

June 30, 2022

Participation & Multifamily Census Study

Rhode Island



Study Goals



Analyze trends in residential participation in energy efficiency programs between 2016 and 2020



Inform Nonparticipant Study by identifying nonparticipating customers and modeling propensity scores



Create a database of multifamily properties (5+ units) in Rhode Island



About Propensity Scores

- Propensity scores represent **likelihood of future participation**
 - Scores are based on features nonparticipants share with participants (i.e., the higher the score, the more similar the nonparticipant is to past participants)
 - Our team used random forest modeling to develop our scores
- The propensity scores can be used to:
 - Target customers that are most likely to participate (**high scores**)
 - Understand which customers are unlikely to participate in the way the program currently exists (**low scores**)



Nonparticipant Propensity Results



Score	Nonparticipating Electric and Gas Accounts	Implication
Low scores (0.0–0.3) are associated with accounts that have features less commonly observed in participants.	178,762 (56%)	More than half of nonparticipating accounts look very different than past participants and are the least likely to participate in programs as designed, marketed, and delivered today.
Middle scores (0.3–0.6) are assigned to accounts that are equally <u>similar to</u> participants and nonparticipants.	78,322 (25%)	The reasons for nonparticipation are likely due to factors for which we do not have data.
High Scores (0.6–1.0) are most like the observed participants.	60,602 (19%)	Less than one-fifth of nonparticipating accounts are more likely to participate in a current program; these accounts may need more time or may face fewer barriers to participation.

Lasting Resource

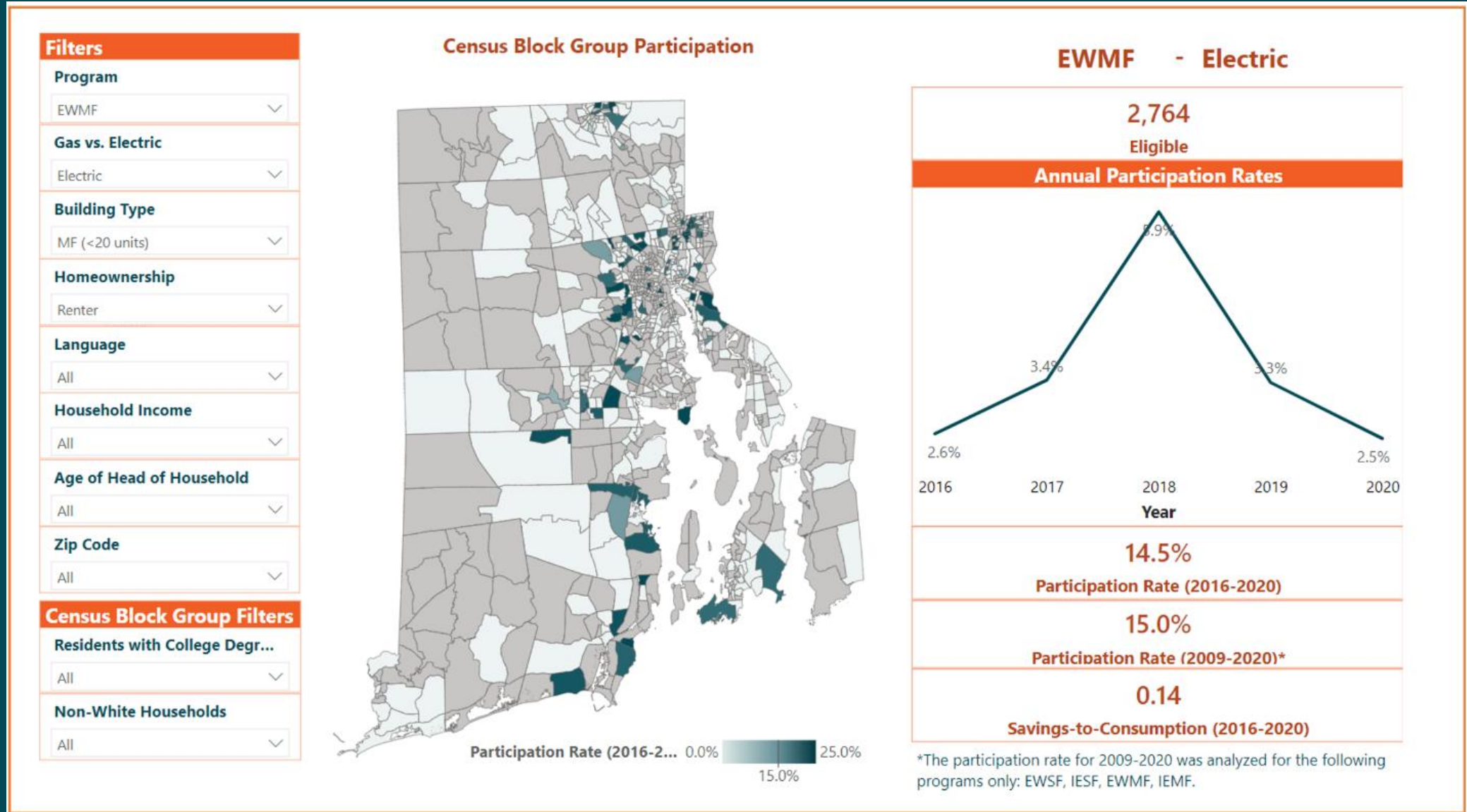
Our team populated a **PowerBI database** with study data; designed as a dynamic, internal resource (includes customer PII) for RI Energy planning and outreach efforts. Allows RI Energy staff to filter data by **program, account type**, and **household/demographic characteristics**

