

2020 RECS Pretesting – Generic Clearance
Cognitive Testing Protocol

Instrument 1 (Cognitive Testing)

Thank you for agreeing to participate in this research study. We are currently interviewing people to help us improve the Residential Energy Consumption Survey, which the US Department of Energy uses to gather information about how energy is used in homes. This interview is voluntary and should take about 1 hour. All of your comments and responses will be kept private and confidential and will only be used to finalize the future survey questions.

During our discussion today, you will complete a questionnaire. As you work through the questionnaire, I am interested in more than just your answers to the questions-- I would also like to hear what you are thinking about as you answer each question. Please try to think aloud while answering them, telling me everything that comes to mind, whether it seems important or not. I am also going to be asking you some follow-up questions about how you came up with your answers, what the question means to you, or if you think the question is missing any answer options. I may ask some follow-up questions to clarify what I'm hearing.

I'll be taking some notes to make sure I accurately capture what you are saying. Please remember, this is not a test. There are no right or wrong answers. I just want to know what each question means to you. If you don't understand a question that is asked or you find it confusing, please let me know.

At the end of the interview, you'll receive \$40 cash as a thank-you for your participation.

Your answers will be kept confidential, and we will not use your name in the report summarizing these interviews. Before we begin, do you have any questions?

It would be helpful to me if I recorded our interview so I could reference it as needed when writing up a summary of findings. Is this okay with you?

IF YES: BEGIN RECORDING.

Alright, I just started recording.

Let's start with an example.

In what year was your home built? Remember, think aloud as you answer this question.

Now, I'm going to ask you some follow-up questions.

- [IF DID NOT THINK ALOUD] How did you come up with your answer?
- How easy or difficult was it for you to come up with your answer?

Good, it looks like you have the hang of it. Now we can get started with the survey questions.

TYPEHUQ	
ASK	All respondents

Which best describes your home?	
<ol style="list-style-type: none"> 1 Mobile home 2 Single-family house detached from any other house 3 Single-family house attached to one or more other houses (for example: duplex, row house, or townhome) 4 Apartment in a building with 2 to 4 units 5 Apartment in a building with 5 or more units 	
NEXT	SF1
NOTE	Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP), wood amount (WOODAMT/PELLETAMT), air conditioning (ACEQUIPM), and electric vehicles (EV1-EV8).
PROBES	None

SF1	
ASK	All respondents
<p>A home's size is typically reported in "square feet." Do you know your home's square footage?</p> <ol style="list-style-type: none"> 1 Yes 0 No 	
NEXT	If SF1 = 1: SF2 Else: SF3
NOTE	
PROBES	None

SF2	
ASK	If SF1 = 1
<p>What is the square footage of your home? <i>We would rather you select 'Don't know' than provide a guess.</i></p> <p>_____square feet</p> <p>Don't know</p>	
NEXT	If SF2 = DK, SF3 Else: SF4
NOTE	
PROBES	<ul style="list-style-type: none"> • How accurate do you think your response is?

SF3	
ASK	If SF1 = 0 or SF2 = DK
<p>We understand that you might not know how many square feet your home is. A home's size is closely related to its energy use, so we would like you to <u>provide an estimate</u>. Please tell us which category best describes the square footage of your home.</p>	

- 1 Less than 500 square feet
- 2 500-999 square feet
- 3 1,000-1,499 square feet
- 4 1,500-1,999 square feet
- 5 2,000-2,499 square feet
- 6 2,500-2,999 square feet
- 7 3,000-3,499 square feet
- 8 3,500-3,999 square feet
- 9 4,000 square feet or more
- 10 Don't know (*Select this option only if you are unable to provide a guess.*)

NEXT	If SF1 = 1: SF4 ELSE: STOVEN
NOTE	
PROBES	<ul style="list-style-type: none"> • What was your thought process as you answered this question? • Is anything about this question confusing or unclear? (EXPLAIN) • What do you think of the response categories? Do you think they should be changed, or are they okay?

SF4	
ASK	If SF1 = 1 & SF2 ≠ DK
<p>What sources of information did you use to determine your home's square footage? <i>Select all that apply.</i></p> <ol style="list-style-type: none"> 1 I checked my property tax documents 2 I checked my lease or mortgage documents 3 I remember from when I leased or bought my home 4 I asked someone else who knows 5 I checked an internet site (e.g., Zillow) 6 Other (please specify): _____ 	
NEXT	STOVEN, STOVE, OVEN
NOTE	
PROBES	None

STOVEN, STOVE, OVEN	
ASK	All respondents
<p>PRESENT ITEMS ON THE SAME PAGE AND INCLUDE IMAGE OF EACH ITEM.</p> <p>STOVEN How many stoves/ranges do you have in your home?</p> <p>STOVE How many separate cooktops without an oven do you have in your home?</p> <p>OVEN How many separate wall ovens do you have in your home?</p>	

NEXT	If STOVEN>0: STOVENIND Else if STOVE>0: STOVEIND Else: TVCOLOR
NOTE	
PROBES	None

STOVENIND	
ASK	If STOVEN>0
Does your [If STOVEN>1: <u>most used</u>] <u>stove/range</u> have an induction cooktop?	
1 Yes 0 No	
NEXT	If STOVE>0: STOVEIND Else: TVCOLOR
NOTE	
PROBES	<ul style="list-style-type: none"> • How confident are you that your answer is correct? • How familiar are you with induction cooktops? • In your own words, what is an induction cooktop?

