R2213 Delivered Fuel Savings Impacts – Methods and Attribution

Study Kickoff Meeting

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NMR Group, Inc.

Objectives

Identify and document best practices and methods for estimating savings for delivered fuels

Develop methods or algorithms suitable for integration into vendor / audit tools that estimate delivered fuel savings

Produce results that can inform fuel switching, incentives policy changes, or GHG policies or associated metrics in Connecticut

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Background

Unlike electricity and natural gas, no consistent energy consumption data exist for delivered fuels.

Current practice is to use / convert CT-specific natural gas savings (in Btus) estimates to delivered fuel units (e.g., gallons).

The study will largely be a secondary data effort. It will build on R91 Impact Evaluation Best Practices Study.

The study review information from other states on similar programs or policies, or within-CT information, or emerging technologies in measuring and monitoring delivered fuel use to help identify best practices

Background

House Heating Fuels in Connecticut

Fuel	% Households (ACS)*	% Households (RECS)**
Fuel oil or kerosene	37%	39%
Natural gas	35%	35%
Electricity	18%	21%
Propane	6%	4%
Other	4%	1%
Total	**100%**	**100%**

*Source: **2021 ACS 1-Year Data Profiles**

Source: **2020 Residential Energy Consumption Survey

Tasks

1.Literature Review

- Current CT Practices
- Impact Evaluation Literature
- TRMs

2. Subject Matter Expert Interviews

- Identify SMEs
- Interview up to 10 experts

3. Analysis

- Threshold analysis
- Inputs for vendor / audit tool
- GHG Impcts

Literature Review

Review current Connecticut practices

- Past impact evaluations in Connecticut involving weatherization and heap pump measures that estimate delivered fuel savings
- Inputs and algorithms currently used by audit software in Connecticut to estimate delivered fuel savings

Review impact evaluation literature

- Impact evaluations form other jurisdictions containing delivered fuel impact analysis
- Widely used and authoritative evaluation protocols and manuals on impact evaluation
  - International Performance Measurement and Verification Protocol (IPMVP)
  - Uniform Methods Project (UMP) Protocols

2.3. Review Technical Reference Manuals

- Five TRMs from the northeast region (Maine, Vermont, Massachusetts, and New York TRMs, as well as the CT PSD)
  - Identify key algorithms, inputs, and assumptions
  - Develop acceptable and best practices in the treatment of delivered fuel savings in ex-ante savings estimation
  - Document any differences across jurisdictions

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SME Interviews

Conduct interviews with up to ten subject matter experts* aiming to:

Gather/Confirm

- Expert perspectives on key issues, practices, and challenges
- Key findings from literature review

Identify

- Gaps and/or additional literature to review
- Emerging methods and practices

Document

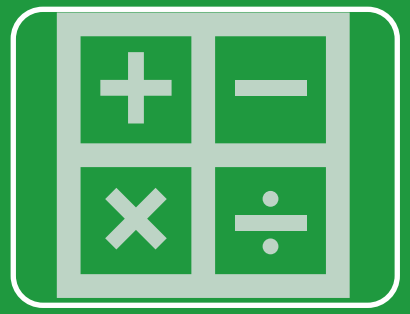
- Lessons learned
- Current best practices

*Consisting of utility personnel, public service employees, and evaluation experts involved in TRM development and impact evaluation

Analysis

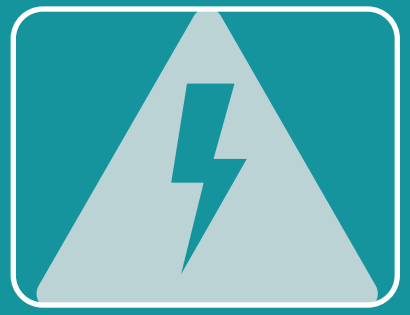
Threshold analysis

- NMR will assess how changes to savings assumptions or calculation practices alter the delivered fuel savings estimates based on current Connecticut approaches



Inputs for vendor / audit tool

- NMR will develop methods, values, or algorithms suitable for integration in Connecticut-relevant vendor / audit tools for estimation of ex ante delivered fuel savings from weatherization measures and heat pumps displacing delivered fuel-fired systems



GHG impacts

- NMR will identify emissions factors and develop methods to most accurately estimate GHG reduction impacts associated with delivered fuel savings and electricity consumption of heat pumps

Timeline

Task	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Planning & Literature Review								
Subject Matter Expert Interviews								
Analysis & Reporting								

Budget

Task	Budget
Planning & Literature Review	$39,800
Subject Matter Expert Interviews	$18,700
Analysis & Reporting	$66,500
Total	**$125,000**

Thank You

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