

Home Projects and Appliance Decisions Survey

Start of Block: Project Overview and Informed Consent

Q1 Project Overview and Informed Consent

You are being asked to complete a 20-minute survey conducted by the Pacific Northwest National Laboratory and funded by the Department of Energy. The survey will ask you how you make decisions about home projects involving electrical appliances, heating and cooling, windows, and building materials.

Your participation is voluntary, and you can withdraw from the survey at any time without penalty. You can choose not to respond to a particular question. No personally identifiable information will be collected, and your responses will be kept confidential and secure. You will not be paid for participating in this survey and you are not likely to benefit from participating. Some questions may make you feel uncomfortable.

Please click the following link to read the full informed consent disclosure: [Informed consent](#)

End of Block: Project Overview and Informed Consent

Start of Block: About You and Your Home

Q2 Do you own or rent your current home?

☐ Rent (1)

☐ Own (2)

End of Block: About You and Your Home

Start of Block: Homeowner Questions

Q3 How old are you?

- ☐ Under 18 years (1)
- ☐ 18 - 25 (2)
- ☐ 26 – 35 (3)
- ☐ 36 – 45 (4)
- ☐ 46 – 55 (5)
- ☐ 56 – 65 (6)
- ☐ 65 – 70 (7)
- ☐ over 70 (8)

Skip To: End of Block If How old are you? = Under 18 years

Q4 Are you a key decision maker in your household when it comes to making changes to your home including renovation, appliance purchases, maintenance, and repair?

- ☐ No (1)
- ☐ Yes (2)

Skip To: End of Block If Are you a key decision maker in your household when it comes to making changes to your home inclu... = No

Q5 Which of the following best describes your home?

- ☐ Single family detached home (1)
- ☐ Duplex, triplex, or townhouse (2)
- ☐ Condo or apartment with 4 or fewer units in building (3)
- ☐ Condo or apartment with 5 or more units in building (4)
- ☐ Mobile home, manufactured home or trailer (5)

Skip To: End of Block If Which of the following best describes your home? = Condo or apartment with 5 or more units in building

Skip To: End of Block If Which of the following best describes your home? = Mobile home, manufactured home or trailer

Q6 Do you live in this home year-round (is this your primary residence)?

- ☐ No (1)
- ☐ Yes (2)

Skip To: End of Block If Do you live in this home year-round (is this your primary residence)? = No

Q213 In which state do you currently reside?

▼ Alabama (1) ... I do not reside in the United States (53)



Q7 What is your ZIP code?

Q8 Which GENDER do you identify as?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Non-binary / third gender (3)
- ☐ Prefer to self-identify (4) _____
- ☐ Prefer not to say (5)
-

Q9 Which of the following best represents your RACE? Please indicate all responses that apply:

- ☐ White (1)
- ☐ Black or African American (3)
- ☐ American Indian or Alaskan Native (4)
- ☐ Asian (5)
- ☐ Native Hawaiian or Other Pacific Islander (9)
- ☐ Middle Eastern or North African (6)
- ☐ Prefer not to say (7)
- ☐ Other (please specify) (8) _____
-

Q201 Which of the following best represents your ETHNIC HERITAGE?

- ☐ Hispanic or Latino (2)
- ☐ Non Hispanic or Latino (6)
- ☐ Prefer not to say (7)
-

Q10 Which of the following best describes the highest level of education you have obtained?

▼ Some high school, no diploma (1) ... Prefer not to say (6)

Q11 Household composition (Please enter total number of individuals in respective age groups below, including you)

Adults (18-64) : _____ (1)

Older Adults (65 or older) : _____ (2)

Children (17 or younger) : _____ (3)

Total : _____

Q12 Which of the following best describes your 2021 household income before taxes?

▼ No Income (1) ... Prefer not to say (12)

Q13 Approximately how much do spend per month on your mortgage (inclusive of property taxes, insurance premiums and any other bundled costs)?

▼ Less than \$400 (1) ... Prefer not to say (16)

Q14 How long have you lived in your current home?

▼ Less than 1 year (1) ... 10 years or longer (5)

Q15 In what year was your home built? Your best guess is fine

▼ before 1900 (1) ... Don't know/Not sure (8)

Q16 How large is your home? Your best guess is fine

▼ 500 square feet or smaller (1) ... Don't know (8)

Q17 What is the main fuel used to HEAT your home?

- ☐ Electricity (1)
- ☐ Natural gas (2)
- ☐ Propane (3)
- ☐ Oil (4)
- ☐ Don't know (5)
- ☐ Other(please specify) (6)

Q18 What is the main fuel used for WATER HEATING in your home?

- ☐ Electricity (1)
 - ☐ Natural gas (2)
 - ☐ Propane (3)
 - ☐ Oil (4)
 - ☐ Don't know (5)
 - ☐ Other(please specify) (6)
-

Q19 On average, how much are your monthly energy expenses (e.g., electricity, natural gas, fuel oil, propane)? Please do not include water, trash service, internet, or phone. Your best guess is fine.

▼ Up to \$25 (41) ... Prefer not to say (43)

Q20 Do you have trouble paying your electric and/or gas bill every month?

- ☐ Yes, I often miss paying an electric and/or gas bill (1)
 - ☐ Yes, and I receive financial assistance (like Low-Income Home Energy Assistance Program LIHEAP, or similar) (2)
 - ☐ I can afford my energy bills but only because I use the smallest amount of energy that I can in my home or cut back expenses in other areas (3)
 - ☐ No, I don't have trouble paying my electric/gas bill (4)
 - ☐ Other(please specify) (5)
-

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Q21 How important are the following for your household, as features of the space you live in currently or would like in your future living space?

	Important (1)	Somewhat Important (2)	Not Important (3)
Space for children (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for pets (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space to entertain (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space to relax (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for family cooking and eating together (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for chef's kitchen (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for project shop (cars, wood, building) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for crafting (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for exercise (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for home office (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe space from bad weather or natural disaster (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor space for gardening or recreation (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home is easy to maintain (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yard is easy to maintain (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home reflects my style or is visually pleasing (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other, please specify
(16)



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Q22 Have you completed any of the following types of modification in your current home?
Select all that apply:

- ☐ Lighting (1)
- ☐ Kitchen or Kitchen Appliance (2)
- ☐ Heating and Cooling (3)
- ☐ Hot Water Appliances (9)
- ☐ Yard Care (4)
- ☐ Building Materials, Structure and Accessories (5)
- ☐ Electrical Wiring, Panels and/or Backup (6)
- ☐ Smart home and energy management technology (7)
- ☐ Renewable Energy and Electric Vehicles (8)
- ☐ None of the above (10)

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Lighting*

Q23 What type of modification did you make to Lighting? Select all that apply:

- ☐ Replaced conventional lighting with LED or other energy efficient lighting system
(1)
 - ☐ Installed dimmable lights (2)
 - ☐ Other (please specify) (3)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Kitchen or Kitchen Appliance*

Q24 What type of modification did you make to Kitchen or Kitchen Appliances ? Select all that apply:

- ☐ Installed a new gas stove (1)
 - ☐ Installed a new electric stove (2)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Heating and Cooling*

Q25 What type of modification did you make to Heating and Cooling for your home ? Select all that apply:

- ☐ Installed a CENTRAL heat pump (1)
- ☐ Installed a MINI SPLIT heat pump (2)
- ☐ Installed electric resistance heating (e.g., baseboard or Cadet-style heating) (3)
- ☐ Used space heaters (4)
- ☐ Installed a GAS furnace (5)
- ☐ Installed an OIL furnace (6)
- ☐ Installed CENTRAL air conditioner (8)
- ☐ Used PORTABLE air conditioners (9)
- ☐ Installed a WOOD or PELLET stove (10)
- ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
- ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
- ☐ Switched appliances from OIL to GAS (18)
- ☐ Converted fireplace from WOOD to GAS (19)
- ☐ Installed exhaust ventilation (bath fan, range hood) (20)
- ☐ Installed supply ventilation (fan integrated with HVAC) (21)
- ☐ Installed balance ventilation (HRV/ERV) (22)
- ☐ Installed radon fan (23)

- ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Installed Smart Thermostat (27)
 - ☐ Other (please specify) (26)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Hot Water Appliances*

Q204 What type of modification did you make to Hot Water Appliances ? Select all that apply:

- ☐ Installed a boiler (7)
 - ☐ Installed GAS storage water heater (11)
 - ☐ Installed an ELECTRIC storage water heater (12)
 - ☐ Installed HEAT PUMP water heater (13)
 - ☐ Installed ELECTRIC TANKLESS water heater (14)
 - ☐ Installed GAS TANKLESS water heater (15)
 - ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
 - ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
 - ☐ Switched appliances from OIL to GAS (18)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Other (please specify) (26)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Yard Care*

Q26 What type of modification did you make to Yard Care? Select all that apply:

☐

Bought appliances and tools for yard maintenance and upkeep (1)

☐

Changed landscaping to increase shade or sun (2)

☐

Modified Lawn (Installed, Removed or Fertilized). How? (3)

