



Connecticut R1959 Single-Family Renovations & Additions Potential Analysis

Kickoff Presentation

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NMR Group, Inc.

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Study Objectives

- Characterize size and scope of market in CT
- Estimate savings potential
- Identify opportunities for fuel optimization
- Identify and gather baseline data for market effects indicators
- Conduct process evaluation of pilot program
- **Recommendations for program planning, PSD (if any)**



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Tasks

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1. Kickoff
2. Census review and permit-based market size estimate
3. Process evaluation of pilot (in-depth interviews)
4. Contractor web survey
5. Homeowner web survey
6. Potential savings assessment
7. Reporting and technical presentation

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Task 2 – Market Size Estimate

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- Apply MA ratios to CT Census data
- MA ratios based on:
 - Thousands of 2017 online building permits
 - 56 municipalities
 - Regression analysis to estimate other municipalities
 - R&A permits estimated based on number of single-family homes, median income, and population density
 - Permit counts adjusted based on non-permitted project percentages to develop market size estimate

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Task 3 – Pilot Process Evaluation

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- Program material and data review
- In-depth interviews
 - n=10
 - Key program staff
 - Participating contractors (requires data request)
 - Participating HERS raters (requires data request)
 - \$50 for contractors and HERS raters
- Research questions
 - What challenges have been associated with the pilot?
 - What are the current incentives?
 - What level of savings have projects generated?
 - How satisfied are participants with the pilot?
 - What barriers have participants encountered?
 - Do contractors anticipate carrying over program practices?
 - What measures are being affected and what are the installed efficiencies?

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Task 4 – Contractor Web Survey

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- CT contractors and handymen
 - n=100
 - Sample sourced from web scraping
 - Sample by county
 - \$50 gift card
 - 20 to 30-minute survey
- Research questions
 - How many R&A projects do companies work on per year?
 - What are the energy-related elements of R&As?
 - Who are the key decision makers that affect a project's efficiency?
 - What proportion of R&A market actors prioritize EE?
 - How often is new mechanical equipment installed during R&As?
 - What type of equipment is installed?
 - What type of incentive structure would be most useful?
 - Would working with HERS raters/HES vendors present a barrier to participation?

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Task 5 – Homeowner Web Survey



- Single-family homeowners
 - n=100
 - Engaged in renovation or addition in past three years
 - Sample by county, using Qualtrics panel data
 - \$25 gift card
 - 20-minute survey
- Research questions
 - Vary slightly from contractor survey
 - Focus more on project scope

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Task 6 – Potential Savings Asses.



- Build prototype energy models
 - Reasonable mix of sizes, scopes, and fuel types
 - Estimate savings from increasing efficiency of projects
 - Possibly consider fuel optimization
 - Possibly use standard engineering algorithms

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Task 7 – Reporting and Presentation



- Standard reporting procedures
 - Draft to EA Team in May 2020
 - Draft for public review in June 2020
 - Report finalization in July 2020
 - Technical presentation in July 2020

Timeline



Deliverables	2019		2020						
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July
Task 1: Kickoff meeting, presentation									
Task 1: Prepare, finalize plan									
Task 2: Estimate permit-based market size									
Task 3: Deliver draft process evaluation interview guides									
Task 3: Finalize draft process evaluation interview guides									
Task 3: Conduct process evaluation interviews									
Task 4: Deliver draft contractor survey instrument									
Task 4: Finalize contractor survey instrument									
Task 4: Program and field contractor survey									
Task 5: Deliver draft homeowner survey									
Task 5: Finalize homeowner survey instrument									
Task 5: Program and field homeowner survey									
Task 6: Model potential savings									
Task 7: Analyze data and draft report									
Task 7: Submit draft report to EA team								E	
Task 7: Send draft report for public review									D
Task 7: Finalize report									F
Task 7: Hold final presentation									

E = Submit to EA Team; D = Draft Report for Public Review; F = Final Report

Q & A



Questions?