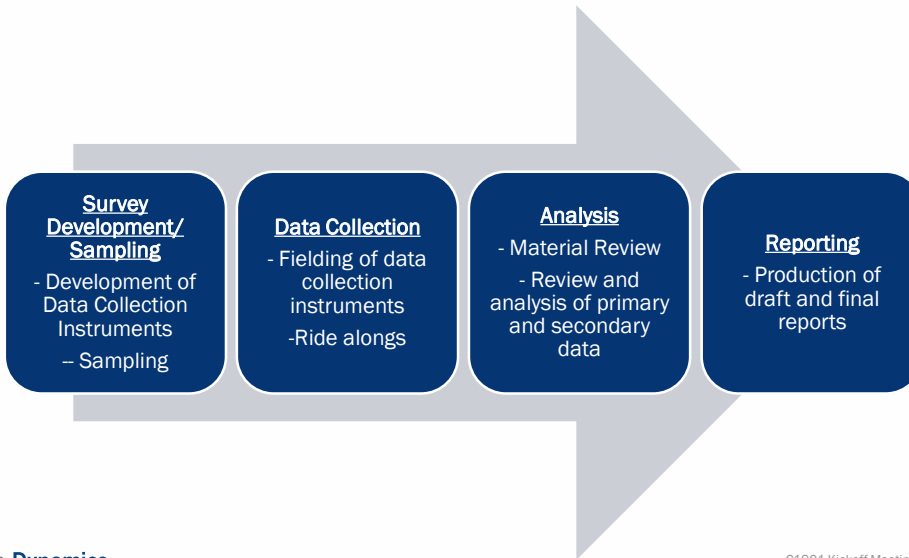
Market penetration

Depth and
comprehensiveness of
savings

Customer equity

Overview of Study Activities

High Level Tasks



Data Collection Activities

Data Collection Activities

Target Audience/ Activity	EO Program	Upstream Lighting Program	ECB Program	BES Program
Material Review	✓	✓	✓	✓
Utility Staff <i>(n=10, divided among utilities and programs)</i>	IDI	IDI	IDI	IDI
Implementers/ Service Providers <i>(n=3, census)</i>	--	IDI	--	IDI
Trade Allies <i>(n=55, stratified random sample)</i>	IDI, Ride-alongs	IDI	IDI	IDI
Distributors <i>(participating n=10, non-participating n=5, stratified random sample)</i>	--	IDI	--	--
Participants/ End Users <i>(n=350, stratified random samples by program)</i>	Survey	Survey	Survey	Survey
Non-participants <i>(n=200, stratified random sample)</i>	Survey			

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Example Research Question Map

Research Topic	Research Question	Program Documents	Participant Database	Program Staff	Implementers	Trade Ally/ Distributor Survey	Participant Survey	Non-participant Survey	Jurisdictional Scan	Other Data
Assess utilities' use of energy efficiency and customers' use of energy efficiency. How do barriers to energy efficiency affect program participation?	What financing opportunities are available to customers?	✓		✓						
	What technical assistance do programs offer customers?	✓		✓						
	What are the barriers to participating in financing?			✓		✓	✓			
	What technical assistance? How is it being addressed? How is financial assistance being addressed?					✓	✓			
Understand customer decision making around adoption of energy efficiency and program participation	What are the factors customers consider when choosing to participate in an EE program?						✓	✓		
	What are the factors customers consider when choosing to make an EE upgrade?						✓	✓		
What roles do tenants have, if any, in planning and carrying out comprehensive energy upgrades over time? How can they influence or work with building owners? How can they help contractors gain access to building owners?	What role do tenants play in providing access to properties?					✓	✓	✓		
	What role do tenants play, if any, in influencing owners to do EE upgrades?					✓	✓	✓		
	How does data get input and tracked for the EO program?	✓		✓						
Assess programs' data collection and tracking	Who inputs program data?	✓		✓						
	What data is used by program staff?	✓		✓						
	How is the program data used by staff?	✓		✓						
	Who tracks program data?	✓		✓						

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Examples of Research Topics by Target Audience

- Utility Staff Interviews
 - Program implementation
 - Data collection and tracking processes
 - Offering/uptake of financing and technical assistance
 - QA/QC processes
 - Meeting of customer needs
 - Opportunities for improvement
- Trade Ally Interviews
 - Motives/abilities to deliver comprehensive projects
 - Role in planning and carrying out comprehensive projects
 - Capability of market to deliver BES projects
- Distributors
 - Program efficacy and efficiency
 - Driving deeper/more comprehensive savings
 - Program coverage
 - Market barriers
 - Stocking and sales practices

Examples of Research Topics by Target Audience, Cont'd

- Participants/Non-Participants/End Users
 - Awareness of EE opportunities
 - Customer decision making processes
 - Equipment upgrades
 - Program participation
 - Role of tenants
 - Satisfaction with program offerings
 - Use of/barriers to financing and technical assistance
 - Adoption and persistence of energy management/O&M changes
 - Drivers of comprehensive savings

Analysis and Reporting

Analysis Overview

- Detailed program material review
- Analysis of utility tracking data
- Analysis of survey/interview responses
 - Descriptive statistics (means, frequencies, etc.)
 - Qualitative data analysis
- Analysis/review of program data from previous program years and other jurisdictions

Analysis Will Tie to Key Outcomes

- Differences among customer groups (size, SIC, utility, etc.)
- Review of utilities' and contractors' outreach and offerings related to financing and technical assistance
- Comparison of programs, including upstream lighting, to similar programs in neighboring jurisdictions



Portfolio cost effectiveness and optimization of expenditures

Depth and comprehensiveness of savings

Market penetration

Customer equity

Reporting Schedule

- Draft report – October 2020
- Final report – November 2020

Anticipated Challenges and Solutions

Common Data-Related Challenges and Solutions

- Merging multiple data sets
 - Difficulty linking participants to customer data
 - Use of fuzzy logic identifying similar names or addresses with high probability of matching
 - Manual review of data set comparisons
 - Incomplete contact info for non-participants
 - Supplement with other data provided by utility and/or third party information
 - Incomplete information on business segments
 - Use of programmed logic to match common words with segments
 - E.g., “pizza” in a business name is likely a restaurant

Other Anticipated Challenges and Solutions

- Low response rates
 - Use of industry best practices for outreach
 - Multiple modes (e.g., email and phone)
 - Multiple contact attempts
 - Email invitation followed up by reminders
 - Multiple contact attempts at different times/days for phone interviews
 - Offering of incentives to historically non-responsive populations
 - Non-participants
 - Trade allies

Thank You!



Data Collection Activities

- Material review
 - Review of contractor guidelines and training materials, participant materials, application forms, etc.
- In-Depth Interviews (IDI)
 - Primarily open-ended responses and significant use of probing and follow-up questioning to obtain depth of information
- Surveys
 - Use primarily close-ended responses but some open-ended responses
 - Online surveys will allow us to reach a diverse and representative sample of respondents
- Ride-Alongs
 - Allow observation and documentation of program implementation in field