Example use cases:

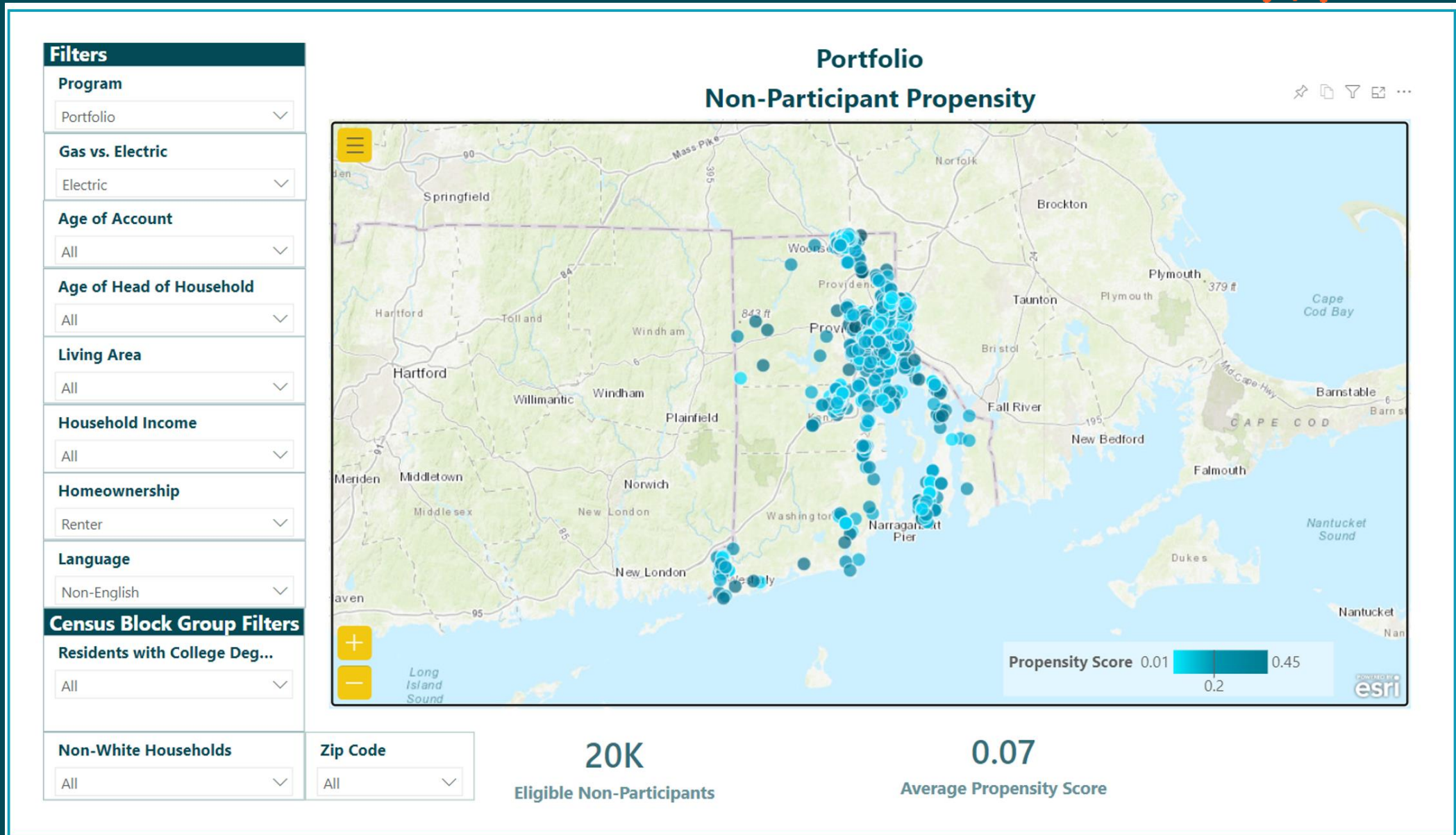
- How many renters living in smaller multi-family buildings (less than 20 units) have participated in the EWMF program?
- Which census block groups do non-English speaking customers with the highest propensity scores live? Which block groups have customers with the lowest propensity?



