

# UnderStandingAmericaStudy

UAS 577: ENERGY-SAVING INVESTMENTS



Survey author(s): Stephie Fried, Hannah Rhodenhiser, David Lagakos

Fielded November 8, 2023 - February 11, 2024

---

## Contents

---

<b>1</b>	<b>Introduction</b>	<b>3</b>
1.1	Topics . . . . .	3
1.2	Experiments . . . . .	3
1.3	Citation . . . . .	3
<b>2</b>	<b>Survey Response And Data</b>	<b>4</b>
2.1	Sample selection and response rate . . . . .	4
2.2	Timings . . . . .	4
2.3	Sample & Weighting . . . . .	5
<b>3</b>	<b>Standard Variables</b>	<b>6</b>
<b>4</b>	<b>Background Demographics</b>	<b>11</b>
<b>5</b>	<b>Missing Data Conventions</b>	<b>15</b>
<b>6</b>	<b>Routing Syntax</b>	<b>16</b>
<b>7</b>	<b>Survey with Routing</b>	<b>17</b>
	background . . . . .	17
	energy . . . . .	18
	rationale . . . . .	19
	rationale_no . . . . .	28
	climate . . . . .	49
	Closing . . . . .	50

---

# 1 INTRODUCTION

---

This survey, titled "UAS 577: Energy-saving investments", asks respondents a series of questions about energy-saving investments at home. This survey is no longer in the field. Respondents were paid \$3 to complete the survey.

## 1.1 Topics

---

This survey contains questions (among others) on the following topics: Consumer Behavior, Diet Lifestyle, Environment. A complete survey topic categorization for the UAS can be found [here](#).

## 1.2 Experiments

---

This survey did not include any experiments. A complete survey experiment categorization for the UAS can be found [here](#).

## 1.3 Citation

---

Each publication, press release or other document that cites results from this survey must include an acknowledgment of UAS as the data source and a disclaimer such as, 'The project described in this paper relies on data from survey(s) administered by the Understanding America Study, which is maintained by the Center for Economic and Social Research (CESR) at the University of Southern California. The content of this paper is solely the responsibility of the authors and does not necessarily represent the official views of USC or UAS.' For any questions or more information about the UAS, contact Tania Gutsche, Project and Panel Manager, Center for Economic and Social Research, University of Southern California, at [tgutsche@usc.edu](mailto:tgutsche@usc.edu).

---

## 2 SURVEY RESPONSE AND DATA

---

### 2.1 Sample selection and response rate

---

The sample selection for this survey was:

Custom selection of active English speaking respondents for a nationally representative sample with a supplement of additional respondents in the San Francisco Federal district.

As such, this survey was made available to 4648 UAS participants. Of those 4648 participants, 3613 completed the survey and are counted as respondents. Of those who are not counted as respondents, 4 started the survey without completing and 1031 did not start the survey. The overall response rate was 77.73%.

Note: We are unable to provide sample weights for a small number of UAS members (see the Sample weighting section below for details). If they completed the survey, these members are included in the data set with a weight of zero, but accounted for in the computation of total sample size and survey response rate.%.

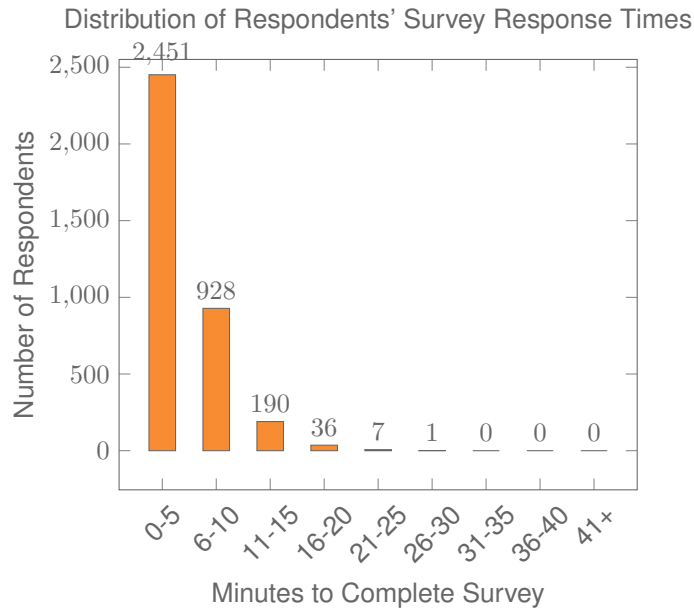
The detailed survey response rate is as follows:

UAS577 - Response Overview	
Size of selected sample	4648
Completed the survey	3613
Started but did not complete the survey	4
Did not start the survey	1031
Response rate	77.73%

### 2.2 Timings

---

The survey took respondents an average of 5 minutes, and the full distribution of survey response times is available in the figure below. Times per question are available upon request.



### 2.3 Sample & Weighting

Sample weights for this survey are computed following the general UAS Weighting Procedure. Specifically, we use a two-step process where we first compute base weights, which correct for unequal probabilities of sampling UAS members, and then generate final, post-stratification weights, which align the sample to the reference population along certain socio-economic dimensions. These are gender (male/female), race and ethnicity (White/Black/Other/Hispanic/Native American), age (18-39/40-49/50/59/60+), education (High school or less/Some college/Bachelor or more), Census regions (Northeast/Midwest/West, excl. CA/CA, excl. LAC, LAC). Benchmark distributions for these variables are derived from the 6 most recent available Current Population Survey (CPS) Basic Monthly Survey with respect to the survey's completion date. The reference population considered for the weights is the U.S. population of adults age 18 and older.

This survey dataset may contain respondents with a weight of zero. These respondents belong to a small group of UAS members for whom sample weights cannot be computed due to non-probability recruitment for special projects. Hence, while they are accounted for in the total number of survey respondents, they do not contribute to any statistics using sample weights. More information is available from the UAS Weighting Procedure. Please contact UAS staff with any questions.

---

### 3 STANDARD VARIABLES

---

Each Understanding America Study data contains a series of standard variables, consisting of individual, household and sample identifiers, language indicator, time stamps and a rating by the respondent of how much he or she liked the survey:

- **uasid**: the identifier of the respondent. This identifier is assigned to a respondent at recruitment and stays with the respondent throughout each and every survey he/she participates in. When analyzing data from multiple surveys, the 'uasid' can be used to merge data sets.
- **uashhid**: the household identifier of the respondent. Every member is assigned a household identifier, stored in the variable 'uashhid'. For the primary respondent this identifier equals his or her 'uasid'. All other eligible members of the primary respondent's household (everyone who is 18 or older in the household) who become UAS respondents receive the 'uasid' of the primary respondent as their household identifier. The identifier 'uashhid' remains constant over time for all respondents. Thus it is always possible to find the original UAS household of an UAS panel member (even after they, for example, have moved out to form another household).
- **survhhid**: uniquely identifies the household a UAS panel member belongs to in a given survey. For instance, if the primary respondent and his/her spouse are both UAS members at the time of a given survey, they both receive the same 'survhhid' identifier for that survey. If they subsequently split, they receive two different 'survhhid' in subsequent surveys. They, however, always share the same 'uashhid'. The identifier 'survhhid' is set to missing (.) if no other household members are UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart if the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, household members have different 'survhhid' reflecting different household compositions at the time they answered the survey. For instance, suppose that the primary respondent and his/her spouse are both UAS members. If the primary respondent answers the survey when he/she is living with the spouse, but the spouse answers the survey when the couple has split, they receive different 'survhhid'. Hence, the variable 'survhhid' identifies household membership of UAS panel members, at the time the respondent answers the survey. Note: in the My Household survey 'survhhid' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.
- **uasmembers**: is the number of other household members who are also UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart is the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, the primary respondent of a household has a value of '0', whereas the second UAS household respondent has a value of '1'. Therefore 'uasmembers' should be interpreted as the

number of household and UAS panel members at the time the respondent answers the survey. Note: in the My Household survey 'uasmembers' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.

