

R2209/R2215 RNC NTG and Impact Evaluation

Kickoff Meeting

Shirley Pon and Zack Tyler

Dec. 14, 2022

NMR
Group, Inc.

Objectives

1

Determine NTG values for the RNC market.

2

Determine the market effects of code compliance activities.

This study will...

- Allow the Companies to understand the program's net impacts on new home construction in CT from 2019-2021
- Use a Delphi approach
 - an interactive and iterative process that relies on a panel of experts to develop a group judgment via multiple rounds of questions
- Use program data and information from the R1968 RNC baseline study to show real-world measure-level efficiency values vs estimated measure-level values in the *absence* of the Companies' RNC efforts

And incorporate the new electric-only program design to...

- Provide insight on builders' reactions and expected changes due to new program design (e.g., optimal incentives and design structure)
- Forecast NTG for new home construction in CT from 2023-2025

Tasks

Development and Fielding

- Round 1: Delphi panel estimates using Round 1 instrument and evidence memorandum
- Builder in-depth interviews
- Round 2: Delphi panel forecasts using information on the new electric-only program design

Modeling and Retrospective Analysis

- Retrospective net savings
- Comparison of net savings to program reported savings to estimate free-ridership, spillover, and an overall NTG ratio

Prospective Analysis

- NTG ratios for SF, MF, and the overall RNC market internally estimated from panelist forecasts

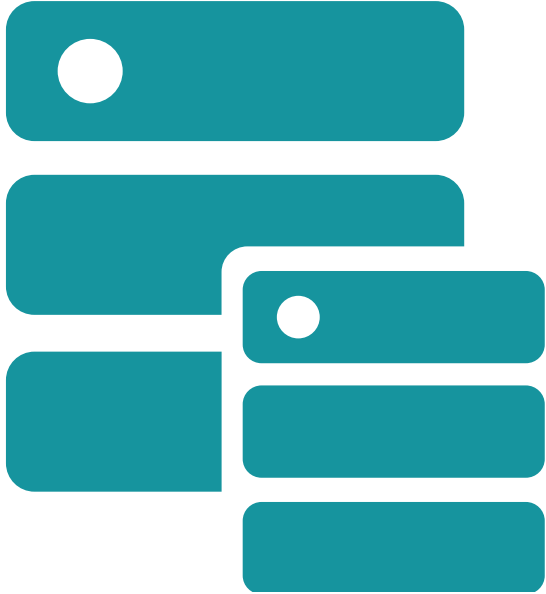
Round 1 Instrument development

Measure efficiency values from R1968 RNC baseline study analysis incorporated into instrument for program and non-program homes

Air infiltration	Lighting	Windows	Building shell	HVAC systems	Water heating systems
------------------	----------	---------	----------------	--------------	-----------------------



Efficiency values from these measures feed into the UDRH



Delphi Panel Round 1

- Provide panelists with background information
- Host anonymous webinar to walk panelists through the instrument and memo.
- Panelists to provide insight on
 - **Estimates of what would have happened in the absence of the program**
 - **High-level potential impact of proposed all-electric offering on the market**

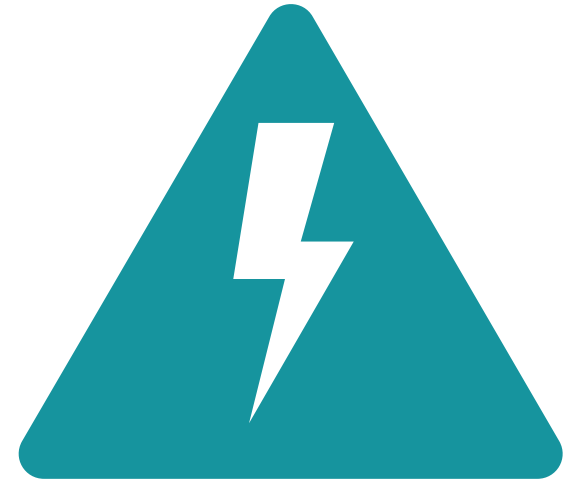


Builder IDIs

- 15 IDIs
- Builders to provide insight on the:
 - ✓ Likelihood of building all-electric homes
 - ✓ Impact of the new electric-only program design on the RNC market

Delphi Panel Round 2

- Panelists to provide feedback on new electric-only program design and forecast:
 - ✓ Future program penetration
 - ✓ New construction activity
 - ✓ Program impacts on builder practices



Modeling & Retrospective Analysis

Use panelists' estimations of measure-level efficiencies for program and non-program homes had the Companies' RNC efforts ceased on January 1, 2019.

to estimate...

- Net savings
- NTG ratios

for...

- Single family
- Low-rise multifamily
- Overall RNC market

This methodology is consistent with the R1707 study

Prospective Analysis

Use panelists'
forecast of...

- New construction activity
- Program penetration
- Program impacts

to forecast...

- NTG ratios

for...

- Single family
- Low-rise multifamily
- Overall RNC market

This methodology is consistent with the R1707 study

Budget

Task	Budget
Planning, Delphi Round 1, & Retrospective Analysis	\$110,000
Builder IDI & Delphi Round 2	\$60,000
Prospective Analysis & Reporting	\$65,000
Phase 1 Total	\$235,000
Phase 2 – Impact Evaluation (<i>kickoff at a later date</i>)	\$365,000
R2209/R2215 Total:	\$600,000

Thank You

Shirley Pon

✉ spon@nmrgroupinc.com

☎ (617) 544-2032

A photograph of a brick wall with a sign. The sign is rectangular and mounted on the wall. It features the letters 'NMR' in large, green, 3D block letters. Below 'NMR', the words 'Group, Inc.' are written in a smaller, dark grey, sans-serif font. The sign has a thin gold border. The background shows a blurred window and the texture of the red brick wall.

NMR

Group, Inc.