Dynamic (Reporting) Dashboard



Dynamic (Targeting) Dashboard



Questions?

6/30/2022

NONPARTICIPANT MARKET BARRIERS STUDY

(RI-21-RX-NPSTUDY)

ILLUME



AGENDA

INTRODUCTION AND STUDY OVERVIEW

PARTICIPATION BARRIERS

POTENTIAL SOLUTIONS

QUESTIONS/DISCUSSION





Study Overview



Overall Study Goals and Objectives

This study provides in-depth research to characterize customers that have not participated in Rhode Island Energy's residential programs, assess barriers to their participation, and identify opportunities to engage them.

The objectives of this study included:

- Understanding the barriers that are preventing identified customer groups from participating in energy efficiency programs.
- Exploring messaging, new program concepts, and other possible solutions to barriers to participation.
- Identifying the common characteristics of customer groups that are not participating in energy efficiency programs or are participating at a lower rate than the general population.
- Understanding barriers, communication channels, and possible solutions for engaging landlords and property managers.



Research Activities

- › The study used a multi-pronged research approach to reach customers and address the research questions, balancing quantitative and qualitative research activities.
- › Appendix A of the report includes a detailed methodology.

- › Note that because the utility name was *National Grid* at the time the study was conducted, we use *National Grid* for the remainder of the presentation.

1,462 Surveys
with customers

24 Interviews
with customers

18 Interviews with
community organizations

11 Interviews or surveys of
landlords and property
managers

7 Interviews with National Grid
implementation and marketing
teams



Survey Methodology

Web survey and recruitment materials:



Various Touchpoints:

- Invitation Postcards and Emails
- Reminder Postcards and Emails
- Mail Surveys for those without an email address

Incentive:



Responses by mode:



WEB SURVEYS

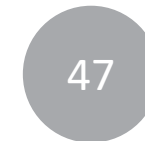


MAIL SURVEYS

Responses by language:*



ENGLISH



SPANISH



PORTUGUESE

*While 17% of survey respondents indicated that they spoke a language other than English, 95% completed the survey in English.





Key Findings



Participation Barriers

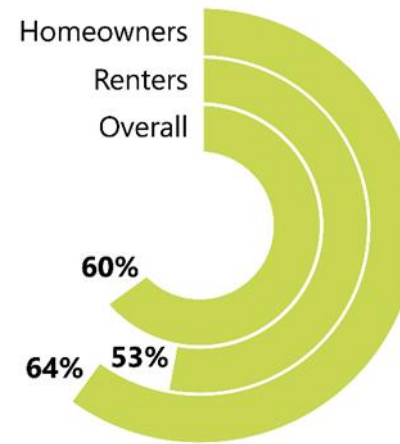


Participation Barriers

Nearly 40% of survey respondents were **not aware** that National Grid offers energy efficiency programs and many customers who were aware of the offerings did not **understand** who the programs are for, why National Grid offers them, how to participate, or what benefits to expect.