- **sampleframe**: indicates the sampling frame from which the household of the respondent was recruited. All UAS recruitment is done through address based sampling (ABS) in which samples are acquired based on postal records. Currently, the variable 'sampleframe' takes on four values reflecting four distinct sample frames used by the UAS over the year (in future data sets the number of sample frames used for recruitment may increase if additional specific populations are targeted in future recruitment batches):
  1. U.S. National Territory: recruited through ABS within the entire U.S.
  2. Areas high concentration Nat Ame: recruited through ABS in areas with a high concentration of Native Americans in the zip-code. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
  3. Los Angeles County: recruited through ABS within Los Angeles County.
  4. California: recruited through ABS within California.

Note: prior to March 6, 2024 this variable was called sampletype and had the following value labels for the above list in UAS data sets:

1. Nationally Representative Sample: recruited through ABS within the entire U.S.
  2. Native Americans: recruited through ABS in areas with a high concentration of Native Americans. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
  3. LA County: recruited through ABS within Los Angeles County.
  4. California: recruited through ABS within California.
- **batch**: indicates the batch from which the respondent was recruited. Currently, this variable takes the following values (in future data sets the number of batches may increase as new recruitment batches are added to the UAS):
    1. ASDE 2014/01
    2. ASDE 2014/01
    3. ASDE 2014/01
    4. Public records 2015/05
    5. MSG 2015/07
    6. MSG 2016/01
    7. MSG 2016/01
    8. MSG 2016/01
    9. MSG 2016/02

10. MSG 2016/03
11. MSG 2016/04
12. MSG 2016/05
13. MSG 2016/08
14. MSG 2017/03
15. MSG 2017/11
16. MSG 2018/02
17. MSG 2018/08
18. MSG 2019/04
19. MSG 2019/05
20. MSG 2019/11
21. MSG 2020/08
22. MSG 2020/10
23. MSG 2021/02
24. MSG 2021/08
25. MSG 2021/08
26. MSG 2022/02
27. MSG 2022/02
28. MSG 2022/08
29. MSG 2022/11
30. MSG 2022/11
31. MSG 2023/01
32. MSG 2023/06
33. MSG 2023/09
34. MSG 2023/10

Note: prior to March 6, 2024 this variable had the following value labels for the above list in UAS data sets:

1. ASDE 2014/01 Nat.Rep.
2. ASDE 2014/01 Native Am.
3. ASDE 2014/11 Native Am.
4. LA County 2015/05 List Sample
5. MSG 2015/07 Nat.Rep.
6. MSG 2016/01 Nat.Rep. Batch 2
7. MSG 2016/01 Nat.Rep. Batch 3



8. MSG 2016/01 Nat.Rep. Batch 4
9. MSG 2016/02 Nat.Rep. Batch 5
10. MSG 2016/03 Nat.Rep. Batch 6
11. MSG 2016/04 Nat.Rep. Batch 7
12. MSG 2016/05 Nat.Rep. Batch 8
13. MSG 2016/08 LA County Batch 2
14. MSG 2017/03 LA County Batch 3
15. MSG 2017/11 California Batch 1
16. MSG 2018/02 California Batch 2
17. MSG 2018/08 Nat.Rep. Batch 9
18. MSG 2019/04 LA County Batch 4
19. MSG 2019/05 LA County Batch 5
20. MSG 2019/11 Nat. Rep. Batch 10
21. MSG 2020/08 Nat. Rep. Batch 11
22. MSG 2020/10 Nat. Rep. Batch 12
23. MSG 2021/02 Nat. Rep. Batch 13
24. MSG 2021/08 Nat. Rep. Batch 15
25. MSG 2021/08 Nat. Rep. Batch 16
26. MSG 2022/02 Nat. Rep. Batch 17 (priority)
27. MSG 2022/02 Nat. Rep. Batch 17 (regular)
28. MSG 2022/08 Nat. Rep. Batch 18
29. MSG 2022/11 LA County Batch 6
30. MSG 2022/11 Nat. Rep. Batch 20
31. MSG 2023/01 Nat. Rep. Batch 21
32. MSG 2023/06 Nat. Rep. Batch 22
33. MSG 2023-09 Native Am. Batch 3
34. MSG 2023-10 Nat. Rep. Batch 23

- **primary\_respondent:** indicates if the respondent was the first person within the household (i.e. to become a member or whether s/he was added as a subsequent member. A household in this regard is broadly defined as anyone living together with the primary respondent. That is, a household comprises individuals who live together, e.g. as part of a family relationship (like a spouse/child/parent) or in context of some other relationship (like a roommate or tenant).
- **hardware:** indicates whether the respondent ever received hardware or not. Note: this variable should not be used to determine whether a respondent received hardware at a given point in time and/or whether s/he used the hardware to participate in a survey. Rather, it indicates whether hardware was ever provided:

1. None
  2. Tablet (includes Internet)
- **language**: the language in which the survey was conducted. This variable takes a value of 1 for English and a value of 2 for Spanish.
  - **start\_date (start\_year, start\_month, start\_day, start\_hour, start\_min, start\_sec)**: indicates the time at which the respondent started the survey.
  - **end\_date (end\_year, end\_month, end\_day, end\_hour, end\_min, end\_sec)**: indicates the time at which the respondent completed the survey.
  - **cs\_001**: indicates how interesting the respondent found the survey.

---

## 4 BACKGROUND DEMOGRAPHICS

---

Every UAS survey data set includes demographic variables, which provide background information about the respondent and his/her household. Demographic information such as age, ethnicity, education, marital status, work status, state of residence, family structure is elicited every quarter through the “My Household” survey. The demographic variables provided with each survey are taken from the most recent ‘MyHousehold’ survey answered by the respondent. If at the time of a survey, the information in “My Household” is more than three months old, a respondent is required to check and update his or her information before being able to take the survey.

The following variables are available in each survey data set:

- **gender**: the gender of the respondent.
- **dateofbirth\_year**: the year of birth of the respondent.
- **age**: the age of the respondent at the start of the survey.
- **agerange**: if the respondent’s age cannot be calculate due to missing information, ‘agerange’ indicates the approximate age. Should a value for both the ‘age’ and ‘agerange’ be present, then ‘age’ takes precedence over ‘agerange’.
- **citizenus**: indicates whether the respondent is a U.S. citizen.
- **bornus**: indicates whether the respondent was born in the U.S.
- **stateborn**: indicates the state in which the respondent was born. This is set to missing (.) if the respondent was not born in the U.S.
- **countryborn**: indicates the country in which the respondent was born. This is set to missing (.) if the respondent was born in the U.S.
- **countryborn\_other**: indicates the country of birth if that country is not on the drop down list of countries shown to the respondent’.
- **statereside**: the state in which the respondent is living.
- **immigration\_status**: indicates whether the respondent is an immigrant. It takes one of the following values: 0 Non-immigrant, 1 First generation immigrant (immigrant who migrated to the U.S), 2 Second generation immigrant (U.S.-born children of at least one foreign-born parent), 3 Third generation immigrant (U.S.-born children of at least one U.S.-born parent, where at least one grandparent is foreign-born), or 4 Unknown immigrant status.
- **maritalstatus**: the marital status of the respondent.
- **livewithpartner**: indicates whether the respondent lives with a partner.

