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AGENDA

- Introductions
- Program Overview
- Objectives and Approach Overview
- Detailed Design Discussion
- Questions

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Early Retirement (ER) Overview

- ER programs target equipment that would have continued to operate until the end of its useful life without program intervention
- Relatively new in CT; impact evaluations may need to hold for post-implementation portion of scope
- The first program targets large chillers (600 tons and up). Following this will be other initiatives. These may include:
  - Possible second round with chillers
  - Larger facilities with RTUs
  - Smaller initiatives that may target the ER of refrigerators, freezers, and window air conditioning units as well as an upstream HVAC program and an HVAC modernization demonstration

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2019-2020 Evaluation Objectives

Objective	Source
1. Provide feedback on ER program design, including which gross and net parameters are relevant for ER programs	Best Practices/ER Design
2. Ensure that CT programs are accounting for dual baseline calculations where applicable as outlined in the CT PSD	Best Practices/ER Design
3. Ensure that the program is equipped to handle non-energy impact factor considerations for ER projects	Best Practices/ER Design
4. Optimize the process effectiveness and efficiency for ER programs	Best Practices/ER Design & CT ER Impact Eval
5. Use program EM&V to assess the performance of ER programs and to better inform the design of ER programs	CT ER Impact Eval

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Evaluation Overview

Best practices/ER design

- Secondary research and interviews surrounding:
  - Program design
  - Dual baseline contributions to portfolio savings and NEIs
  - Sources of likely customers
- Analysis of the CT portfolio data
  - Examination of the current data and confirming appropriate use of dual baselines
  - Provide recommendations based on that analysis
- **Interim Deliverable** – Memo documenting findings and recommendations

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Evaluation Overview Cont.

CT ER Impact Evaluation *–these activities will be timed based on progress of pilot programs*

- Sample design for the large C&I initiative(s) as well as smaller initiatives
- Interviews of participants
- Confirm the appropriateness of the first-year and lifetime savings
- Review of program eligibility requirements and any benefit-cost ratio (BCR) screening

Final Deliverable – Full project report documenting updated impact factors (realization rates) and program improvement recommendations

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Design Discussion – Best Practices/ER Program Design

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Best Practices Research

1. **Lit review of ER programs across North America, focused on:**
   - Program design
   - Dual baseline treatment
   - NTG and NEIs
2. **Interviews of:**
   - Multiple ER program managers
   - Trade allies
3. **Analyze program data:**
   - Best practices, treatments and implications of dual baseline methods.
   - May schedule and conduct additional interviews with utility staff

Interim Deliverable: Summer 2020, memo will summarize:

- Best practices from other jurisdictions relevant to CT programs (including key data)
- Key new evaluation impact factors for this dual baseline framework, or how single baseline parameters can be modified.
- Pros and cons of implementing dual baseline calculations, where and how they are currently being utilized, and recommendations based on that analysis.

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Expected First Data Request

Data requested for best practices/ER program design research will include but is not limited to a reporting database at the measure group level that includes detailed measure level savings (kWh and therms), first year savings, and life of measure.

- Traditional program tracking data including measures, savings, classification (lost opportunity, etc.) and similar data
- Will follow data request procedures

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Design Discussion – Conduct Evaluation of CT ER Programs

Starts after sufficient participation in CT ER programs has been reached.

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Impact Eval of ER Program(s)

- This work will cover large C&I programs as well as smaller initiatives
- To date a chiller program has been released that targets chillers of at least 600 tons
- Build on the information gathered in ER research to determine the best approach to collecting data and performing impact evaluation activities
  1. **Develop sampling strategy -** Will outline in detail how samples will be calculated and drawn. The quantities and timing will be fine-tuned based on actual participation.
  2. **Desk reviews –** Collect program information, review and confirm calculations, and review project materials addressing the appropriate baseline treatments.
  3. **Customer interviews -** For each desk review performed, ERS will also reach out to the customer to discuss key project information (existing equipment parameters).

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Expected Data Requests for Impact Evaluation Work

- Program level tracking data for each program being evaluated. First program released is the large chiller program
- Project files for projects selected in the sample. Examples of the requested files may include but will not be limited to:
  - Project application, savings calculations, individual site reports, photos, M&V data if applicable, project invoices
  - Possibly billing data if determined it would be valuable for any of the individual programs
  - Variations will apply to smaller res programs
  - Will follow data request procedures

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Analysis and Reporting

- Aggregate analyses for ER programs
- A portion of data collected will be from interviews, will contain a mix of qualitative and quantitative responses
- CT-specific responses and data will be compared to the findings from the secondary research

Final Deliverable: Timing depends on program participation. Report with quantified results:

- Savings realization rates
- NEI impact factors
- Programs ability to expedite the retirement of equipment

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2019-2020 Evaluation Objectives

Objective	Source
1. Provide feedback on ER program design, including which gross and net parameters are relevant for ER programs	From lit review and interviews
2. Ensure that CT programs are accounting for dual baseline calculations where applicable as outlined in the CT PSD	From program data analysis
3. Ensure that the program is equipped to handle non-energy impact factor considerations for ER projects	From lit review and data analysis
4. Optimize the process effectiveness and efficiency for ER programs	From interviews and impact evaluation
5. Use program EM&V to assess the performance of ER programs and to better inform the design of ER programs	From impact evaluation

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QUESTIONS?
THANK YOU

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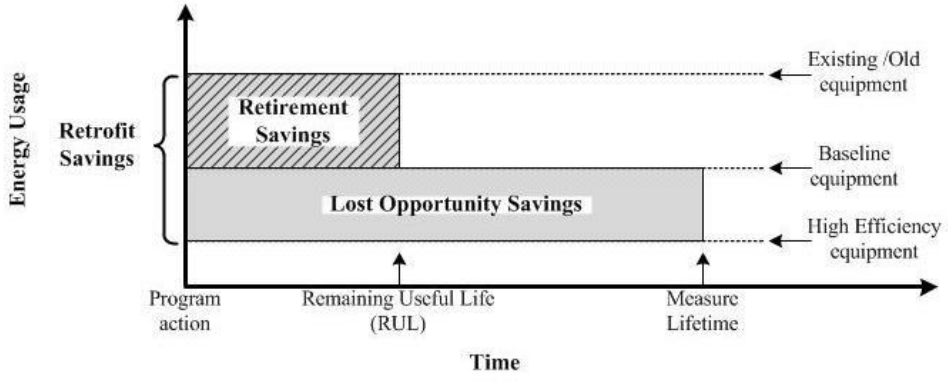
DUAL BASELINE



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