While customers **trust** National Grid as a source of information, they may not **trust** that the programs and associated benefits are legitimate.

Aware of Programs



"I don't want to use resources that someone else may need and don't want to inquire for programs that could be for someone else."

– Bari, homeowner



Participation Barriers

Customers have many different living situations, home conditions, and other priorities that interfere with their ability to **prioritize** energy efficiency.

Even with rebates, upfront **costs**, are a barrier to participation for both customers and landlords/property managers.

"Right now I feel like I'm giving [National Grid] so much money, and why am I not warm?"

– Nancy, homeowner

"When I bought the appliances, I think [Lowe's] had a financing thing but I just would rather pay it all then, so I don't have to worry about another payment."

-Clayton, homeowner



Participation Barriers

"[It] seemed like too time-consuming a process and complicated [to apply for rebates]."

– Landlord

"I wouldn't divulge income and I wouldn't divulge some of those personal questions."

– Lenny, renter

"National Grid needs to ensure that we have contractors that resemble and represent the population and offer multiple languages so there are no barriers there. Language is a potential barrier because people don't feel comfortable with a language barrier."

– Housing provider community organization

Program requirements, or the perceptions of what they might be, along with expectations for how the program works and the benefits it provides can deter customers from participating.

Language, communication, culture, and experience affect someone's ability to participate in National Grid programs.



Participation Barriers

Being a renter or landlord/property manager is a deterrent to participating in EE programs.

Renters:

- 1) Noted they have fewer options for participation
- 2) Do not want to attract the attention of their landlords
- 3) Fear being evicted or priced out of their homes

Landlords/Property Managers:

- 1) Are busy and difficult to reach
- 2) Often have limited time frames in which to make equipment upgrades or energy efficiency improvements
- 3) Have limited time for planning upgrades



Potential Solutions

Themes for Addressing Participation Barriers

- 1) Understanding
- 2) Transparency
- 3) Access
- 4) Value
- 5) Autonomy



Understanding

Residential customers, landlords, and property managers we spoke with did not have a clear expectation of what program participation would look like. They wanted to better understand who programs are for, how they work, and what benefits they provide.

Highlighted Recommendation:

Use testimonials to illustrate who programs are for, how they work, and to help make energy savings more tangible.

“I think the whole industry is not that well understood by the consumer, including myself, so not able to understand the full implications. Not that they’re lying, but that’s the way the consumer feels.”

– Nancy, homeowner



Transparency

Many customers were not clear on what making efficient improvements to their homes or buildings really meant, or how it could benefit them and National Grid. Their bills were already high and difficult to understand, and they did not know why National Grid wants to help them save energy and money. They were also skeptical of being able to see the impacts of making energy efficient improvements on their bills.

Highlighted Recommendation:

Include information on how National Grid programs are funded by customers in program materials to help explain why National Grid has energy saving programs and how they benefit from customers saving energy.

“What National Grid should do is explain why National Grid wants me to be energy efficient because to me it's like well, doesn't National Grid just want me to spend more money on gas? Doesn't National Grid want me to be inefficient? So maybe it's on National Grid to explain why they support these programs. That would be interesting and helpful.”

– Alli, renter



Access

“Outreach needs to be culturally relevant for different communities, and there needs to be an analysis if the programs are actually accessible.”

-State-level policy advocate

Customers want easily accessible, detailed program information in their preferred language that they can refer to on their own time. In addition, customers need access to participation options that meet their needs.

Highlighted Recommendation:

Diversify language, content, and channel of messaging to ensure messaging is accessible, culturally relevant, and available on the channels that community members are using.



Value

"I do compost and I pay a company to do that, but when it comes to electricity and stuff like that, definitely it's all for the money."

– Mick, renter

"I like a lot of information about how to save money. I love saving money."

– Selena, homeowner

"[Health benefits are] probably more important than comfort, but still not as important as saving money and using energy that I feel ethically good about."

– Alli, renter

Customers want to know that participating in a program will be worth the time it takes them to fill out an application and/or take part in a home or site visit and to receive their rebate and/or recommendations.