- **education**: the highest level of education attained by the respondent.
- **hisplativo**: indicates whether the respondent identifies him or herself as being Hispanic or Latino. This variable is asked separately from race.
- **hisplatinogroup**: indicates which Hispanic or Latino group a respondent identifies him or herself with. This is set to missing (.) if the respondent does not identify him or herself as being Hispanic or Latino.
- **white**: indicates whether the respondent identifies him or herself as white (Caucasian).
- **black**: indicates whether the respondent identifies him or herself as black (African-American).
- **nativeamer**: indicates whether the respondent identifies him or herself as Native American (American Indian or Alaska Native).
- **asian**: indicates whether the respondent identifies him or herself as Asian (Asian-American).
- **pacific**: indicates whether the respondent identifies him or herself as Native Hawaiian or Other Pacific Islander.
- **race**: indicates the race of the respondent as singular (e.g., '1 White' or '2 Black') or as mixed (in case the respondent identifies with two or more races). The value '6 Mixed' that the respondent answered 'Yes' to at least two of the single race categories. This variable is generated based on the values of the different race variables (white, black, nativeamer, asian, pacific). This composite measure is not conditional on hisplativo, so an individual may identify as Hispanic or Latino, and also as a member of one or more racial groups.
- **working**: indicates whether the respondent is working for pay.
- **sick\_leave**: indicates whether the respondent is not working because sick or on leave.
- **unemp\_layoff**: indicates whether the respondent is unemployed or on lay off.
- **unemp\_look**: indicates whether the respondent is unemployed and looking for a job.
- **retired**: indicates whether the respondent is retired.
- **disabled**: indicates whether the respondent has a disability.
- **If\_other**: specifies other labor force status.
- **laborstatus**: indicates the labor force status of the respondent as singular (e.g., '1 Working for pay' or '2 On sick or other leave') or as mixed (in case the respondent selects two or more labor statuses). The value '8 Mixed' indicates that the respondent answered 'Yes' to at least two of the single labor force status variables. This variable is generated based on the values of the different labor status variables (working, sick\_leave, unempl\_layoff, unempl\_look, retired, disabled, If\_other).

- **employmenttype**: indicates the employment type of the respondent (employed by the government, by a private company, a nonprofit organization, or self-employed). This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **workfullpart**: indicates whether the respondent works full or part-time. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hourswork**: indicates the number of hours the respondent works per week. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hhincome**: is the total combined income of all members of the respondent's household (living in their household) during the past 12 months.
- **anyhhmember**: indicates whether there were any members in the respondent's household at the time he/she answered the survey as reported by the respondent.
- **hhmembervnumber**: indicates the number of household members in the respondent's household at the time of the survey as reported by the respondent. It may be that 'anyhhmember' is 'Yes', but 'hhmembervnumber' is missing if the respondent did not provide the number of household members at the time of the survey.
- **hhmemberin\_#**: indicates whether a household member is currently in the household as reported by the respondent. Household members are never removed from the stored household roster and their information is always included in survey data sets. The order of the roster is the same order in which household members were specified by the respondent in the 'MyHousehold' survey. The order is identified by the suffix \_# (e.g., \_1 indicates the first household member, \_2 the second household member, etc.).

As an example, if the first household member is in the household at the time of the survey, 'hhmemberin\_1' is set to '1 HH Member 1 is in the HH'; if he/she has moved out, 'hhmemberin\_1' is set to '0 HH member 1 is no longer in the HH'. Since information of other household members (stored in the variables listed below) is always included in survey data sets, information about 'hhmemberin\_1' is available whether this person is still in the household or has moved out.

- **hhmembergen\_#**: indicates the gender of another household member as reported by the respondent.
- **hhmemberage\_#**: indicates the age of another household member. The age is derived from the month and year of birth of the household member as reported by the respondent.
- **hhmemberrel\_#**: indicates the relationship of the respondent to the other household member as reported by the respondent.

- **hhmemberuasid\_#**: is the 'uasid' of the other household member if this person is also a UAS panel member. It is set to missing (.) if this person is not a UAS panel member at the time of the survey. Since this identifier is directly reported by the respondent (chosen from a preloaded list), it may differ from the actual (correct) 'uasid' of the UAS member it refers to because of reporting error. Also, this variable should not be used to identify UAS members in a given household at the time of the survey. This is because the variables 'hhmemberuasid\_#' are taken from the most recent 'My Household' and changes in household composition involving UAS members may have occurred between the time of the respondent answered 'My Household' and the time the respondent answers the survey. To follow UAS members of a given household, it is advised to use the identifiers 'uashhid' and 'survhhid'.
- **lastmyhh\_date**: the date on which the demographics variables were collected through the 'My Household' survey.

---

## 5 MISSING DATA CONVENTIONS

---

Data files provide so-called clean data, that is, answers given to questions that are not applicable anymore at survey completion (for example because a respondent went back in the survey and skipped over a previously answered question) are treated as if the questions were never asked. In the data files all questions that were asked, but not answered by the respondent are marked with (.e). All questions never seen by the respondent (or any dirty data) are marked with (.a). The latter may mean that a respondent did not view the question because s/he skipped over it; or alternatively that s/he never reached that question due to a break off. If a respondent did not complete a survey, the variables representing survey end date and time are marked with (.c). Household member variables are marked with (.m) if the respondent has less household members (e.g. if the number of household members is 2, any variables for household member 3 and up are marked with (.m)).

UAS provides data in STATA and CSV format. Stata data sets come with include variable labels that are not available in the CSV files. Value labels are provided for single-response answer option. In STATA these labels will include the labels 'Not asked' and 'Not answered' for (.a) and (.e), and will show in tabulations such as 'tab q1, missing'. For multiple-response questions a binary variable is created for each answer option indicating whether the option was selected or not. A summary variable is also provided in string format reflecting which options were selected and in which order. For example, if a question asked about favorite animals with options cat, dog, and horse, then if a respondent selected horse and then cat, the binary variables for horse and cat will be set to yes, while the overall variable would have a string value of '3-1'. If no answer was given, all binary variables and the summary variable will be marked with '.e'.

Questions that are asked multiple times are often implemented as so-called array questions. Supposing the name of such question was Q1 and it was asked in 6 different instances, your data set would contain the variables Q1\_1\_ to Q1\_6\_. To illustrate, if a survey asked the names of all children, then child\_1\_ would contain the name of the first child the respondent named and so on.

More information about the UAS data in general can be found on the UAS Data Pages web site.

---

## 6 ROUTING SYNTAX

---

The survey with routing presented in the next section includes all of the questions that make up this survey, the question answers when choices were provided, and the question routing. The routing includes descriptions of when questions are grouped, conditional logic that determines when questions are presented to the respondent, randomization of questions and answers, and fills of answers from one question to another.

If you are unfamiliar with conditional logic statements, they are typically formatted so that **if** the respondent fulfills some condition (e.g. they have a cellphone or a checking account), **then** they are presented with some other question or the value of some variable is changed. If the respondent does not fulfill the condition (e.g. they are not a cellphone adopter or they do not have a checking account), something **else** happens such as skipping the next question or changing the variable to some other value. Some of the logic involved in the randomization of questions or answers being presented to the respondent is quite complex, and in these instances there is documentation to clarify the process being represented by the routing.