☐

Changed landscaping to reduce water use OR installed irrigation system (6)

☐

Other (please specify) (9)

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Building Materials, Structure and Accessories*

Q27 What type of modification did you make to Building Materials, Structure and Accessories?
Select all that apply:

- ☐ Abated asbestos and/or lead (1)
 - ☐ Replaced windows with double pane windows (2)
 - ☐ Replaced windows with triple pane windows (3)
 - ☐ Installed window attachments or coverings (e.g., storm windows or energy saving/light blocking shades, awnings) (4)
 - ☐ Installed insulation in walls (5)
 - ☐ Air sealed cracks and openings (6)
 - ☐ New siding (7)
 - ☐ New roof (8)
 - ☐ Other (please specify) (9)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Electrical Wiring, Panels and/or Backup*

Q28 What type of modification did you make to Electrical Wiring, Panels and/or Backup? Select all that apply:

- ☐ Replaced knob and tube wiring (1)
 - ☐ Upgraded electric panel (2)
 - ☐ Installed a gas backup generator (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Smart home and energy management technology*

Q29 What type of modification did you make to Smart home and energy management technology? Select all that apply:

- ☐ Installed home energy management system (1)
 - ☐ Installed smart thermostat (3)
 - ☐ Other (please specify) (2)
-

Display This Question:

*If Have you completed any of the following types of modification in your current home? Select all th...
= Renewable Energy and Electric Vehicles*

Q30 What type of modification did you make to Renewable Energy and Electric Vehicles?
Select all that apply:

- ☐ Installed solar photovoltaic (PV) system, WITHOUT battery storage (1)
 - ☐ Installed solar photovoltaic (PV) system WITH battery storage (2)
 - ☐ Installed solar thermal system (hot water) (3)
 - ☐ Installed geothermal system (4)
 - ☐ Bought an electric vehicle (5)
 - ☐ Installed battery systems for the home (6)
 - ☐ Other (please specify) (7)
-

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Q31 Thinking about the appliance, technology, and home modification decisions you have made (as indicated in the previous question), which of the following factors were important to your decision-making process? Select all that apply:

- ☐ Improve comfort and safety for children and/or pets (1)
 - ☐ Improve comfort and safety for older adults and people with disabilities (2)
 - ☐ Change spaces to be more useful (e.g., improved kitchen, home office, yard, add storage, etc.) (3)
 - ☐ Improve appearance (4)
 - ☐ Fix or replace something that was broken or needed repair (5)
 - ☐ Reduce energy bills (6)
 - ☐ Reduce maintenance effort and cost (7)
 - ☐ Reduce harmful health impacts (8)
 - ☐ Reduce environmental impacts (9)
 - ☐ Make a change required by a Homeowner's Association (HOA) or building owner (10)
 - ☐ Other (please specify) (11)
-

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Q32 Consider the following potential scenarios. Provided that you receive more information from reliable sources in the future, would any of the listed scenarios change how you would make technology selection and home modification decisions? select all that apply:

- ☐ Scenario 1 - More energy efficient or environment friendly technologies and materials have become affordable and may now fit your budget. (4)
- ☐ Scenario 2 - You learn about new appliances, technologies, and materials that use less energy and are environmentally friendly. They cost more up front but pay for themselves over time through lower energy bills. (5)
- ☐ Scenario 3 - You find out that many materials and appliances have potentially long-term health risks for people living in your home. Other options have been shown to be safer. (6)
- ☐ Scenario 4 - You stay at a friend or relative's home, vacation rental, or a motel/hotel that has a new energy efficient or environmentally friendly technology, appliance or building material you've never seen, and you have the chance to try it out. (7)
- ☐ Other (please describe): (8)
-

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Q41 Which of the following potential changes to your household situation is likely to influence your future decision-making process about home projects (e.g., repair, maintenance, appliance purchase, or renovation)? **Do you: (select all that apply)**

- ☐ Situation 1 - Increase in number of people in your household (e.g., new baby, caring for an elderly family member, foster care, more roommates, etc.) (4)
 - ☐ Situation 2 - A new job with an increase in pay (5)
 - ☐ Situation 3 - A new home (6)
 - ☐ Situation 4 - You find out about a new incentive program or tax benefit linked to home improvement and you might be eligible to participate in it (7)
 - ☐ None of the above (10)
-

Q207 Last year was unusually hot, cold, wet or stormy. Your home was uncomfortable, and energy bills were higher. Power outages occurred, or you faced unexpected repairs from storm damage. This is likely to occur again. **Do you: (select all that apply)**

- ☐ Get started on home projects to avoid the issue next year (1)
 - ☐ Start planning for home projects to address the issue in the near future (2)
 - ☐ Consider moving to a new house (3)
 - ☐ Consider moving to a different area where such situations are less likely (4)
 - ☐ Take no action since it may not happen again anytime soon (5)
 - ☐ Other (please specify) (6)
-

Q47 New appliances, technologies, and materials offer major energy efficiency benefits over current products. However, your trusted contractor or retail store advocates for the older technology because they have more experience with it. **Do you: (select all that apply)**

- ☐ Get started on the home projects using your trusted contractor/retail store recommendations (1)
 - ☐ Find a new contractor/retail store that supports the new technology/material (2)
 - ☐ Pause plans for home projects and revisit the plan (3)
 - ☐ Make a cutback or cancel plans for home projects (4)
 - ☐ Does not affect my decision process (5)
 - ☐ Other (please specify) (6)
-

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Q48 Thinking back to your most recent home project (e.g., repair, maintenance, appliance purchase, or renovation), which of the following did you consider when making decisions and completing the project (select all that apply):

- ☐ The materials and/or appliances were sold at a big box store (Home Depot, Lowe's, Best Buy, etc.) (1)
- ☐ The materials and/or appliances were sold at your local hardware or appliance store (2)
- ☐ The materials and/or appliances were sold online (3)
- ☐ You got a quote/bid from a trusted contractor (4)
- ☐ You were able to install the material/appliance by yourself (i.e., DIY) (5)
- ☐ You could pay for the upgrade without getting a loan or using credit (6)
- ☐ It was easy to get a loan or financing to cover the expense (this could include on-bill financing from a utility) (7)
- ☐ You were weather proofing your home because you experienced extreme conditions recently (8)
- ☐ You were weather proofing your home because you anticipated extreme conditions happening with more regularity (9)
- ☐ You were forced to make a change to comply with building codes or an HOA requirement (10)
- ☐ You got a recommendation from family or friends based on their experience doing something similar (11)
- ☐ You found positive online reviews and/or convincing ads (12)
- ☐ You were eligible to participate in a local weatherization/utility program (13)
- ☐ The nature of your job required you to modify your home (14)

☐ It made sense to switch to a lower cost or more stably priced energy due to rising costs or price swings in fuels (15)

☐ You wanted to lower the emissions and carbon footprint of your home (16)

☐ Other (please specify) (17)

Carry Forward Unselected Choices from "Thinking back to your most recent home project (e.g., repair, maintenance, appliance purchase, or renovation), which of the following did you consider when making decisions and completing the project (select all that apply):"



Q49 For a similar home project in the future, would you include any of the factors you did not consider before (listed below)? If YES, please select all that apply:

☐

The materials and/or appliances were sold at a big box store (Home Depot, Lowe's, Best Buy, etc.) (1)

☐

The materials and/or appliances were sold at your local hardware or appliance store (2)

☐

The materials and/or appliances were sold online (3)

☐

You got a quote/bid from a trusted contractor (4)

☐

You were able to install the material/appliance by yourself (i.e., DIY) (5)

☐

You could pay for the upgrade without getting a loan or using credit (6)

☐

It was easy to get a loan or financing to cover the expense (this could include on-bill financing from a utility) (7)

☐

You were weather proofing your home because you experienced extreme conditions recently (8)

☐

You were weather proofing your home because you anticipated extreme conditions happening with more regularity (9)

☐

You were forced to make a change to comply with building codes or an HOA requirement (10)

☐

You got a recommendation from family or friends based on their experience doing something similar (11)

☐

You found positive online reviews and/or convincing ads (12)

☐

You were eligible to participate in a local weatherization/utility program (13)

☐

The nature of your job required you to modify your home (14)

☐ It made sense to switch to a lower cost or more stably priced energy due to rising costs or price swings in fuels (15)

☐ You wanted to lower the emissions and carbon footprint of your home (16)

☐ Other (please specify) (17)

Q50 Have you ever participated in a home energy program? (programs include federal, state, utility or other local programs that provide home weatherization, equipment purchase rebates, home energy demand management etc.)

☐ Yes (which program?) (1)

☐ No (2)

☐ Don't know/Not sure (3)

☐ Prefer not to say (4)

☐ Other (5) _____

Display This Question:

If Have you ever participated in a home energy program? (programs include federal, state, utility or... = Yes (which program?)

Q51 Did the program help you make the repair/home upgrade you had planned?