Highlighted Recommendations:

Tie program services to everyday needs and value to customers.

Continue to promote financial savings associated with making improvements.



Autonomy

Customers we spoke with wanted to make a decision on their own terms, without necessarily having to talk to someone or put their trust in someone new.

Highlighted Recommendation:

Educate community organizations that serve key groups of interest on National Grid's energy efficiency offerings so that they can in turn recommend them to their clients to help address high bills, comfort, or other issues their clients are experiencing that can be addressed through energy efficiency improvements.

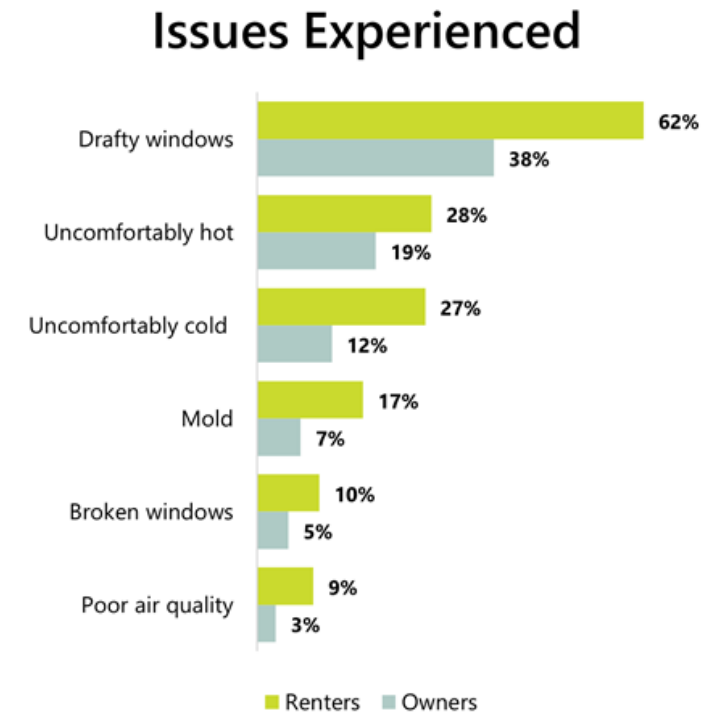
8 of the **18** community organizations we interviewed knew National Grid offered energy efficiency programs.



Potential Solutions for Landlords and Renters

Highlighted Recommendations:

- Developing a fast-track path for landlords to access rebates during emergency replacements or limited time periods for making improvements.
- Educating landlords and renters on the non-energy benefits of energy efficiency improvements and use these benefits to help motivate improvements.
- Finding ways to engage renters in energy efficiency by educating them on tenant rights, considering measures renters could take with them to a future home or do themselves like DIY kits for window sealing, or supporting policy changes that grant renters the right to make efficiency improvements.



Questions?



Appendix



Methodology

Survey Sampling Details

Sample Strata	Sample Frame	% of Sample Frame	Survey Sample	% of Sample	Number of Completed Surveys	% of Completed Surveys	Response Rate
Bottom 10% Propensity Score	15,122	8%	7,250	50%	696	48%	10%
Owner	4,688	3%	2,850	20%	363	25%	13%
Renter	10,434	6%	4,400	30%	333	23%	8%
Top 90% Propensity Score	166,630	92%	7,250	50%	766	52%	11%
Owner	142,483	78%	4,400	30%	553	38%	13%
Renter	24,147	13%	2,850	20%	213	15%	7%
Total	181,752	100%	14,500	100%	1,462	100%	10%



Select Survey Findings

Differences between Homeowners and Renters

Home and Demographic Characteristics



Homeowners are more likely to...

- Live in a single-family detached home (87% vs. 12%)
- Use a central air conditioner to cool their home (34% vs. 12%)
- Use oil to heat their home (36% vs. 14%)
- Have lived in their home for more than 10 years (69% vs. 23%)
- Have at least one household member over the age of 64 (49% vs. 21%)
- Have a total household income **above** 60% of the SMI (78% vs. 35%)



Renters are more likely to...