Because logic syntax standards vary, here is a brief introduction to our syntax standards. The syntax used in the conditional statements is as follows: '=' is equal to, '<' is less than, '>' is greater than, and '!= ' is used for does not equal. When a variable is set to some number N, the statement looks like 'variable := N'.

The formatting of the questions and routing are designed to make it easier to interpret what is occurring at any given point in the survey. Question ID is the bold text at the top of a question block, followed by the question text and the answer selections. When a question or variable has associated data, the name links to the appropriate data page, so you can easily get directly to the data. Text color is used to indicate the routing: **red** is conditional logic, **gold** is question grouping, **green** is looping, and **orange** is used to document randomization and other complex conditional logic processes. The routing is written for a computer to parse rather than a human to read, so when the routing diverges significantly from what is displayed to the respondent, a screenshot of what the respondent saw is included.

The name of the randomization variables are defined in proximity to where they are put into play, and like the question ID the names of the randomization variables can be used to link directly to the associated data page.



---

## 7 SURVEY WITH ROUTING

---

Start of section **Background**

**maintro** (Section Background)

We would like to ask you a few questions about energy-saving investments at home.

/\* This survey asks respondents a series of questions about energy-saving investments at home. After an initial pilot, some changes were made with regard to question phrasing, formatting and error checking. Whether a respondent received the initial or modified version is denoted in variable `optional.flag` with values:

- o 1 With optional/required text and formatting. Here respondents saw the texts "(Required)" behind "Most important" reason and "(Optional)" behind the 2nd and 3rd most important reason. Additionally, no warning was shown if respondents did not provide a 2nd and/or 3rd reason.
- o 2 Without optional/required text and formatting. Here respondents did not see any text behind "Most important", "2nd most important", and "3rd most important". Additionally, a warning was shown if respondents did not provide a 2nd and/or 3rd reason.

\*/

`optional.flag := 1`

### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**a001** (own or rent home in section Background)

Do you own or rent your home?

1 Own

2 Rent

3 Other, please specify:

**a001.other** (other own or rent home in section Background)

STRING

### END OF GROUP

**IF a001 = 1 THEN**

**a002.o** (approximate monthly mortgage payment in section Background)

What is your approximate monthly mortgage payment? (Include payments to principal and interest; exclude property taxes and insurance.)

1 \$0

2 \$1 to \$999

3 \$1,000 to \$1,999

- 4 \$2,000 to \$2,999
- 5 \$3,000 to \$3,999
- 6 \$4,000 or more

**ELSEIF a001 = 2 THEN**

**a002.r** (approximate monthly rent in section Background)

What is your approximate monthly rent?

- 1 \$0
- 2 \$1 to \$999
- 3 \$1,000 to \$1,999
- 4 \$2,000 to \$2,999
- 5 \$3,000 to \$3,999
- 6 \$4,000 or more

**END OF IF**

**a003** (best describes home in section Background)

Which of the following best describes your home?

- 1 Single-family house detached from any other house
- 2 Single-family house attached to one or more other houses (for example: duplex, row house, or townhome)
- 3 Apartment in a building with 2 to 4 units
- 4 Apartment in a building with 5 or more units
- 5 Mobile home

End of section **Background**

Start of section **Energy**

**GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN**

**b001\_intro** (Section Energy)

For each of the following items, please indicate whether you own or lease them, do not own or lease, or don't know.

**SUBGROUP OF QUESTIONS**

**b001** (All-electric vehicle or plug-in hybrid vehicle in section Energy)

All-electric vehicle or plug-in hybrid vehicle

**b002** (Non-plug-in hybrid vehicle in section Energy)

Non-plug-in hybrid vehicle

**IF a001 = 1 THEN**

**b003** (Home solar panels in section Energy)  
Home solar panels

**b004** (Heat pump heating and cooling in section Energy)  
Heat pump heating and cooling

**b005** (Energy efficient appliances: for example, an Energy Star certified refrigerator, clothes washer or dryer, dishwasher, electric or induction range, stove, or oven in section Energy)  
Energy efficient appliances: for example, an Energy Star certified refrigerator, clothes washer or dryer, dishwasher, electric or induction range, stove, or oven

END OF IF

END OF SUBGROUP

END OF GROUP

IF a001 = 1 THEN

**b007** (invest in weatherization or insulation measures costing more than \$1,000 in section Energy)  
Have you invested in weatherization or insulation measures costing more than \$1,000: for example, insulation in walls/attic/basement, or installation of energy efficient windows?

END OF IF

End of section **Energy**

Start of section **Rationale**

/\* The order in which answer options are shown for the different types of energy-saving investments is randomized per the following variables:

- Variables options\_order: order of answer options in d002a to d002c, and d005a to d005c.
- Variables options\_order\_no: order of answer options in d003a to d003c.
- Variables options\_order\_no\_not\_consider: order of answer options in d003a.cn to d003c.cn.
- Variables options\_order\_no\_hybrid: order of answer options in d006a to d006c.
- Variables options\_order\_no\_hybrid\_not\_consider: order of answer options in d006a.cn to d006c.cn.
- Variables options\_order\_solar: order of answer options in d011a to d011c.
- Variables options\_order\_solar\_no: order of answer options in d012a to d012c.

- Variables options\_order\_no\_solar\_not\_consider: order of answer options in d012a.cn to d012c.cn.
- Variables options\_order\_appliance: order of answer options in d019a to d019c.
- Variables options\_order\_appliance\_no: order of answer options in d020a to d020c.
- Variables options\_order\_no\_appliance\_not\_consider: order of answer options in d020a.cn to d020c.cn.
- Variables options\_order\_pump: order of answer options in d022a to d022c.
- Variables options\_order\_pump\_no: order of answer options in d023a to d023c.
- Variables options\_order\_no\_pump\_not\_consider: order of answer options in d023a.cn to d023c.cn.

\*/

IF sizeof(options\_order) = 0 THEN

options\_order := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))  
options\_order(5) := 5

END OF IF

IF sizeof(options\_order\_solar) = 0 THEN

options\_order\_solar := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))  
options\_order\_solar(5) := 5

END OF IF

IF sizeof(options\_order\_appliance) = 0 THEN

options\_order\_appliance := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))  
options\_order\_appliance(5) := 5

END OF IF

IF sizeof(options\_order\_pump) = 0 THEN

options\_order\_pump := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))  
options\_order\_pump(5) := 5

END OF IF

IF b001 = 1 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**c001\_intro** (Section Rationale)

Please rank *up to three* of these options in order of their importance for your decision to own/lease an electric vehicle or plug-in hybrid.

## SUBGROUP OF QUESTIONS

**c001a** (Most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

Most important (required)

**c001b** (2nd most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

2nd most important (optional)

**c001c** (3rd most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

3rd most important (optional)

## END OF SUBGROUP

**selectscript** (Section Rationale)

## END OF GROUP

### IF c001a = 5 THEN

**c001a.other** (other most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

What is the most important reason for your decision to own/lease an electric vehicle or plug-in hybrid?

STRING

### END OF IF

### IF c001b = 5 THEN

**c001b.other** (other 2nd most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

What is the 2nd most important reason for your decision to own/lease an electric vehicle or plug-in hybrid?

STRING

### END OF IF

### IF c001c = 5 THEN

**c001c.other** (other 3rd most important own/lease an electric vehicle or plug-in hybrid in section Rationale)

What is the 3rd most important reason for your decision to own/lease an electric vehicle or plug-in hybrid?

STRING

### END OF IF

END OF IF

IF b002 = 1 AND b001 != 1 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**c002\_intro** (Section Rationale)

Please rank *up to three* of these options in order of their importance for your decision to own/lease a hybrid vehicle (non-plug-in).