☐ Yes (1)

☐ No (2)

☐ Don't know/Not sure (3)

☐ Other (4) _____

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q52 Was it easy to find information on resident eligibility?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q53 Was it easy to find out which projects, materials, or appliances qualified?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q54 Was it easy to find a contractor qualified to do the work?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ Could be better (3)
 - ☐ Not applicable (4)
-

Q55 Is there a specific home improvement that you would like program assistance for?

- ☐ No (1)
 - ☐ Maybe (2)
 - ☐ Yes (describe type of assistance and for what home improvement or specific program)
(3) _____
-

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Q56 When selecting new technology (e.g., appliance, building materials, windows or structure) for your home, how important are the following factors to your choice? select all that apply:

Familiar - technology and its operation are familiar, and I have previous experience using or owning (1)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Nostalgia – good experiences and memories from childhood or a previous home (2)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Matches other appliances/features in the home or I like the way it looks (3)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low-cost option or fits my budget (4)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low installation and/or maintenance cost (5)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low up-front cost and technology can be replaced instead of repairing (6)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Long-lasting and durable, can be maintained or repaired multiple times (7)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Offers superior performance compared to the older technology (8)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Requires low/ comparatively less maintenance (9)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has latest features or specific features I want beyond basic functions (e.g., smart phone app or Wi-Fi capability) (10)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)

Operates during a power outage (11)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Trusted and preferred brand (12)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Certified to safety standards (13)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
ENERGY STAR certified (14)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has fewer health risks (15)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has less environmental impact or potential to reduce carbon footprint (16)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Option to DIY, no need for contractors or certified installers (17)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Easy to find a retailer to buy from and return to (if needed) (18)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Easy to find a contractor or technician to install and/or maintain (if needed) (19)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Safe and easy to use around young children or pets (20)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Accessible for older adults or people with disabilities (21)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)

Other (22)

☐ Important (1)

☐ Somewhat
Important (2)

☐ Not Important
(3)

Q57 If you had to replace your stove or cooking range, which of the following would be important to you? (select all that apply):

- ☐ The technology and its operation are familiar (1)
 - ☐ You like to cook, and the stove/range enhances your experience (2)
 - ☐ Stove/range uses gas (3)
 - ☐ Stove/range uses electricity (4)
 - ☐ None of the above (6)
 - ☐ Other (7) _____
-

Q58 When selecting heating and cooling and hot water appliances (like air conditioners, water heaters, furnaces), is it important that (select all that apply):

- ☐ Technology is energy efficient (1)
 - ☐ Contractor to install and maintain technology is readily available (2)
 - ☐ For water heaters and furnace, fuel is Gas (3)
 - ☐ For water heaters and furnace, fuel is Electricity (4)
 - ☐ None of the above (6)
 - ☐ Other (7) _____
-

Q59 For which of the projects below, would you hire professional assistance (contractor, electrician, plumber, insulator, etc.) instead of doing it yourself (DIY)? (select all that apply):

☐

Selection and installation of large appliances (such as ranges, stoves, washer/dryers) (1)

☐

Installation, repair, or replacement of heating and cooling, plumbing and hot water appliances (such air conditioners, water heaters, and furnaces) (2)

☐

Installation, repair, or replacement of building materials and accessories (like insulation, waterproofing, windows, interior finishes, roofing, and siding) (3)

☐

Installation, repair, or replacement of electrical wiring and electrical panel upgrade (4)

☐

Installation, repair, or replacement of smart home and energy management technology (thermostats, lighting controls, etc.) (5)

☐

Selection and installation of solar energy and battery systems (6)

☐

None of the above (7)

☐

Other (8) _____

Q60 In which of the following situations are you likely to replace a kitchen appliance (like Stove/Range, Freezer/Refrigerator, Microwave) in your home? Select up to five options:

- ☐ Breakdown or irreparable damage (1)
 - ☐ Minor malfunction (2)
 - ☐ Uses too much energy (3)
 - ☐ Aesthetically displeasing or ugly (4)
 - ☐ Change in home or household needs (5)
 - ☐ Nearing end of service life/contractor recommended replacement (6)
 - ☐ Newer technology available (7)
 - ☐ Opportunity to make my home environment safer (e.g., reduce, fumes, fire hazard etc.) (8)
 - ☐ Opportunity to reduce my home's environmental impact (9)
 - ☐ Opportunity to lower bills (10)
 - ☐ Get an appliance that is easier to operate and maintain (11)
 - ☐ Other (12) _____
-

Q61 In which of the following situations are you likely to replace a Heating and Cooling or Hot Water Appliances (like air conditioners, water heaters, furnaces) in your home? Select up to five options:

- ☐ Breakdown or irreparable damage (1)
- ☐ Minor malfunction (2)
- ☐ Uses too much energy (3)
- ☐ Aesthetically displeasing or ugly (4)
- ☐ Change in home or household needs (5)
- ☐ Nearing end of service life/contractor recommended replacement (6)
- ☐ Newer technology available (7)
- ☐ Opportunity to make my home environment safer (e.g., reduce, fumes, fire hazard etc.) (8)
- ☐ Opportunity to reduce my home's environmental impact (9)
- ☐ Opportunity to lower bills (10)
- ☐ Get an appliance that is easier to operate and maintain (11)
- ☐ Other (12) _____

Q62 If affordable, would you invest in the following high efficiency electrical technologies?

Q63 Induction/electric stovetops

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
 - ☐ Need more information (4)
-



Q64 Heat pumps for central cooling and heating

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
 - ☐ Need more information (4)
-



Q65 Home energy management systems and smart thermostats

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
 - ☐ Need more information (4)
-



Q66 Heat pump water heater

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
 - ☐ Need more information (4)
-



Q67 Solar energy for hot water and/or space heating/cooling

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
 - ☐ Need more information (4)
-



Q68 Solar panels

- ☐ Yes, with or without battery storage (1)
 - ☐ Yes, only with battery storage (2)
 - ☐ Yes, only if can export excess to grid (3)
 - ☐ No (4)
 - ☐ Maybe (5)
 - ☐ Need more information (6)
-



Q69 Electric Vehicle

- ☐ Yes (1)
 - ☐ Yes, only if I can charge at home (2)
 - ☐ No (3)
 - ☐ Maybe (4)
 - ☐ Need more information (5)
-

Q70 Many appliances and building materials might have health and safety risks from long-term exposure. These include indoor air pollutants caused by a lack of ventilation, fire risks with dryers, particulates and pollutants from unvented fireplaces and cookstoves, mold growth, asbestos or lead particles in indoor air from building materials, etc. Health and safety risks can often be prevented or reduced by selecting improved technologies and using updated installation/construction practices.

If you were aware of these risks and ways to avoid them, would you consider any of the following actions? select all that apply:

- ☐ Select products that lower risks, even if they may cost more (1)
- ☐ Select contractors that follow updated installation/construction guidelines (2)
- ☐ Buy a home with a higher safety standard (3)
- ☐ Replace with safer technology when it is time for an upgrade (4)
- ☐ Replace with safer technology ahead of time for an upgrade (5)
- ☐ None of the above (6)
- ☐ Other (7) _____

Page Break

Q71 How affordable are the following home project costs for you? Please indicate how affordable each budget is.

	Affordable Does not require much spending, or is within my budget (1)	Somewhat Affordable I will need to plan a few months ahead or get a loan within my budget (2)	Too expensive I am not willing to pay this amount, or it is out of budget for me (3)
(10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$500-\$2,499 (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$2,500-\$9,000 (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$10,000-\$19,999 (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$20,000-\$49,999 (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$50,000-\$74,999 (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$75,000-\$99,999 (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
>\$100,000 (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q72 In the next 12 months, which of the following home projects are your highest priorities?
Select top three:

- ☐ Kitchen modifications (including stove, range, hood and construction work) (1)
 - ☐ Small Appliances (Includes small kitchen appliances such as toasters, coffee makers; office and entertainment appliances such as routers, speakers, televisions sets, and computer monitors etc.) (2)
 - ☐ Large Appliances (such as microwaves, refrigerators, washer/dryers) (3)
 - ☐ Heating and cooling and hot water appliances (such air conditioners, water heaters, and furnaces) (4)
 - ☐ Work and maintenance-related appliances and tools (home and yard repair and maintenance such as power tools and lawn mowers) (5)
 - ☐ Building materials and accessories (like insulation, waterproofing, windows, interior finishes, roofing, and siding) (6)
 - ☐ Electrical wiring and electrical panel upgrade (7)
 - ☐ Smart home and energy management technology (thermostats, lighting controls, etc.) (8)
 - ☐ Other (9) _____
 - ☐ No projects planned (10)
-

Q73 Can you estimate your budget for home projects in the next 12 months?