- Live in an apartment building (83% vs. 11%)
- Use a room or window air conditioner to cool their home (77% vs. 50%)
- Use natural gas to heat their home (71% vs. 53%)
- Have lived in their home for less than 10 years (77% vs. 31%)
- Have at least one household member under the age of 18 (34% vs. 17%)
- Have a total household income **below** 60% of the SMI (65% vs. 22%)



Differences between Homeowners and Renters

Reasons for Not Participating

Homeowners

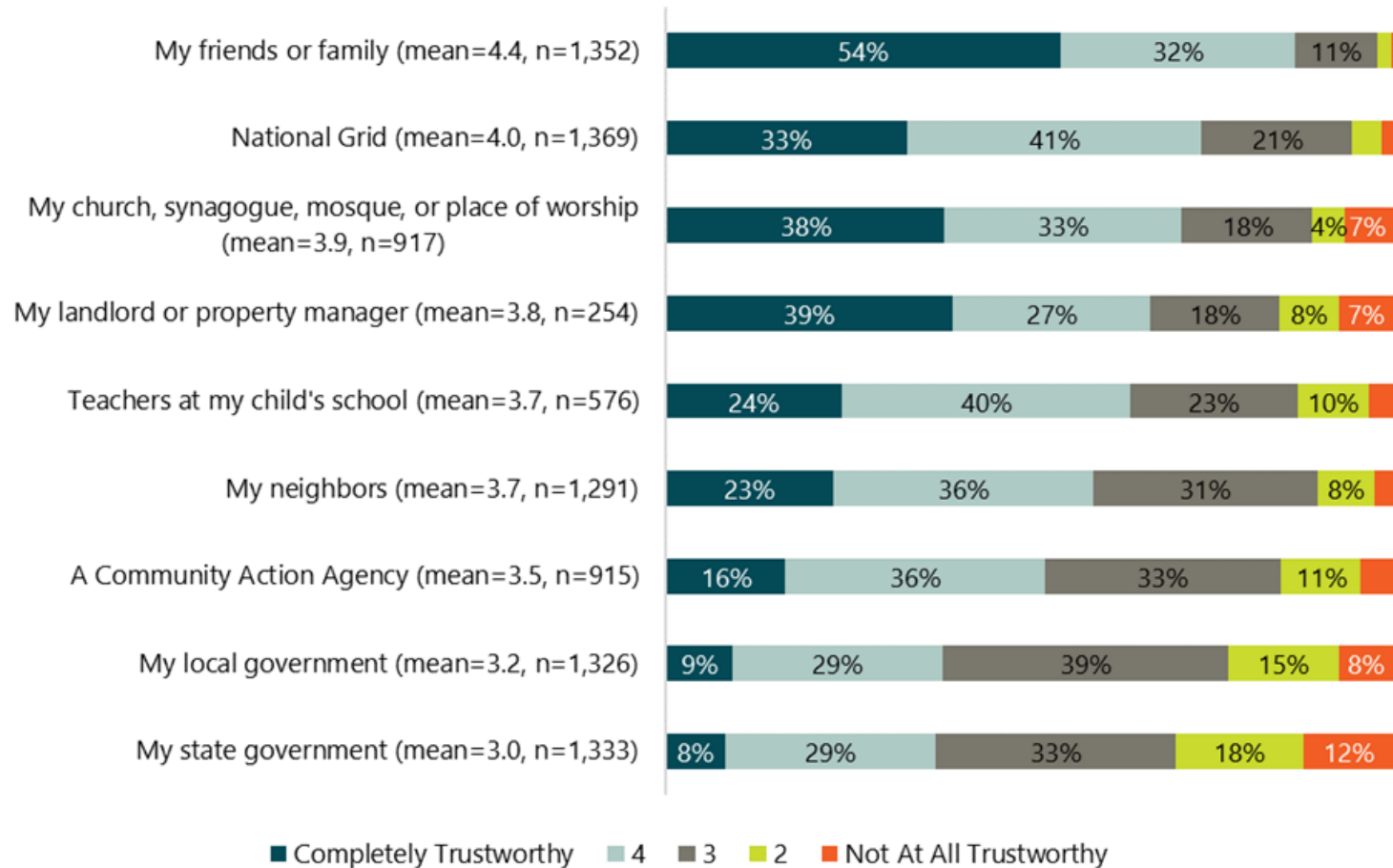
- My home was already energy efficient (26%)
- I didn't know about the programs (17%)
- I didn't have the time (16%)