SUBGROUP OF QUESTIONS

**c002a** (Most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)  
Most important (required)

**c002b** (2nd most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)  
2nd most important (optional)

**c002c** (3rd most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF c002a = 5 THEN

**c002a\_other** (other most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)

What is the most important reason for your decision to own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF c002b = 5 THEN

**c002b\_other** (other 2nd most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)

What is the 2nd most important reason for your decision to own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF c002c = 5 THEN

**c002c\_other** (other 3rd most important own/lease a hybrid vehicle (non-plug-in) in section Rationale)

What is the 3rd most important reason for your decision to own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

END OF IF

IF b003 = 1 THEN

**c003** (were solar panels already installed in section Rationale)

When you bought your home, were solar panels already installed?

- 1 My home had solar panels when I bought it
- 2 I installed solar panels on my home

IF c003 = 2 THEN

**c004** (ware that the federal government offers a tax credit for installing solar panels in section Rationale)

Are you aware that the federal government offers a tax credit for installing solar panels?

IF c004 = 1 THEN

**c005** (how big was federal tax credit when installed solar panels in section Rationale)

As far as you remember, how big was the federal tax credit that was offered at the time when you installed solar panels?

- 1 0 - 9% (0 - 9 cents back for every \$1 spent)
- 2 10 - 19% (10 - 19 cents back for every \$1 spent)
- 3 20 - 29% (20 - 29 cents back for every \$1 spent)
- 4 30 - 39% (30 - 39 cents back for every \$1 spent)
- 5 40 - 49% (40 - 49 cents back for every \$1 spent)
- 6 50 - 59% (50 - 59 cents back for every \$1 spent)
- 7 60 - 69% (60 - 69 cents back for every \$1 spent)
- 8 70% or more (70 or more cents back for every \$1 spent)

**c006** (which year install solar panels in section Rationale)

In which year did you install solar panels?

- 1 2023
- 2 2022
- 3 2021
- 4 2020
- 5 2019
- 6 2018
- 7 2017
- 8 2016
- 9 2015

- 10 2014
- 11 2013
- 12 2012
- 13 2011
- 14 2010
- 15 2009
- 16 2008
- 17 2007
- 18 2006
- 19 2005
- 20 2004
- 21 2003
- 22 2002
- 23 2001
- 24 2000
- 25 Before 2000

**END OF IF**

**c007** (at time of solar panel installation, did state or utility offer any incentives in section Rationale)

At the time of your solar panel installation, did your state or utility offer any incentives for installing solar panels?

- 1 Yes
- 2 No
- 3 Don't know

**IF c007 = 1 THEN**

**c007\_other** (other incentives state or utility offer in section Rationale)

What kind of incentives for installing solar panels did your state or utility offer?

STRING

**END OF IF**

**GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN**

**c008\_intro** (Section Rationale)

Please rank *up to three* of these options in order of their importance for your decision to install solar panels.

**SUBGROUP OF QUESTIONS**

**c008a** (Most important install solar panels in section Rationale)

Most important (required)

**c008b** (2nd most important install solar panels in section Rationale)



2nd most important (optional)

**c008c** (3rd most important install solar panels in section Rationale)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF c008a = 5 THEN

**c008a\_other** (other most important install solar panels in section Rationale)  
What is the most important reason for your decision to install solar panels?  
STRING

END OF IF

IF c008b = 5 THEN

**c008b\_other** (other 2nd most important install solar panels in section Rationale)  
What is the 2nd most important reason for your decision to install solar panels?  
STRING

END OF IF

IF c008c = 5 THEN

**c008c\_other** (other 3rd most important install solar panels in section Rationale)  
What is the 3rd most important reason for your decision to install solar panels?  
STRING

END OF IF

**c009** (still install solar panels if no tax credits federal government in section Rationale)

If the federal government did not offer any tax credits for solar panels when I made the decision to install solar panels...

- 1 I would most likely still have installed solar panels
- 2 I would most likely not have installed solar panels

END OF IF

END OF IF

IF b004 = 1 THEN

**c003.hp** (was heat pump heating/cooling already installed in section Rationale)  
When you bought your home, was heat pump heating/cooling already installed?

- 1 My home had heat pump heating/cooling when I bought it
- 2 I installed heat pump heating/cooling in my home

IF c003\_hp = 2 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**c011\_intro** (Section Rationale)

Please rank *up to three* of these options in order of their importance for your decision to own/lease heat pump heating and cooling.

SUBGROUP OF QUESTIONS

**c011a** (Most important heat pump heating and cooling in section Rationale)  
Most important (required)

**c011b** (2nd most important heat pump heating and cooling in section Rationale)  
2nd most important (optional)

**c011c** (3rd most important heat pump heating and cooling in section Rationale)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF c011a = 5 THEN

**c011a\_other** (other most important heat pump heating and cooling in section Rationale)

What is the most important reason for your decision to own/lease heat pump heating and cooling?

STRING

END OF IF

IF c011b = 5 THEN

**c011b\_other** (other 2nd most important heat pump heating and cooling in section Rationale)

What is the 2nd most important reason for your decision to own/lease heat pump heating and cooling?

STRING

END OF IF

IF c011c = 5 THEN

**c011c\_other** (other 3rd most important heat pump heating and cooling in section Rationale)  
What is the 3rd most important reason for your decision to own/lease heat pump heating and cooling?  
STRING  
END OF IF  
END OF IF  
END OF IF

IF b005 = 1 OR b007 = 1 THEN  
GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**c010\_intro** (Section Rationale)  
Please rank *up to three* of these options in order of their importance for your decision to own/lease energy efficient appliances or invest in weatherization/insulation measures.

SUBGROUP OF QUESTIONS

**c010a** (Most important energy efficient appliances in section Rationale)  
Most important (required)

**c010b** (2nd most important energy efficient appliances in section Rationale)  
2nd most important (optional)

**c010c** (3rd most important energy efficient appliances in section Rationale)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF c010a = 5 THEN

**c010a\_other** (other most important energy efficient appliances in section Rationale)  
What is the most important reason for your decision to own/lease energy efficient appliances or invest in weatherization/insulation measures?  
STRING

END OF IF

IF c010b = 5 THEN

**c010b\_other** (other 2nd most important energy efficient appliances in section Rationale)  
What is the 2nd most important reason for your decision to own/lease energy efficient

```

| appliances or invest in weatherization/insulation measures?
| STRING
| END OF IF
| IF c010c = 5 THEN
|   c010c_other (other 3rd most important energy efficient appliances in section Rationale)
|   What is the 3rd most important reason for your decision to own/lease energy efficient
|   appliances or invest in weatherization/insulation measures?
|   STRING
| END OF IF
END OF IF

```

End of section **Rationale**

Start of section **Rationale\_no**

```

IF sizeof(options_order_no) = 0 THEN
| options_order_no := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4, 5 →5))
| options_order_no(6) := 6
END OF IF

```

```

IF sizeof(options_order_no_not_consider) = 0 THEN
| options_order_no_not_consider := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))
| options_order_no_not_consider(5) := 5
END OF IF

```

```

IF sizeof(options_order_no_hybrid) = 0 THEN
| options_order_no_hybrid := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))
| options_order_no_hybrid(5) := 5
END OF IF

```

```

IF sizeof(options_order_no_hybrid_not_consider) = 0 THEN
| options_order_no_hybrid_not_consider := shuffleArray(array(1 →1, 2 →2, 3 →3))
| options_order_no_hybrid_not_consider(4) := 4
END OF IF