- ☐ Yes (enter \$ amount below) (1)

 - ☐ No/Not Applicable (2)
-

Page Break _____

Q74 For home projects that are currently too expensive, would any of the following outcomes resulting directly from the home project make you reconsider your investment decision? select all that apply:

- ☐ Accurate estimates of Long-Term Benefits (e.g., increase in home value, extended warranties, long-term cost savings, etc.) (4)
- ☐ Significant lowering of Health and Safety Risks for home occupants (5)
- ☐ Significant lowering of Indoor Pollution (noise, fumes, etc.) and Negative Environmental impacts (6)
- ☐ Eligibility for Financial Assistance program to offset part of upfront cost (7)
- ☐ Eligibility for Lease and/or Buyback options (8)
- ☐ Reduction in overall household expenses or increased savings (9)

Page Break



Q81 Do you find information about Energy Efficient Technologies and Materials (e.g., smart home technologies, lighting, appliances, etc.) useful and relevant? (Select all that apply):

- ☐ Relevant, I keep myself informed (1)
 - ☐ Relevant, I usually research such information and have participated/will participate (2)
 - ☐ Follow some information, but don't find it useful (3)
 - ☐ I would like to be informed, but it is difficult to access information (4)
 - ☐ Not interested (5)
 - ☐ Prefer not to say (6)
 - ☐ Other (7) _____
-



Q82 Do you find information about Renewable and Clean Energy Technologies for homes (e.g., solar thermal, solar PV, geothermal, battery storage) useful and relevant? (Select all that apply):

☐

Relevant, I keep myself informed (1)

☐

Relevant, I usually research such information and have participated/will participate (2)

☐

Follow some information, but don't find it useful (3)

☐

I would like to be informed, but it is difficult to access information (4)

☐

Not interested (5)

☐

Prefer not to say (6)

☐

Other (7) _____



Q83 Do you find information about Recycling, Reuse and Reduction of waste in homes useful and relevant? (Select all that apply):

☐

Relevant, I keep myself informed (1)

☐

Relevant, I usually research such information and have participated/will participate (2)

☐

Follow some information, but don't find it useful (3)

☐

I would like to be informed, but it is difficult to access information (4)

☐

Not interested (5)

☐

Prefer not to say (6)

☐

Other (7) _____



Q84 Do you find information about public entities (utilities, cities, states, or federal agencies) sponsored programs on energy-efficient and low-carbon homes and economy useful and relevant? (Select all that apply):

- ☐ Relevant, I keep myself informed (1)
- ☐ Relevant, I usually research such information and have participated/will participate (2)
- ☐ Follow some information, but don't find it useful (3)
- ☐ I would like to be informed, but it is difficult to access information (4)
- ☐ Not interested (5)
- ☐ Prefer not to say (6)
- ☐ Other (7) _____



Q85 Do you find information about initiatives by private businesses and brands to increase energy efficiency and reduce waste useful and relevant? (Select all that apply):

☐

Relevant, I keep myself informed (1)

☐

Relevant, I usually research such information and have participated/will participate (2)

☐

Follow some information, but don't find it useful (3)

☐

I would like to be informed, but it is difficult to access information (4)

☐

Not interested (5)

☐

Prefer not to say (6)

☐

Other (7) _____

Page Break

Q86 Where do you usually find information about appliances, building materials, and contractors for home projects? (select all that apply):

- ☐ Newspaper, radio or television (1)
- ☐ Word of mouth or referrals from friends or family (2)
- ☐ Government-sponsored websites (e.g., Department of Energy (DOE), Energy Saver, Environmental Protection Agency (EPA), or regional energy-efficiency organizations) (3)
- ☐ Home repair and review websites (e.g., Home Advisor, Angi (formerly Angie's List), Yelp, Google Reviews) (4)
- ☐ Social networking websites (e.g., Facebook, Instagram, Twitter) (5)
- ☐ Known retailers (including big box stores and online sellers) (6)
- ☐ Contractors (7)
- ☐ From service provider lists maintained by the cities, utilities, or state/federal agencies (8)
- ☐ Manufacturer advertising and/or helplines (9)
- ☐ Other (10) _____

Carry Forward Selected Choices from "Where do you usually find information about appliances, building materials, and contractors for home projects? (select all that apply):"



Q87 Which of these information sources (selected above) do you trust the most? Drag and drop these information sources in the order of most trusted at the top to least trusted at the bottom.

- _____ Newspaper, radio or television (1)
 - _____ Word of mouth or referrals from friends or family (2)
 - _____ Government-sponsored websites (e.g., Department of Energy (DOE), Energy Saver, Environmental Protection Agency (EPA), or regional energy-efficiency organizations) (3)
 - _____ Home repair and review websites (e.g., Home Advisor, Angi (formerly Angie's List), Yelp, Google Reviews) (4)
 - _____ Social networking websites (e.g., Facebook, Instagram, Twitter) (5)
 - _____ Known retailers (including big box stores and online sellers) (6)
 - _____ Contractors (7)
 - _____ From service provider lists maintained by the cities, utilities, or state/federal agencies (8)
 - _____ Manufacturer advertising and/or helplines (9)
 - _____ Other (10)
-

Q88 Would you prefer a single source of information from a research-based agency that periodically shares information about energy efficiency, renewable energy, and home improvements? (examples include mobile application, website, and newsletter.)

- ☐ No (1)
 - ☐ Yes (2)
 - ☐ Maybe (3)
-

Page Break

Q89 While planning for desired home projects to enhance your living space, lower energy costs and use, what have been some of the barriers that delayed or caused you to drop your plans? select all that apply:

- ☐ Upfront cost of material and/or appliances (1)
- ☐ Unclear cost-benefit projections (2)
- ☐ Difficulty in finding the right material and/or appliances (3)
- ☐ Difficulty in finding the right contractor (4)
- ☐ Lack of clarity/information about warranties, rebates and other necessary information (5)
- ☐ Other (6) _____
- ☐ None of the above (7)

Display This Question:

If While planning for desired home projects to enhance your living space, lower energy costs and use... != None of the above

Q90 Please describe your experience of the delayed or dropped home improvement

Q91 Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation?

☐ Yes, only in the last 1 year (How much did it cost? \$) (1)

☐ Yes, in the last 1 to 3 years (How much did it cost? \$) (2)

☐ No (3)

☐ Prefer not to say (4)

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)

Q92 What did you have to repair, replace or renovate?

☐ Enter response 1 (4) _____

☐ Enter response 2 (5) _____

☐ Enter response 3 (6) _____

☐ Enter response 4 (7) _____

☐ Enter response 5 (8) _____

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)



Q93 Was the repair, replacement or renovation (select all that apply):

- ☐ Same/similar to the original (1)
- ☐ Improvement over the original (e.g., more energy efficient, additional features) (2)
- ☐ A cheaper alternative as a temporary fix, intend to upgrade later (3)
- ☐ A cheaper alternative, no plans to upgrade later (4)
- ☐ Other (5) _____

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)



Q94 How did it impact your household budget or financial plans?

- ☐ Significant negative impact (1)
- ☐ Somewhat negative impact (2)
- ☐ Can't say (3)
- ☐ No impact (4)
- ☐ Prefer not to say (5)

End of Block: Homeowner Questions

Start of Block: Renter Questions

Q97 How old are you?

- ☐ Under 18 years (1)
- ☐ 18 - 25 (2)
- ☐ 26 – 35 (3)
- ☐ 36 – 45 (4)
- ☐ 46 – 55 (5)
- ☐ 56 – 65 (6)
- ☐ 65 – 70 (7)
- ☐ over 70 (8)

Skip To: End of Block If How old are you? = Under 18 years

Q98 Are you a key decision maker in your household when it comes to managing changes to your home, including working with your landlord or property manager to request repairs, maintenance, appliance purchases, or other improvements?

- ☐ No (1)
- ☐ Yes (2)

Skip To: End of Block If Are you a key decision maker in your household when it comes to managing changes to your home, in... = No

Q99 Which of the following best describes your home?

- ☐ Single family detached home (1)
- ☐ Duplex, triplex, or townhouse (2)
- ☐ Condo or apartment with 4 or fewer units in building (3)
- ☐ Condo or apartment with 5 or more units in building (4)
- ☐ Mobile home, manufactured home or trailer (5)

Skip To: End of Block If Which of the following best describes your home? = Condo or apartment with 5 or more units in building

Skip To: End of Block If Which of the following best describes your home? = Mobile home, manufactured home or trailer

Q100 Do you live in this home year-round (is this your primary residence)?

- ☐ No (1)
- ☐ Yes (2)

Skip To: End of Block If Do you live in this home year-round (is this your primary residence)? = No

Q211 In which state do you currently reside?

▼ Alabama (1) ... I do not reside in the United States (53)

Skip To: End of Block If 50 States, D.C. and Puerto Rico = I do not reside in the United States



Q101 What is your ZIP code

Q102 Which GENDER do you identify as?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Non-binary / third gender (3)
- ☐ Prefer to self-identify (4) _____
- ☐ Prefer not to say (5)
-

Q103 Which of the following best represents your RACE? Please indicate all responses that apply:

- ☐ White (1)
- ☐ Black or African American (3)
- ☐ American Indian or Alaskan Native (4)
- ☐ Asian (5)
- ☐ Native Hawaiian or Pacific Islander (9)
- ☐ Middle Eastern or North African (6)
- ☐ Prefer not to say (7)
- ☐ Other (please specify) (8) _____
-

Q202 Which of the following best represents your ETHNIC HERITAGE?