Renters

- I could not get or did not want to try to get my landlord's cooperation (22%)
- I didn't have the time (16%)
- I didn't need the rebate (14%)



Trustworthiness as Source of Information



Concerns and Issues in the Home

Top Home Concerns*

- Healthiness of home (62%)
- Risk of damage to home from a weather event (62%)
- Using too much energy in home (60%)

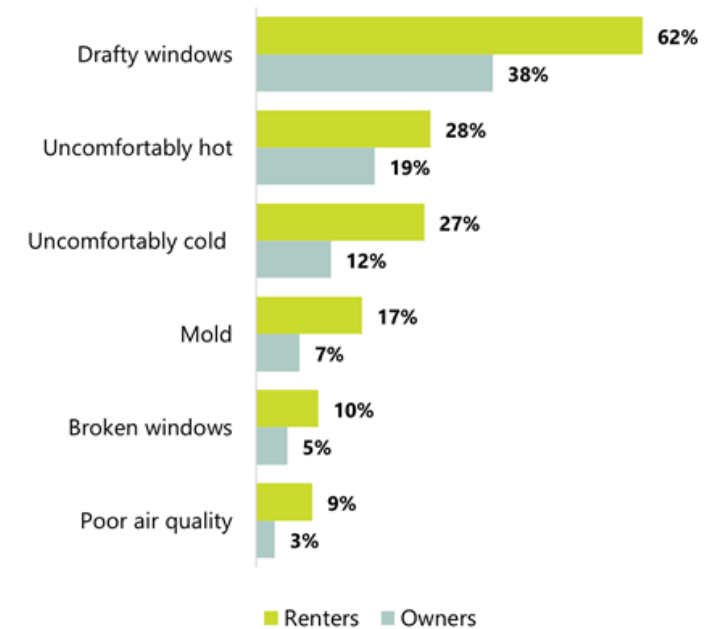
Top Home Issues

- Drafty windows (43%)
- High energy bills (38%)
- Mice, insects or other pests (26%)
- Hot or cold spots (25%)
- Moisture on windows (21%)

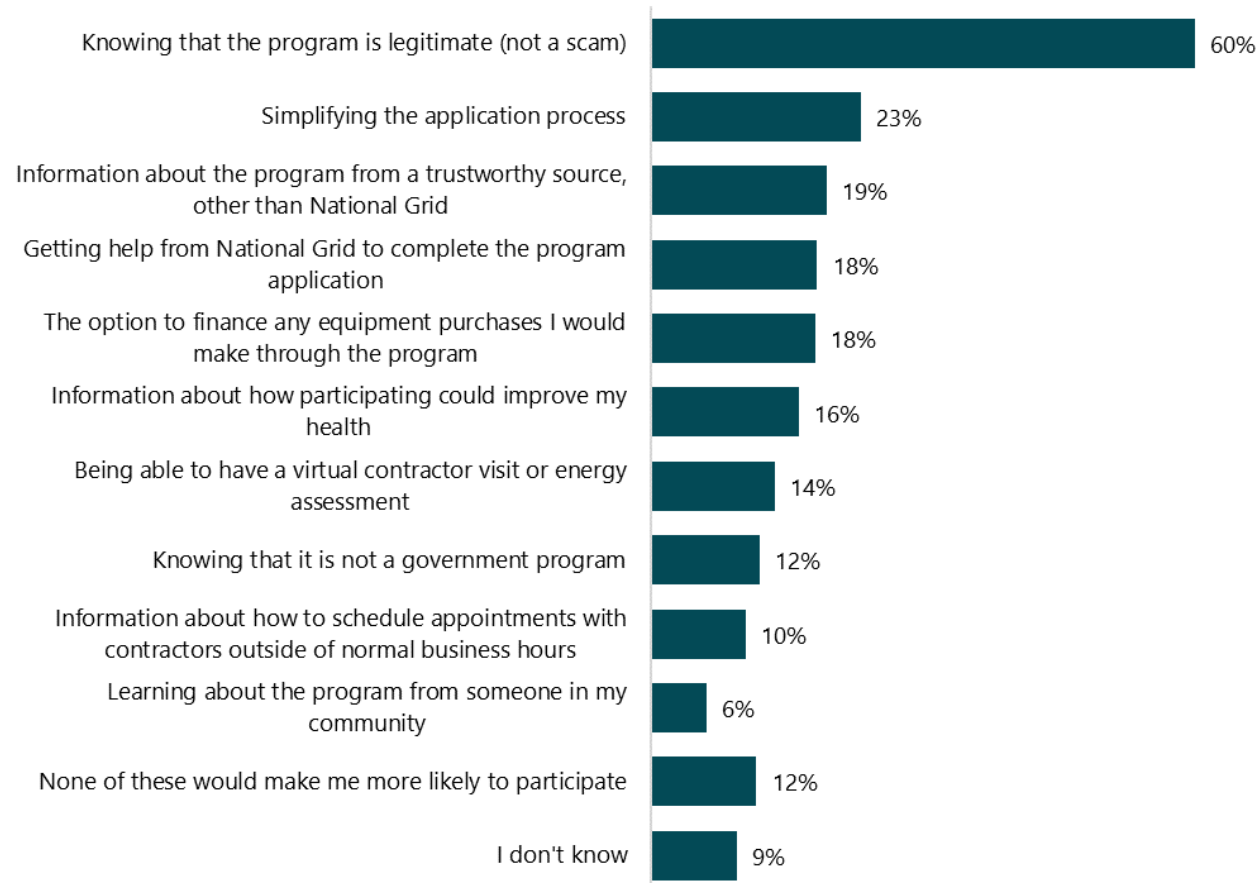
Improvements Home Will Need in the Next Two Years