```

```

IF sizeof(options_order_no_solar) = 0 THEN
| options_order_no_solar := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))
| options_order_no_solar(5) := 5
END OF IF

```

```

IF sizeof(options_order_no_solar_not_consider) = 0 THEN

```

```
options_order_no_solar_not_consider := shuffleArray(array(1 →1, 2 →2, 3 →3))
options_order_no_solar_not_consider(4) := 4
END OF IF
```

```
IF sizeof(options_order_no_pump) = 0 THEN
options_order_no_pump := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))
options_order_no_pump(5) := 5
END OF IF
```

```
IF sizeof(options_order_no_pump_not_consider) = 0 THEN
options_order_no_pump_not_consider := shuffleArray(array(1 →1, 2 →2, 3 →3))
options_order_no_pump_not_consider(4) := 4
END OF IF
```

```
IF sizeof(options_order_no_appliance) = 0 THEN
options_order_no_appliance := shuffleArray(array(1 →1, 2 →2, 3 →3, 4 →4))
options_order_no_appliance(5) := 5
END OF IF
```

```
IF sizeof(options_order_no_appliance_not_consider) = 0 THEN
options_order_no_appliance_not_consider := shuffleArray(array(1 →1, 2 →2, 3 →3))
options_order_no_appliance_not_consider(4) := 4
END OF IF
```

```
IF b001 = 2 THEN
d001 (ever considered owning/leasing electric vehicle or plug-in hybrid in section
Rationale_no)
Have you ever considered owning/leasing an electric vehicle or plug-in hybrid?
```

```
IF d001 = 1 THEN
```

**GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN**

```
d002_intro (Section Rationale_no)
Please rank up to three of these options in order of their importance for your decision
to consider an electric vehicle or plug-in hybrid.
```

**SUBGROUP OF QUESTIONS**

```
d002a (Most important consider own/lease an electric vehicle or plug-in hybrid in
section Rationale_no)
Most important (required)
```

```
d002b (2nd most important consider own/lease an electric vehicle or plug-in
```

hybrid in section Rationale\_no)  
2nd most important (optional)

**d002c** (3rd most important consider own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)  
3rd most important (optional)

**END OF SUBGROUP**

**selectscript** (Section Rationale)

**END OF GROUP**

**IF d002a = 5 THEN**

**d002a\_other** (other most important consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the most important reason for your decision to consider an electric vehicle or plug-in hybrid?

STRING

**END OF IF**

**IF d002b = 5 THEN**

**d002b\_other** (other 2nd most important consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 2nd most important reason for your decision to consider an electric vehicle or plug-in hybrid?

STRING

**END OF IF**

**IF d002c = 5 THEN**

**d002c\_other** (other 3rd most important consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 3rd most important reason for your decision to consider an electric vehicle or plug-in hybrid?

STRING

**END OF IF**

**GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN**

**d003\_intro** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease an electric vehicle or plug-in hybrid.

#### SUBGROUP OF QUESTIONS

**d003a** (Most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

Most important (required)

**d003b** (2nd most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

2nd most important (optional)

**d003c** (3rd most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

3rd most important (optional)

#### END OF SUBGROUP

**selectscript\_six** (Section Rationale)

#### END OF GROUP

##### IF d003a = 6 THEN

**d003a\_other** (other most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

##### END OF IF

##### IF d003b = 6 THEN

**d003b\_other** (other 2nd most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

##### END OF IF

##### IF d003c = 6 THEN

**d003c\_other** (other 3rd most important not own/lease an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

##### END OF IF

ELSEIF d001 = 2 THEN

## GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d003\_intro2** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease/consider an electric vehicle or plug-in hybrid.

### SUBGROUP OF QUESTIONS

**d003a\_cn** (Most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

Most important (required)

**d003b\_cn** (2nd most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

2nd most important (optional)

**d003c\_cn** (3rd most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

3rd most important (optional)

### END OF SUBGROUP

**selectscript** (Section Rationale)

### END OF GROUP

**IF d003a\_cn = 5 THEN**

**d003a\_cn\_other** (other most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

**END OF IF**

**IF d003b\_cn = 5 THEN**

**d003b\_cn\_other** (other 2nd most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

**END OF IF**

**IF d003c\_cn = 5 THEN**



**d003c\_cn\_other** (other 3rd most important not own/lease/consider an electric vehicle or plug-in hybrid in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

END OF IF

END OF IF

IF b001 = 2 AND b002 = 2 THEN

**d004** (ever considered owning/leasing hybrid vehicle (non-plug-in) in section Rationale\_no)

Have you ever considered owning/leasing a hybrid vehicle (non-plug-in)?

IF d004 = 1 AND (b001 = 2 AND d001 = 2) THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d005\_intro** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision to consider a hybrid vehicle (non-plug-in).

SUBGROUP OF QUESTIONS

**d005a** (Most important consider own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

Most important (required)

**d005b** (2nd most important consider own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

2nd most important (optional)

**d005c** (3rd most important consider own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d005a = 5 THEN

**d005a\_other** (other most important consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the most important reason for your decision to consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d005b = 5 THEN

**d005b\_other** (other 2nd most important consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 2nd most important reason for your decision to consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d005c = 5 THEN

**d005c\_other** (other 3rd most important consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 3rd most important reason for your decision to consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d006\_intro** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease a hybrid vehicle (non-plug-in).

#### SUBGROUP OF QUESTIONS

**d006a** (Most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

Most important (required)

**d006b** (2nd most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

2nd most important (optional)

**d006c** (3rd most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d006a = 5 THEN

**d006a\_other** (other most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d006b = 5 THEN

**d006b\_other** (other 2nd most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d006c = 5 THEN

**d006c\_other** (other 3rd most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease a hybrid vehicle (non-plug-in)?

STRING

END OF IF

ELSEIF d004 = 2 AND (b001 = 2 AND d001 = 1) THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d006\_intro2** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease/consider a hybrid vehicle (non-plug-in).

SUBGROUP OF QUESTIONS

**d006a\_cn** (Most important not own/lease/consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

Most important (required)

**d006b\_cn** (2nd most important not own/lease/consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

2nd most important (optional)

**d006c\_cn** (3rd most important not own/lease/consider a hybrid vehicle (non-plug-in) in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript\_four** (Section Rationale)

END OF GROUP

IF d006a\_cn = 4 THEN

**d006a\_cn\_other** (other most important not own/lease a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d006b\_cn = 4 THEN

**d006b\_cn\_other** (other 2nd most important not own/lease/consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

IF d006c\_cn = 4 THEN

**d006c\_cn\_other** (other 3rd most important not own/lease/consider a hybrid vehicle (non-plug-in) in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease/consider a hybrid vehicle (non-plug-in)?

STRING

END OF IF

END OF IF

END OF IF

IF a001 = 1 AND b003 = 2 THEN

**d007** (ever considered installing solar panels in section Rationale\_no)

Have you ever considered installing solar panels?

IF d007 = 1 THEN

**d008** ( aware that federal government offers tax credit for installing solar panels in section Rationale\_no)

Are you aware that the federal government offers a tax credit for installing solar panels?

**IF d008 = 1 THEN**

**d009** (how big federal tax credit when considering solar panels in section Rationale\_no)

As far as you remember, how big was the federal tax credit that was offered at the time when you were considering solar panels?