- ☐ Hispanic or Latino (2)
- ☐ Not Hispanic or Latino (3)
- ☐ Prefer not to say (7)
-

Q104 Which of the following best describes the highest level of education you have obtained?

▼ Some high school, no diploma (1) ... Prefer not to say (6)

Q105 Household composition (Please enter total number of individuals in respective age groups below, including you)

Adults (18-64) : _____ (1)

Older Adults (65 or older) : _____ (2)

Children (17 or younger) : _____ (3)

Total : _____

Q106 Which of the following best describes your 2021 household income before taxes?

▼ No Income (1) ... Prefer not to say (12)

Q107 Approximately how much do spend per month on your rent (include any taxes and fees)?

▼ No rent (1) ... Prefer not to say (19)

Q108 How long have you lived in your current home?

▼ Less than 1 year (1) ... 10 years or longer (5)

Q109 In what year was your home built? Your best guess is fine

▼ before 1900 (1) ... Don't know/Not sure (8)

Q110 How large is your home? Your best guess is fine

▼ 500 square feet or smaller (1) ... Don't know (8)

Q111 What is the main fuel used to HEAT your home?

- ☐ Electricity (1)
 - ☐ Natural gas (2)
 - ☐ Propane (3)
 - ☐ Oil (4)
 - ☐ Don't know (5)
 - ☐ Other(please specify) (6)
-

Q112 What is the main fuel used for WATER HEATING in your home?

- ☐ Electricity (1)
 - ☐ Natural gas (2)
 - ☐ Propane (3)
 - ☐ Oil (4)
 - ☐ Don't know (5)
 - ☐ Other(please specify) (6)
-

Q209 On average, how much are your monthly energy expenses (e.g., electricity, natural gas, fuel oil, propane)? Please do not include water, trash service, internet, or phone. Your best guess is fine.

▼ Up to \$25 (41) ... Prefer not to say (43)

Q114 Do you have trouble paying your electric and/or gas bill every month? Select all that apply:

- ☐ Yes, I often miss paying an electric and/or gas bill (1)
 - ☐ Yes, and I receive financial assistance (like Low-Income Home Energy Assistance Program LIHEAP, or similar) (2)
 - ☐ I can afford my energy bills but only because I use the smallest amount of energy that I can in my home or cut back expenses in other areas (3)
 - ☐ No, I don't have trouble paying my electric/gas bill (4)
 - ☐ Other(please specify) (5)
-

Page Break

Q115 How important are the following for your household, as features of the space you live in currently or would like in your future living space?

	Important (1)	Somewhat Important (2)	Not Important (3)
Space for children (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for pets (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space to entertain (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space to relax (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for family cooking and eating together (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for chef's kitchen (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for project shop (cars, wood, building) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for crafting (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for exercise (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space for home office (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe space from bad weather or natural disaster (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor space for gardening or recreation (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home is easy to maintain (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Yard is easy to maintain (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home reflects my style or is visually pleasing (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q116 Have you, as a TENANT, completed and paid for any of the following types of modification in your current home? Select all that apply:

- ☐ Lighting (1)
- ☐ Kitchen or Kitchen Appliance (2)
- ☐ Heating and Cooling (3)
- ☐ Hot Water Appliances (10)
- ☐ Yard Care (4)
- ☐ Building Materials, Structure and Accessories (5)
- ☐ Electrical Wiring, Panels and/or Backup (6)
- ☐ Smart home and energy management technology (7)
- ☐ Renewable Energy and Electric Vehicles (8)
- ☐ None of the above (9)

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Lighting

Q117 What type of modification did you make to Lighting? Select all that apply:

- ☐ Replaced conventional lighting with LED or other energy efficient lighting system (1)
 - ☐ Installed dimmable lights (2)
 - ☐ Other (please specify) (3)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Kitchen or Kitchen Appliance

Q118 What type of modification did you make to Kitchen or Kitchen Appliances ? Select all that apply:

- ☐ Installed a new gas stove (1)
 - ☐ Installed a new electric stove (2)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Heating and Cooling

Q119 What type of modification did you make to Heating and Cooling for your home? Select all that apply:

- ☐ Installed a CENTRAL heat pump (1)
- ☐ Installed a MINI SPLIT heat pump (2)
- ☐ Installed electric resistance heating (e.g., baseboard or Cadet-style heating) (3)
- ☐ Used space heaters (4)
- ☐ Installed a GAS furnace (5)
- ☐ Installed an OIL furnace (6)
- ☐ Installed CENTRAL air conditioner (8)
- ☐ Used PORTABLE air conditioners (9)
- ☐ Installed a WOOD STOVE or PELLET STOVE (10)
- ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
- ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
- ☐ Switched appliances from OIL to GAS (18)
- ☐ Converted fireplace from WOOD to GAS (19)
- ☐ Installed exhaust ventilation (bath fan, range hood) (20)
- ☐ Installed supply ventilation (fan integrated with HVAC) (21)
- ☐ Installed balance ventilation (HRV/ERV) (22)
- ☐ Installed radon fan (23)

- ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Installed Smart Thermostat (27)
 - ☐ Other (please specify) (26)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Hot Water Appliances

Q205 What type of modification did you make to Hot Water Appliances ? Select all that apply:

- ☐ Installed a boiler (7)
 - ☐ Installed GAS storage water heater (11)
 - ☐ Installed an ELECTRIC storage water heater (12)
 - ☐ Installed HEAT PUMP water heater (13)
 - ☐ Installed ELECTRIC TANKLESS water heater (14)
 - ☐ Installed GAS TANKLESS water heater (15)
 - ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
 - ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
 - ☐ Switched appliances from OIL to GAS (18)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Other (please specify) (26)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Yard Care

Q120 What type of modification did you make to Yard Care? Select all that apply:

- ☐ Bought appliances and tools for yard maintenance and upkeep (1)
- ☐ Changed landscaping to increase shade or sun (2)
- ☐ Modified Lawn (Installed, Removed or Fertilized). How? (3)

- ☐ Changed landscaping to reduce water use OR installed irrigation system (6)
- ☐ Other (please specify) (9)

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Building Materials, Structure and Accessories

Q121 What type of modification did you make to Building Materials, Structure and Accessories?
Select all that apply:

- ☐ Abated asbestos and/or lead (1)
 - ☐ Replaced windows with double pane windows (2)
 - ☐ Replaced windows with triple pane windows (3)
 - ☐ Installed window attachments or coverings (e.g., storm windows or energy saving/light blocking shades, awnings) (4)
 - ☐ Installed insulation in walls (5)
 - ☐ Air sealed cracks and openings (6)
 - ☐ New siding (7)
 - ☐ New roof (8)
 - ☐ Other (please specify) (9)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Electrical Wiring, Panels and/or Backup

Q122 What type of modification did you make to Electrical Wiring, Panels and/or Backup?
Select all that apply:

- ☐ Replaced knob and tube wiring (1)
 - ☐ Upgraded electric panel (2)
 - ☐ Installed a gas backup generator (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Smart home and energy management technology

Q123 What type of modification did you make to Smart home and energy management technology? Select all that apply:

- ☐ Installed home energy management system (1)
 - ☐ Installed smart thermostat (3)
 - ☐ Other (please specify) (2)
-

Display This Question:

If Have you, as a TENANT, completed and paid for any of the following types of modification in your... = Renewable Energy and Electric Vehicles

Q124 What type of modification did you make to Renewable Energy and Electric Vehicles?
Select all that apply:

- ☐ Installed solar photovoltaic (PV) system, WITHOUT battery storage (1)
 - ☐ Installed solar photovoltaic (PV) system WITH battery storage (2)
 - ☐ Installed solar thermal system (hot water) (3)
 - ☐ Installed geothermal system (4)
 - ☐ Bought an electric vehicle (5)
 - ☐ Installed battery systems for the home (6)
 - ☐ Other (please specify) (7)
-

Page Break

Q190 Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modification in your current home? Select all that apply:

- ☐ Lighting (1)
- ☐ Kitchen or Kitchen Appliance (2)
- ☐ Heating and Cooling (3)
- ☐ Hot Water Appliances (10)
- ☐ Yard Care (4)
- ☐ Building Materials, Structure and Accessories (5)
- ☐ Electrical Wiring, Panels and/or Backup (6)
- ☐ Smart home and energy management technology (7)
- ☐ Renewable Energy and Electric Vehicles (8)
- ☐ None of the above (9)

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Lighting

Q191 What type of modification did your building owner make to Lighting? Select all that apply:

- ☐ Replaced conventional lighting with LED or other energy efficient lighting system (1)
 - ☐ Installed dimmable lights (2)
 - ☐ Other (please specify) (3)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Kitchen or Kitchen Appliance

Q192 What type of modification did your building owner make to Kitchen or Kitchen Appliances ? Select all that apply:

- ☐ Installed a new gas stove (1)
 - ☐ Installed a new electric stove (2)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Heating and Cooling

Q193 What type of modification did your building owner make to Heating and Cooling for your home? Select all that apply:

- ☐ Installed a CENTRAL heat pump (1)
- ☐ Installed a MINI SPLIT heat pump (2)
- ☐ Installed electric resistance heating (e.g., baseboard or Cadet-style heating) (3)
- ☐ Used space heaters (4)
- ☐ Installed a GAS furnace (5)
- ☐ Installed an OIL furnace (6)
- ☐ Installed CENTRAL air conditioner (8)
- ☐ Used PORTABLE air conditioners (9)
- ☐ Installed a WOOD or PELLET STOVE (10)
- ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
- ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
- ☐ Switched appliances from OIL to GAS (18)
- ☐ Converted fireplace from WOOD to GAS (19)
- ☐ Installed exhaust ventilation (bath fan, range hood) (20)
- ☐ Installed supply ventilation (fan integrated with HVAC) (21)
- ☐ Installed balance ventilation (HRV/ERV) (22)
- ☐ Installed radon fan (23)

- ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Installed a Smart Thermostat (25)
 - ☐ Other (please specify (26)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Hot Water Appliances

Q206 What type of modification did your building owner make to Hot Water Appliances ? Select all that apply:

- ☐ Installed a boiler (7)
 - ☐ Installed GAS storage water heater (11)
 - ☐ Installed an ELECTRIC storage water heater (12)
 - ☐ Installed HEAT PUMP water heater (13)
 - ☐ Installed ELECTRIC TANKLESS water heater (14)
 - ☐ Installed GAS TANKLESS water heater (15)
 - ☐ Switched appliances from OIL/GAS to ELECTRIC (16)
 - ☐ Switched appliances from ELECTRIC to OIL/GAS (17)
 - ☐ Switched appliances from OIL to GAS (18)
 - ☐ Installed ENERGYSTAR certified appliances or equipment (24)
 - ☐ Other (please specify (26)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Yard Care

Q194 What type of modification did your building owner make to Yard Care? Select all that apply:

- ☐ Bought appliances and tools for yard maintenance and upkeep (1)
 - ☐ Changed landscaping to increase shade or sun (2)
 - ☐ Installed a lawn (3)
 - ☐ Removed a lawn (4)
 - ☐ Fertilized a lawn (5)
 - ☐ Changed landscaping to reduce water use OR installed irrigation system (6)
 - ☐ Other (please specify) (9)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Building Materials, Structure and Accessories

Q195 What type of modification did your building owner make to Building Materials, Structure and Accessories? Select all that apply:

- ☐ Abated asbestos and/or lead (1)
 - ☐ Replaced windows with double pane windows (2)
 - ☐ Replaced windows with triple pane windows (3)
 - ☐ Installed window attachments or coverings (e.g., storm windows or energy saving/light blocking shades, awnings) (4)
 - ☐ Installed insulation in walls (5)
 - ☐ Air sealed cracks and openings (6)
 - ☐ New siding (7)
 - ☐ New roof (8)
 - ☐ Other (please specify) (9)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Electrical Wiring, Panels and/or Backup

Q196 What type of modification did your building owner make to Electrical Wiring, Panels and/or Backup? Select all that apply:

- ☐ Replaced knob and tube wiring (1)
 - ☐ Upgraded electric panel (2)
 - ☐ Installed a gas backup generator (3)
 - ☐ Other (please specify) (4)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Smart home and energy management technology

Q197 What type of modification did your building owner make to Smart home and energy management technology? Select all that apply:

- ☐ Installed home energy management system (1)
 - ☐ Other (please specify) (2)
-

Display This Question:

If Has your BUILDING OWNER/MANAGEMENT completed and paid for any of the following types of modificat... = Renewable Energy and Electric Vehicles

Q198 What type of modification did your building owner make to Renewable Energy and Electric Vehicles? Select all that apply:

- ☐ Installed solar photovoltaic (PV) system, WITHOUT battery storage (1)
 - ☐ Installed solar photovoltaic (PV) system WITH battery storage (2)
 - ☐ Installed solar thermal system (hot water) (3)
 - ☐ Installed geothermal system (4)
 - ☐ Bought an electric vehicle (5)
 - ☐ Installed battery systems for the home (6)
 - ☐ Other (please specify) (7)
-

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Q125 Thinking about the appliance, technology, and home modification decisions you have made (as indicated in the previous question), which of the following factors were important to your decision-making process? Select all that apply:

- ☐ Improve comfort and safety for children and/or pets (1)
 - ☐ Improve comfort and safety for older adults and people with disabilities (2)
 - ☐ Change spaces to be more useful (e.g., improved kitchen, home office, yard, add storage, etc.) (3)
 - ☐ Improve appearance (4)
 - ☐ Fix or replace something that was broken or needed repair (5)
 - ☐ Reduce energy bills (6)
 - ☐ Reduce maintenance effort and cost (7)
 - ☐ Reduce harmful health impacts (8)
 - ☐ Reduce environmental impacts (9)
 - ☐ Make a change required by landlord or building owner (10)
 - ☐ Other (please specify) (11)
-

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Q126 Consider the following potential scenarios. Provided that you receive more information from reliable sources in the future, would any of the listed scenarios change how you would make technology selection and home modification decisions? select all that apply:

- ☐ Scenario 1 - More energy efficient or environment friendly technologies and materials have become affordable and may now fit your budget. (4)
- ☐ Scenario 2 - You learn about new appliances, technologies, and materials that use less energy and are environmentally friendly. They cost more up front but pay for themselves over time through lower energy bills. (5)
- ☐ Scenario 3 - You find out that many materials and appliances have potentially long-term health risks for people living in your home. Other options have been shown to be safer. (6)
- ☐ Scenario 4 - You stay at a friend or relative's home, vacation rental, or a motel/hotel that has a new energy efficient or environmentally friendly technology, appliance or building material you've never seen, and you have the chance to try it out. (7)
- ☐ Other (please describe): (8)
-

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Q135 Which of the following potential changes to your household situation is likely to influence your future decision-making process about home projects (e.g., repair, maintenance, appliance purchase, or renovation)? Select all that apply:

- ☐ Situation 1 - Increase in number of people in your household (e.g., new baby, caring for an elderly family member, foster care, more roommates, etc.) (4)
 - ☐ Situation 2 - A new job with an increase in pay (5)
 - ☐ Situation 3 - A new home (6)
 - ☐ Situation 4 - You find out about a new incentive program or tax benefit linked to home improvement and you might be eligible to participate in it (7)
 - ☐ None of the above (8)
-

Q140 Last year was unusually hot, cold, wet or stormy. Your home was uncomfortable, and energy bills were higher. Power outages occurred, or you faced unexpected repairs from storm damage. This is likely to occur again. Do you: (select all that apply)

- ☐ Get started on home projects to avoid the issue next year (1)
 - ☐ Start planning for home projects to address the issue in the near future (2)
 - ☐ Discuss with building owner/management about undertaking appropriate home projects (3)
 - ☐ Consider moving to a new house (4)
 - ☐ Consider moving to a different area where such situations are less likely (5)
 - ☐ Take no action since it may not happen again anytime soon (6)
 - ☐ Other (please specify) (7)
-

Q141 New appliances, technologies, and materials offer major energy efficiency benefits over current products. However, your building owner has plans to carry out projects with older technology. Do you: (select all that apply)

- ☐ Discuss with building owner/management about using efficient technology as it will impact my bill (1)
 - ☐ Building owner/management does not consult me and I don't think my suggestion will matter (2)
 - ☐ Install energy efficient products wherever it is under my control and budget (3)
 - ☐ Consider moving to a new house with new and efficient technologies (4)
 - ☐ Does not affect my decision process (5)
 - ☐ Other (please specify) (6)
-

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Q142 Thinking back to your most recent home project (e.g., minor modifications, repair, maintenance or appliance purchase), which of the following did you consider in making decisions and completing the project (select all that apply):

- ☐ The materials and/or appliances were sold at a big box store (Home Depot, Lowe's, Best Buy, etc.) (1)
- ☐ The materials and/or appliances were sold at your local hardware or appliance store (2)
- ☐ The materials and/or appliances were sold online (3)
- ☐ You got a quote/bid from a trusted contractor (4)
- ☐ You were able to install the material/appliance by yourself (i.e., DIY) (5)
- ☐ You could pay for the upgrade without getting a loan or using credit (6)
- ☐ It was easy to get a loan or financing to cover the expense (this could include on-bill financing from a utility) (7)
- ☐ You were weather proofing your home because you experienced extreme conditions recently (8)
- ☐ You were weather proofing your home because you anticipated extreme conditions happening with more regularity (9)
- ☐ You were forced to make a change to comply with building codes or building owner's requirement (10)
- ☐ Building owner/management offered to co-finance project (18)
- ☐ You got a recommendation from family or friends based on their experience doing something similar (11)
- ☐ You found positive online reviews and/or convincing ads (12)
- ☐ You were eligible to participate in a local weatherization/utility program (13)

- ☐ The nature of your job required you to modify your home (14)
- ☐ It made sense to switch to a lower cost or more stably priced energy due to rising costs or price swings in fuels (15)
- ☐ You wanted to lower the emissions and carbon footprint of your home (16)
- ☐ Other (please specify) (17)
-