- New large appliances (28%)
- New windows (23%)
- New heating or cooling equipment (22%)
- A new roof (16%)
- A new thermostat (14%)

Issues Experienced



Factors to Encourage Participation



Recommendation Summary

Recommendations

Theme	Recommendation
Understanding	Use testimonials to illustrate who programs are for, how they work, and the benefits they provide.
	Stress that National Grid programs are available to all customers.
	Notify customers of energy efficiency programs when they have higher than average energy bills or call about their high bills or comfort.
	Integrate information and education on home maintenance and improvement, with messaging about energy efficiency and National Grid Programs.
Transparency	Include information on how National Grid programs are funded by customers in program materials to help explain why National Grid has energy saving programs and how they benefit from customers saving energy.
	Make energy savings more tangible.
	Explain energy efficiency and the associated non-energy benefits.



Recommendations

Theme	Recommendation
Access	Diversify language, content, and channel of messaging to ensure messaging is accessible, culturally relevant, and available on the channels that community members are using.
	Streamline website information and organize it around how people look for information and think about their homes, which does not always align with energy efficiency program designations.
	Consider using communications like newsletters that customers can refer to when they are ready for the information.
	Consider how people with disabilities make decisions and participate in energy efficiency programs.
Value	Continue to promote financial savings associated with making energy efficient improvements.
	Tie program services to everyday needs and value to customers.
	Consider changes to design and implementation that minimize customer time and effort and combat the perception, or reality, that participating takes a lot of time and effort.



Recommendations

Theme	Recommendation
Autonomy	Educate community organizations that serve key groups of interest on National Grid's energy efficiency offerings so that they can in turn recommend them to their clients to help address high bills, comfort, or other issues.
	Establish trust by partnering with a wide range of trusted organizations and "champions" from the community.
	Make the decision to participate easier by providing a variety of options to meet differing customer needs and preferences.
Renters & Landlords	Develop a fast-track path for landlords to access rebates during emergency replacements.
	Educate landlords and renters on the non-energy benefits of energy efficiency improvements.
	Incentivize or recognize non-bill-payers for efficiency investments to help address the split incentive.
	Find ways to engage renters in energy efficiency.
	Continue to explore rental market and property management events and groups to connect with rental property decision-makers to promote National Grid programs and energy efficiency.
	Work with contractors to promote National Grid programs and rebate-eligible equipment.