- 1 0-9% (0-9 cents back for every \$1 spent)
- 2 10-19% (10-19 cents back for every \$1 spent)
- 3 20-29% (20-29 cents back for every \$1 spent)
- 4 30-39% (30-39 cents back for every \$1 spent)
- 5 40-49% (40-49 cents back for every \$1 spent)
- 6 50-59% (50-59 cents back for every \$1 spent)
- 7 60-69% (60-69 cents back for every \$1 spent)
- 8 70% or more (70 or more cents back for every \$1 spent)

**d010** (which year considering solar panels in section Rationale\_no)

In which year were you considering solar panels?

- 1 2023
- 2 2022
- 3 2021
- 4 2020
- 5 2019
- 6 2018
- 7 2017
- 8 2016
- 9 2015
- 10 2014
- 11 2013
- 12 2012
- 13 2011
- 14 2010
- 15 2009
- 16 2008
- 17 2007
- 18 2006
- 19 2005
- 20 2004
- 21 2003
- 22 2002
- 23 2001
- 24 2000
- 25 Before 2000

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d011\_intro** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision to consider solar panels.

SUBGROUP OF QUESTIONS

**d011a** (Most important consider install solar panels in section Rationale\_no)  
Most important (required)

**d011b** (2nd most important consider install solar panels in section Rationale\_no)  
2nd most important (optional)

**d011c** (3rd most important consider install solar panels in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF **d011a = 5 THEN**

**d011a\_other** (other most important consider install solar panels in section Rationale\_no)

What is the most important reason for your decision to consider installing solar panels?

STRING

END OF IF

IF **d011b = 5 THEN**

**d011b\_other** (other 2nd most important consider install solar panels in section Rationale\_no)

What is the 2nd most important reason for your decision to consider installing solar panels?

STRING

END OF IF

IF **d011c = 5 THEN**

**d011c\_other** (other 3rd most important consider install solar panels in section Rationale\_no)

What is the 3rd most important reason for your decision to consider installing solar panels?

STRING

END OF IF

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d012\_intro** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to install solar panels.

#### SUBGROUP OF QUESTIONS

**d012a** (Most important not install solar panels in section Rationale\_no)

Most important (required)

**d012b** (2nd most important not install solar panels in section Rationale\_no)

2nd most important (optional)

**d012c** (3rd most important not install solar panels in section Rationale\_no)

3rd most important (optional)

#### END OF SUBGROUP

**selectscript** (Section Rationale)

#### END OF GROUP

IF d012a = 5 THEN

**d012a\_other** (other most important not install solar panels in section Rationale\_no)

What is the most important reason for your decision to not install solar panels?

STRING

END OF IF

IF d012b = 5 THEN

**d012b\_other** (other 2nd most important not install solar panels in section Rationale\_no)

What is the 2nd most important reason for your decision to not install solar panels?

STRING

END OF IF

IF d012c = 5 THEN

**d012c\_other** (other 3rd most important not install solar panels in section Rationale\_no)

What is the 3rd most important reason for your decision to not install solar panels?

STRING

END OF IF

ELSE

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d012\_intro\_cn** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to consider installing solar panels.

SUBGROUP OF QUESTIONS

**d012a\_cn** (Most important not consider install solar panels in section Rationale\_no)  
Most important (required)

**d012b\_cn** (2nd most important not consider install solar panels in section Rationale\_no)  
2nd most important (optional)

**d012c\_cn** (3rd most important not consider install solar panels in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript\_four** (Section Rationale)

END OF GROUP

IF d012a\_cn = 4 THEN

**d012a\_cn\_other** (other most important not consider install solar panels in section Rationale\_no)

What is the most important reason for your decision to not consider installing solar panels?

STRING

END OF IF

IF d012b\_cn = 4 THEN

**d012b\_cn\_other** (other 2nd most important not consider install solar panels in section Rationale\_no)

What is the 2nd important reason for your decision to not consider installing solar panels?



| STRING

END OF IF

IF d012c.cn = 4 THEN

**d012c.cn.other** (other 3rd most important not consider install solar panels in section Rationale\_no)

What is the 3rd important reason for your decision to not consider installing solar panels?

STRING

END OF IF

END OF IF

### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d013.intro2** (Section Rationale\_no)

As of October 2023, the federal government offers a 30% tax credit for solar panel installations. That means for every \$1 you spend on solar panels you get \$0.30 back as a tax credit.

**d013** (aware that 30% is federal tax credit rate currently offered in section Rationale\_no)

Were you aware that 30% is the federal tax credit rate currently offered?

END OF GROUP

IF d013 = 1 THEN

**d014** (impact on decision if increased tax credit to 50% in section Rationale\_no)

If the federal government increased this tax credit to 50% (meaning for every \$1 that you spend on solar panels you get \$0.50 back as a tax credit), what impact would that have on your decision?

- 1 No impact, I would not be more likely to install solar panels
- 2 I might install solar panels, but I am not sure
- 3 I would be much more likely to install solar panels

IF d014 IN (2,3) THEN

**d015** (more likely would or would not install solar panels if 50% tax credit available in section Rationale\_no)

You answered that you *might* install solar panels if there were a 50% tax credit available.

Which would you say is more likely: that you would install solar panels or that you would not install them?

- 1 More likely that I would
- 2 More likely that I would not

**END OF IF**  
**ELSE**  
**d016** (impact knowing 30% federal tax credit is available have on decision in section Rationale\_no)  
 What impact does knowing a 30% federal tax credit is available have on your decision?  
 1 No impact, I am not more likely to install solar panels  
 2 Now that I know, I might install solar panels, but I am not sure  
 3 Now that I know, I am much more likely to install solar panels  
  
**IF d016 IN (2,3) THEN**  
**d017** (more likely would or would not install solar panels kowing 30% tax credit available in section Rationale\_no)  
 You answered that you *might* install solar panels knowing a 30% federal tax credit is available.  
  
 Which would you say is more likely: that you would install solar panels or that you would not install them?  
 1 More likely that I would  
 2 More likely that I would not  
**END OF IF**  
**END OF IF**  
**END OF IF**  
  
**IF a001 = 1 AND b004 = 2 THEN**  
**d021** (ever considered owning/leasing heat pump heating and cooling in section Rationale\_no)  
 Have you ever considered owning/leasing heat pump heating and cooling?  
  
**IF d021 = 1 THEN**  
**GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN**  
  
**d022\_intro** (Section Rationale\_no)  
 Please rank *up to three* of these options in order of their importance for your decision to consider heat pump heating and cooling.  
  
**SUBGROUP OF QUESTIONS**  
  
**d022a** (Most important consider heat pump heating and cooling in section Rationale\_no)  
 Most important (required)  
  
**d022b** (2nd most important heat pump heating and cooling in section Rationale\_no)

2nd most important (optional)

**d022c** (3rd most important consider heat pump heating and cooling in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d022a = 5 THEN

**d022a\_other** (other most important consider heat pump heating and cooling in section Rationale\_no)  
What is the most important reason for your decision to consider heat pump heating and cooling?  
STRING

END OF IF

IF d022b = 5 THEN

**d022b\_other** (other 2nd most important consider heat pump heating and cooling in section Rationale\_no)  
What is the 2nd most important reason for your decision to consider heat pump heating and cooling?  
STRING

END OF IF

IF d022c = 5 THEN

**d022c\_other** (other 3rd most important consider heat pump heating and cooling in section Rationale\_no)  
What is the 3rd most important reason for your decision to consider heat pump heating and cooling?  
STRING

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d023\_intro** (Section Rationale\_no)  
Please rank *up to three* of these options in order of their importance for your decision not to own/lease heat pump heating and cooling.