Carry Forward Unselected Choices from "Thinking back to your most recent home project (e.g., minor modifications, repair, maintenance or appliance purchase), which of the following did you consider in making decisions and completing the project (select all that apply):"



Q143 For a similar home project in the future, would you include any of the factors you did not consider before (listed below)? If YES, please select all that apply:

- ☐ The materials and/or appliances were sold at a big box store (Home Depot, Lowe's, Best Buy, etc.) (1)
- ☐ The materials and/or appliances were sold at your local hardware or appliance store (2)
- ☐ The materials and/or appliances were sold online (3)
- ☐ You got a quote/bid from a trusted contractor (4)
- ☐ You were able to install the material/appliance by yourself (i.e., DIY) (5)
- ☐ You could pay for the upgrade without getting a loan or using credit (6)
- ☐ It was easy to get a loan or financing to cover the expense (this could include on-bill financing from a utility) (7)
- ☐ You were weather proofing your home because you experienced extreme conditions recently (8)
- ☐ You were weather proofing your home because you anticipated extreme conditions happening with more regularity (9)
- ☐ You were forced to make a change to comply with building codes or building owner's requirement (10)
- ☐ Building owner/management offered to co-finance project (11)
- ☐ You got a recommendation from family or friends based on their experience doing something similar (12)
- ☐ You found positive online reviews and/or convincing ads (13)
- ☐ You were eligible to participate in a local weatherization/utility program (14)
- ☐ The nature of your job required you to modify your home (15)

☐ It made sense to switch to a lower cost or more stably priced energy due to rising costs or price swings in fuels (16)

☐ You wanted to lower the emissions and carbon footprint of your home (17)

☐ Other (please specify) (18)

Q144 Have you ever participated in a home energy program? (programs include federal, state, utility or other local programs that provide home weatherization, equipment purchase rebates, home energy demand management etc.)

☐ Yes (which program?) (1)

☐ No (2)

☐ Don't know/Not sure (3)

☐ Prefer not to say (4)

☐ Other (5) _____

Display This Question:

If Have you ever participated in a home energy program? (programs include federal, state, utility or... = Yes (which program?)

Q145 Did the program help you make the repair/home upgrade you had planned?

☐ Yes (1)

☐ No (2)

☐ Don't know/Not sure (3)

☐ Other (4) _____

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q146 Was it easy to find information on resident eligibility?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q147 Was it easy to find out which projects, materials, or appliances qualified?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q199 Did your landlord tell you that you were qualified for the program?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Display This Question:

*If Have you ever participated in a home energy program? (programs include federal, state, utility or...
= Yes (which program?)*



Q148 Was it easy to find a contractor qualified to do the work?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Could be better (3)
- ☐ Not applicable (4)

Q149 Is there a specific home improvement that you would like program assistance for?

- ☐ No (1)
- ☐ Maybe (2)
- ☐ Yes (describe type of assistance and for what home improvement or specific program)
(3) _____

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Q150 When selecting new technology (e.g., appliance, building materials, windows or structure) for your home, how important are the following factors to your choice? select all that apply:

Familiar - technology and its operation are familiar, and I have previous experience using or owning (1)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Nostalgia – good experiences and memories from childhood or a previous home (2)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Matches other appliances/features in the home or I like the way it looks (3)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low-cost option or fits my budget (4)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low installation and/or maintenance cost (5)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Low up-front cost and technology can be replaced instead of repairing (6)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Long-lasting and durable, can be maintained or repaired multiple times (7)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Offers superior performance compared to the older technology (8)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Requires low/ comparatively less maintenance (9)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has latest features or specific features I want beyond basic functions (e.g., smart phone app or Wi-Fi capability) (10)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)

Operates during a power outage (11)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Trusted and preferred brand (12)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Certified to safety standards (13)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
ENERGY STAR certified (14)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has fewer health risks (15)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Has less environmental impact or potential to reduce carbon footprint (16)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Option to DIY, no need for contractors or certified installers (17)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Easy to find a retailer to buy from and return to (if needed) (18)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Easy to find a contractor or technician to install and/or maintain (if needed) (19)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Safe and easy to use around young children or pets (20)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)
Accessible for older adults or people with disabilities (21)	<input type="radio"/> Important (1)	<input type="radio"/> Somewhat Important (2)	<input type="radio"/> Not Important (3)

Other (22)

☐ Important (1)

☐ Somewhat
Important (2)

☐ Not Important
(3)

Q152 Assuming you have control over the decision to replace your Stove or Cooking range, which of the following would be important to you? (select all that apply):

☐

The technology and its operation are familiar (1)

☐

You like to cook, and the stove/range enhances your experience (2)

☐

Stove/range uses gas (3)

☐

Stove/range uses electricity (4)

☐

None of the above (6)

☐

Other (7) _____

Q153 Assuming you have control over the decision to select Heating and Cooling and Hot Water appliances (like air conditioners, water heaters, furnaces), which of the following would be important to you? (select all that apply):

- ☐ Technology is energy efficient (1)
 - ☐ Contractor to install and maintain technology is readily available (2)
 - ☐ For water heaters and furnace, fuel is Gas (3)
 - ☐ For water heaters and furnace, fuel is Electricity (4)
 - ☐ None of the above (6)
 - ☐ Other (7) _____
-

Q200 Do you adopt any energy saving/ energy bill management strategies at home (e.g., reflective curtains or shades, timing washer/dryer use to least time of use rate)?

- ☐ Yes (please describe all) (1)

 - ☐ No (2)
 - ☐ Not sure/Can't say (3)
-

Q155 In which of the following situations are you likely to replace an electrical appliance in your home? Select up to five options:

- ☐ Breakdown or irreparable damage (1)
- ☐ Minor malfunction (2)
- ☐ Uses too much energy (3)
- ☐ Aesthetically displeasing or ugly (4)
- ☐ Change in home or household needs (5)
- ☐ Nearing end of service life/contractor recommended replacement (6)
- ☐ Newer technology available (7)
- ☐ Opportunity to make my home environment safer (e.g., reduce, fumes, fire hazard etc.) (8)
- ☐ Opportunity to reduce my home's environmental impact (9)
- ☐ Opportunity to lower bills (10)
- ☐ Get an appliance that is easier to operate and maintain (11)
- ☐ Other (12) _____

Q157 For you next home (buying or renting), would you prefer a home with the following high efficiency electrical technologies?

Q158 Induction/electric stovetops

- ☐ Yes (1)
 - ☐ Yes, provided my rent doesn't increase by much (2)
 - ☐ Maybe (3)
 - ☐ No (4)
 - ☐ Need more information (5)
-



Q159 Heat pumps for central cooling and heating

- ☐ Yes (1)
 - ☐ Yes, provided my rent doesn't increase by much (2)
 - ☐ Maybe (3)
 - ☐ No (4)
 - ☐ Need more information (5)
-



Q160 Home energy management systems and smart thermostats

- ☐ Yes (1)
- ☐ Yes, provided my rent doesn't increase by much (2)
- ☐ Maybe (3)
- ☐ No (4)
- ☐ Need more information (5)



Q161 Heat pump water heater

- ☐ Yes (1)
- ☐ Yes, provided my rent doesn't increase by much (2)
- ☐ Maybe (3)
- ☐ No (4)
- ☐ Need more information (5)



Q162 Solar energy for hot water and/or space heating/cooling

- ☐ Yes (1)
- ☐ Yes, provided my rent doesn't increase by much (2)
- ☐ Maybe (3)
- ☐ No (4)
- ☐ Need more information (5)



Q163 Solar panels

- ☐ Yes (1)
 - ☐ Yes, provided my rent doesn't increase by much (2)
 - ☐ No (3)
 - ☐ Maybe (4)
 - ☐ Need more information (5)
-



Q164 If affordable, would you buy an Electric Vehicle

- ☐ Yes (1)
 - ☐ Yes, only if I can charge at home (2)
 - ☐ No (3)
 - ☐ Maybe (4)
 - ☐ Need more information (5)
-

Q165 Many appliances and building materials might have health and safety risks from long-term exposure. These include indoor air pollutants caused by a lack of ventilation, fire risks with dryers, particulates and pollutants from unvented fireplaces and cookstoves, mold growth, asbestos or lead particles in indoor air from building materials, etc. Health and safety risks can often be prevented or reduced by selecting improved technologies and using updated installation/construction practices.

If you were aware of these risks and ways to avoid them, would you consider any of the following actions? select all that apply:

- ☐ Select products that lower risks, even if they may cost more (1)
- ☐ Ask landlord/building manager to upgrade and follow updated installation/construction guidelines (2)
- ☐ Move to a home with a higher safety standard (3)
- ☐ Replace with safer technology when it is time for an upgrade (4)
- ☐ Replace with safer technology ahead of time for an upgrade (5)
- ☐ None of the above (6)
- ☐ Other (7) _____

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Q166 How affordable are the following home project costs for you? Please indicate how affordable each budget is.