SUBGROUP OF QUESTIONS

**d023a** (Most important not own/lease heat pump heating and cooling in section Rationale\_no)  
Most important (required)

**d023b** (2nd most important not own/lease heat pump heating and cooling in section Rationale\_no)  
2nd most important (optional)

**d023c** (3rd most important not own/lease heat pump heating and cooling in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d023a = 5 THEN

**d023a\_other** (other most important not own/lease heat pump heating and cooling in section Rationale\_no)  
What is the most important reason for your decision to not own/lease heat pump heating and cooling?  
STRING

END OF IF

IF d023b = 5 THEN

**d023b\_other** (other 2nd most important not own/lease heat pump heating and cooling in section Rationale\_no)  
What is the 2nd most important reason for your decision to not own/lease heat pump heating and cooling?  
STRING

END OF IF

IF d023c = 5 THEN

**d023c\_other** (other 3rd most important not own/lease heat pump heating and cooling in section Rationale\_no)  
What is the 3rd most important reason for your decision to not own/lease heat pump heating and cooling?  
STRING

END OF IF

ELSE

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d023\_intro\_cn** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease/consider heat pump heating and cooling.

#### SUBGROUP OF QUESTIONS

**d023a\_cn** (Most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

Most important (required)

**d023b\_cn** (2nd most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

2nd most important (optional)

**d023c\_cn** (3rd most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

3rd most important (optional)

#### END OF SUBGROUP

**selectscript\_four** (Section Rationale)

#### END OF GROUP

**IF d023a\_cn = 4 THEN**

**d023a\_cn\_other** (other most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

What is the most important reason for your decision to not own/lease/consider heat pump heating and cooling?

STRING

**END OF IF**

**IF d023b\_cn = 4 THEN**

**d023b\_cn\_other** (other 2nd most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease/consider heat pump heating and cooling?

STRING

**END OF IF**

**IF d023c\_cn = 4 THEN**

**d023c\_cn\_other** (other 3rd most important not own/lease/consider heat pump heating and cooling in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease/consider

heat pump heating and cooling?  
STRING  
END OF IF  
END OF IF  
END OF IF

IF a001 = 1 AND b005 = 2 AND b007 = 2 THEN

**d018** (ever considered owning/leasing energy efficient appliances or investing in weatherization/insulation measures in section Rationale\_no)  
Have you ever considered owning/leasing energy efficient appliances or investing in weatherization/insulation measures?

IF d018 = 1 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d019\_intro** (Section Rationale\_no)  
Please rank *up to three* of these options in order of their importance for your decision to consider energy efficient appliances or weatherization/insulation measures.

SUBGROUP OF QUESTIONS

**d019a** (Most important consider energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
Most important (required)

**d019b** (2nd most important energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
2nd most important (optional)

**d019c** (3rd most important consider energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d019a = 5 THEN

**d019a\_other** (other most important consider energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
What is the most important reason for your decision to consider energy efficient appliances or weatherization/insulation measures?

| STRING  
END OF IF

IF d019b = 5 THEN

**d019b\_other** (other 2nd most important consider energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
What is the 2nd most important reason for your decision to consider energy efficient appliances or weatherization/insulation measures?  
STRING

END OF IF

IF d019c = 5 THEN

**d019c\_other** (other 3rd most important consider energy efficient appliances or weatherization/insulation measures in section Rationale\_no)  
What is the 3rd most important reason for your decision to consider energy efficient appliances or weatherization/insulation measures?  
STRING

END OF IF

#### GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d020\_intro** (Section Rationale\_no)  
Please rank *up to three* of these options in order of their importance for your decision not to own/lease energy efficient appliances or invest in weatherization/insulation measures.

#### SUBGROUP OF QUESTIONS

**d020a** (Most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)  
Most important (required)

**d020b** (2nd most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)  
2nd most important (optional)

**d020c** (3rd most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript** (Section Rationale)

END OF GROUP

IF d020a = 5 THEN

**d020a\_other** (other most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)

What is the most important reason for your decision to not own/lease energy efficient appliances or invest in weatherization/insulation measures?

STRING

END OF IF

IF d020b = 5 THEN

**d020b\_other** (other 2nd most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease energy efficient appliances or invest in weatherization/insulation measures?

STRING

END OF IF

IF d020c = 5 THEN

**d020c\_other** (other 3rd most important not own/lease energy efficient appliances or invest in weatherization/insulation measures in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease energy efficient appliances or invest in weatherization/insulation measures?

STRING

END OF IF

ELSE

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

**d020\_intro\_cn** (Section Rationale\_no)

Please rank *up to three* of these options in order of their importance for your decision not to own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures.

SUBGROUP OF QUESTIONS

**d020a\_cn** (Most important not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures in section Rationale\_no)  
Most important (required)

**d020b\_cn** (2nd most important not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures in section Rationale\_no)  
2nd most important (optional)

**d020c\_cn** (3rd most important not own/lease/consider energy efficient appliances



or invest in/ consider weatherization/insulation measures in section Rationale\_no)  
3rd most important (optional)

END OF SUBGROUP

**selectscript\_four** (Section Rationale)

END OF GROUP

IF d020a.cn = 4 THEN

**d020a.cn\_other** (other most important not own/lease energy efficient appliances or invest in/ consider weatherization/insulation measures in section Rationale\_no)

What is the most important reason for your decision to not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures?

STRING

END OF IF

IF d020b.cn = 4 THEN

**d020b.cn\_other** (other 2nd most important not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures in section Rationale\_no)

What is the 2nd most important reason for your decision to not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures?

STRING

END OF IF

IF d020c.cn = 4 THEN

**d020c.cn\_other** (other 3rd most important not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures in section Rationale\_no)

What is the 3rd most important reason for your decision to not own/lease/consider energy efficient appliances or invest in/ consider weatherization/insulation measures?

STRING

END OF IF

END OF IF

END OF IF

End of section **Rationale\_no**

Start of section **Climate**

**s001** (how important is the issue of climate change personally in section Climate)

How important is the issue of climate change to you personally?

1 Extremely important

- 2 Very important
- 3 Somewhat important
- 4 Not too important
- 5 Not at all important

**s002** (how worried about climate change in section Climate)

How worried are you about climate change?

- 1 Very worried
- 2 Somewhat worried
- 3 Not very worried
- 4 Not at all worried

**s003** (how much think climate change will harm personally in section Climate)

How much do you think climate change will harm you personally?

- 1 A great deal
- 2 A moderate amount
- 3 Only a little
- 4 Not at all
- 5 Don't know

**s004** (how much think climate change will harm future generations of people in section Climate)

How much do you think climate change will harm future generations of people?

- 1 A great deal
- 2 A moderate amount
- 3 Only a little
- 4 Not at all
- 5 Don't know

End of section **Climate**

Start of section **Closing**

**CS\_001** (HOW PLEASANT INTERVIEW in section Closing)

Could you tell us how interesting or uninteresting you found the questions in this survey?

- 1 Very interesting
- 2 Interesting
- 3 Neither interesting nor uninteresting
- 4 Uninteresting
- 5 Very uninteresting

**CS\_003** (comments in section Closing)

Do you have any other comments on the survey? Please type these in the box below. (If you have no comments, please click next to complete this survey.)

STRING

End of section **Closing**

/\* Please note that although question CS\_003 is listed in the routing, the answers are not included in the microdata in the event identifiable information is captured. Cleaned responses are available by request. \*/