	Affordable Does not require much spending, or is within my budget (1)	Somewhat Affordable I will need to plan a few months ahead or get a loan within my budget (2)	Too expensive I am not willing to pay this amount, or it is out of budget for me (3)
(9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$500-\$2,499 (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$2,500-\$9,000 (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$10,000-\$19,999 (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$20,000-\$49,999 (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$50,000-\$74,999 (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
\$75,000-\$99,999 (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
>\$100,000 (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q167 In the next 12 months, which of the following home projects are your highest priorities?
Select top three:

- ☐ Kitchen modifications (including stove, range, hood and construction work) (1)
 - ☐ Small Appliances (Includes small kitchen appliances such as toasters, coffee makers; office and entertainment appliances such as routers, speakers, televisions sets, and computer monitors etc.) (2)
 - ☐ Large Appliances (such as microwaves, refrigerators, washer/dryers) (3)
 - ☐ Heating and cooling and hot water appliances (such air conditioners, water heaters, and furnaces) (4)
 - ☐ Work and maintenance-related appliances and tools (home and yard repair and maintenance such as power tools and lawn mowers) (5)
 - ☐ Smart home and energy management technology (thermostats, lighting controls, etc.) (6)
 - ☐ Other (7) _____
 - ☐ No projects planned (8)
-

Q168 Can you estimate your budget for home projects in the next 12 months?

- ☐ Yes (enter \$ amount below) (1)

 - ☐ No/Not Applicable (2)
-

Page Break _____

Q169 For home projects that are currently too expensive, would any of the following outcomes resulting directly from the home project make you reconsider your investment decision or ask your landlord to reconsider? select all that apply:

- ☐ Accurate estimates of Long-Term Benefits (e.g., increase in home value, extended warranties, long-term cost savings, etc.) (4)
- ☐ Significant lowering of Health and Safety Risks for home occupants (5)
- ☐ Significant lowering of Indoor Pollution (noise, fumes, etc.) and Negative Environmental impacts (6)
- ☐ Eligibility for Financial Assistance program to offset part of upfront cost (7)
- ☐ Eligibility for Lease and/or Buyback options (8)
- ☐ Reduction in overall household expenses or increased savings (9)

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Q176 Do you find information about Energy Efficient Technologies and Materials (e.g., smart home technologies, lighting, appliances, etc.) useful and relevant? (Select all that apply):

- ☐ Relevant, I keep myself informed (1)
- ☐ Relevant, I usually research such information and have participated/will participate (2)
- ☐ Relevant, but not useful as a renter (3)
- ☐ Follow some information, but don't find it useful (4)
- ☐ I would like to be informed, but it is difficult to access information (5)
- ☐ I would like to be informed, but will participate when in a position to do so (6)
- ☐ Not interested (7)
- ☐ Prefer not to say (8)
- ☐ Other (9) _____



Q177 Do you find information about Renewable and Clean Energy Technologies for homes (e.g., solar thermal, solar PV, geothermal, battery storage) useful and relevant? (Select all that apply):

- ☐ Relevant, I keep myself informed (1)
- ☐ Relevant, I usually research such information and have participated/will participate (2)
- ☐ Follow some information, but don't find it useful (3)
- ☐ I would like to be informed, but it is difficult to access information (4)
- ☐ I would like to be informed, but will participate when in a position to do so (5)
- ☐ Not interested (6)
- ☐ Prefer not to say (7)
- ☐ Other (8) _____



Q178 Do you find information about Recycling, Reuse and Reduction of waste in homes useful and relevant? (Select all that apply):

☐

Relevant, I keep myself informed (1)

☐

Relevant, I usually research such information and have participated/will participate (2)

☐

Follow some information, but don't find it useful (3)

☐

I would like to be informed, but it is difficult to access information (4)

☐

I would like to be informed, but will participate when in a position to do so (5)

☐

Not interested (6)

☐

Prefer not to say (7)

☐

Other (8) _____



Q179 Do you find information about public entities (utilities, cities, states, or federal agencies) sponsored programs on energy-efficient and low-carbon homes and economy useful and relevant? (Select all that apply):

- ☐ Relevant, I keep myself informed (1)
- ☐ Relevant, I usually research such information and have participated/will participate (2)
- ☐ Follow some information, but don't find it useful (3)
- ☐ I would like to be informed, but it is difficult to access information (4)
- ☐ I would like to be informed, but will participate when in a position to do so (5)
- ☐ Not interested (6)
- ☐ Prefer not to say (7)
- ☐ Other (8) _____



Q180 Do you find information about initiatives by private businesses and brands to increase energy efficiency and reduce waste useful and relevant? (Select all that apply):

☐

Relevant, I keep myself informed (1)

☐

Relevant, I usually research such information and have participated/will participate (2)

☐

Follow some information, but don't find it useful (3)

☐

I would like to be informed, but it is difficult to access information (4)

☐

I would like to be informed, but will participate when in a position to do so (5)

☐

Not interested (6)

☐

Prefer not to say (7)

☐

Other (8) _____

Page Break

Q181 Where do you usually find information about appliances, building materials, and contractors for home projects? (select all that apply):

- ☐ Newspaper, radio or television (1)
- ☐ Word of mouth or referrals from friends or family (2)
- ☐ Government-sponsored websites (e.g., Department of Energy (DOE), Energy Saver, Environmental Protection Agency (EPA), or regional energy-efficiency organizations) (3)
- ☐ Home repair and review websites (e.g., Home Advisor, Angi (formerly Angie's List), Yelp, Google Reviews) (4)
- ☐ Social networking websites (e.g., Facebook, Instagram, Twitter) (5)
- ☐ Known retailers (including big box stores and online sellers) (6)
- ☐ Contractors (7)
- ☐ From service provider lists maintained by the cities, utilities, or state/federal agencies (8)
- ☐ Manufacturer advertising and/or helplines (9)
- ☐ Other (10) _____

Carry Forward Selected Choices from "Where do you usually find information about appliances, building materials, and contractors for home projects? (select all that apply):"



Q182 Which of the information sources (selected above) do you trust the most? Drag and drop these information sources in the order of most trusted at the top to least trusted at the bottom.

- _____ Newspaper, radio or television (1)
 - _____ Word of mouth or referrals from friends or family (2)
 - _____ Government-sponsored websites (e.g., Department of Energy (DOE), Energy Saver, Environmental Protection Agency (EPA), or regional energy-efficiency organizations) (3)
 - _____ Home repair and review websites (e.g., Home Advisor, Angi (formerly Angie's List), Yelp, Google Reviews) (4)
 - _____ Social networking websites (e.g., Facebook, Instagram, Twitter) (5)
 - _____ Known retailers (including big box stores and online sellers) (6)
 - _____ Contractors (7)
 - _____ From service provider lists maintained by the cities, utilities, or state/federal agencies (8)
 - _____ Manufacturer advertising and/or helplines (9)
 - _____ Other (10)
-

Q183 Would you prefer a single source of information from a research-based agency that periodically shares information about energy efficiency, renewable energy, and home improvements? (examples include mobile application, website, and newsletter.)

- ☐ No (1)
 - ☐ Yes (2)
 - ☐ Maybe (3)
-

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Q184 While planning for desired home projects to enhance your living space, lower energy costs and use, what have been some of the barriers that delayed or caused you to drop your plans? select all that apply:

- ☐ Upfront cost of material and/or appliances (1)
- ☐ Unclear cost-benefit projections (2)
- ☐ Difficulty in finding the right material and/or appliances (3)
- ☐ Difficulty in finding the right contractor (4)
- ☐ Landlord or building manager did not agree or permit (8)
- ☐ Lack of clarity/information about warranties, rebates and other necessary information (5)
- ☐ Other (6) _____
- ☐ None of the above (7)

Display This Question:

If While planning for desired home projects to enhance your living space, lower energy costs and use... != None of the above

Q185 Please describe your experience of the delayed or dropped home improvement

Q186 Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation?

☐ Yes, only in the last 1 year (How much did it cost? \$) (1)

☐ Yes, in the last 1 to 3 years (How much did it cost? \$) (2)

☐ No (3)

☐ Prefer not to say (4)

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)

Q187 What did you have to repair, replace or renovate?

☐ Enter response 1 (4) _____

☐ Enter response 2 (5) _____

☐ Enter response 3 (6) _____

☐ Enter response 4 (7) _____

☐ Enter response 5 (8) _____

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)



Q188 Was the repair, replacement or renovation (select all that apply):

- ☐ Same/similar to the original (1)
- ☐ Improvement over the original (e.g., more energy efficient, additional features)
(2)
- ☐ A cheaper alternative as a temporary fix, intend to upgrade later (3)
- ☐ A cheaper alternative, no plans to upgrade later (4)
- ☐ Other (5) _____

Display This Question:

If Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, only in the last 1 year (How much did it cost? \$)

Or Have you had to make any (one or more) unexpected or emergency repair, replacement or renovation? = Yes, in the last 1 to 3 years (How much did it cost? \$)



Q189 How did it impact your household budget or financial plans?

- ☐ Significant negative impact (1)
- ☐ Somewhat negative impact (2)
- ☐ Can't say (3)
- ☐ No impact (4)
- ☐ Prefer not to say (5)

End of Block: Renter Questions