STOVEIND	
ASK	If STOVE>0
Is your [If STOVE>1: <u>most used</u>] <u>separate cooktop</u> an induction cooktop?	
1 Yes 0 No	
NEXT	TVCOLOR
NOTE	
PROBES	<ul style="list-style-type: none"> • How confident are you that your answer is correct? • ASK ONLY IF STOVENIND WAS NOT ASKED: How familiar are you with induction cooktops? • ASK ONLY IF STOVENIND WAS NOT ASKED: In your own words, what is an induction cooktop?

TVCOLOR	
ASK	All respondents
How many televisions are used in your home? If none, please enter "0."	
_____ Televisions {{ALLOW RANGE 00-30}}	

NEXT	If TVCOLOR>0 : TVUSE1A, TVUSE1B Else: DESKTOP, LAPTOP, TABLET, PCPRINT, SMARTPHN, CELLPHN
NOTE	Question is included to satisfy skip logic for TV usage (TVUSE1A/TVUSE1B).
PROBES	None

TVUSE1A, TVUSE1B	
ASK	If TVCOLOR>0
<p>What is the main use of your <u>most used</u> television?</p> <ol style="list-style-type: none"> 1 Watching live programming 2 Watching recorded or on-demand programming from a set-top box 3 Streaming content via built-in smart TV apps 4 Streaming content via a separate streaming device connected to the television 5 Playing video games 6 Other (please specify): <p>What is the main use of your <u>most used</u> television?</p> <ol style="list-style-type: none"> 1 Watching live, recorded, or on-demand programming 2 Streaming content via built-in smart TV apps or a separate streaming device 3 Playing video games 4 Other (please specify): 	
NEXT	DESKTOP, LAPTOP, TABLET, PCPRINT, SMARTPHN, CELLPHN
NOTE	
PROBES	<ul style="list-style-type: none"> • Are any of the answer options confusing or unclear? Please explain. • Do you use a television for any purposes not listed in these questions? (Yes – please explain; No) • Which of these questions is easier to answer? (WHY?) • Which answer would you choose if your main use was watching DVDs?

DESKTOP, LAPTOP, TABLET, PCPRINT, SMARTPHN, CELLPHN	
ASK	All Respondents
<p>How many of each of the following are used in your home? If none, please enter "0."</p> <p>_____ Desktop computer (DESKTOP) _____ Laptop computer (LAPTOP) _____ Tablet computer or e-reader (for example: iPad or Kindle) (TABLET) _____ Printer, scanner, fax machine, or copier (PCPRINT) _____ "Smart" phones (for example, iPhone or Android) (SMARTPHN) _____ Other cellular phones (CELLPHN)</p> <p>{ALLOW RANGE 00-30 FOR ALL}</p>	

NEXT	If DESKTOP > 0: TIMEON1 Else if LAPTOP > 0: TIMEON1 Else if TABLET > 0: TIMEON1 Else: HEATHOME
NOTE	Question is included to satisfy skip logic for computer usage (TIMEON1).
PROBES	None

TIMEON1	
ASK	If DESKTOP+LAPTOP>0
Thinking about the most used computer, how many hours is it used each day? ____ hours	
NEXT	HEATHOME
NOTE	
PROBES	<ul style="list-style-type: none"> • What thought process did you use to come up with your answer? • Which of the following items do you think this question is asking about? Please tell me "yes" or "no" for each. (Desktop computer; Laptop computer; Tablet computer or e-reader [for example: iPad or Kindle]; Printer, scanner, fax machine, or copier; 'Smart phones' [for example, iPhone or Android]; Other cellular phones) • Does the amount of time your computer is used vary from day to day? (IF YES, EXPLAIN) • Do you live with anyone else? If so, how did you answer this question? Were you thinking about your own usage or that of all household members?

HEATHOME	
ASK	All respondents
Is your home heated during the winter? 1 Yes 2 No, I do not have any heating equipment 3 No, I have heating equipment but do not use it	
NEXT	If HEATHOME=1 and TYPEHUQ in(4,5): APTHEAT If HEATHOME=1 and TYPEHUQ in(1,2,3): EQUIPM Else: AIRCOND
NOTE	Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP), wood amount (WOODAMT/PELLETAMT), secondary heating equipment (EQUIPAUX), and thermostat (THERMAIN).
PROBES	None

APTHEAT	
ASK	If HEATHOME=1 and TYPEHUQ in(4,5)

<p>Is your main heating equipment located in your apartment unit, or is it located somewhere else in the building?</p> <p>1 In apartment unit 2 Somewhere else in building</p> <p>Don't know</p>	
NEXT	If APTHEAT=1: EQUIPM Else: EQUIPAUX
NOTE	Question is included to satisfy skip logic for heat pump back-up source question (HPBACKUP) and wood amount (WOODAMT/PELLETAMT).
PROBES	<ul style="list-style-type: none"> Is anything about this question confusing or unclear? (EXPLAIN) Is it clear what we mean by "In apartment unit" and "Somewhere else in building"? In your own words, what do those mean? [IF APTHEAT=2] Can you tell us anything about the heating equipment in the building?

EQUIPM	
ASK	If HEATHOME=1 and (TYPEHUQ in(1,2,3) or APTHEAT=1))
<p>What is the <u>main</u> type of heating equipment used to provide heat for your home?</p> <p>2 Central furnace 4 Central heat pump 11 Ductless heat pump, also known as a "mini-split" 3 Steam or hot water system with radiators or pipes 5 Built-in electric units installed in walls, ceilings, baseboards, or floors 6 Built-in room heater burning gas, oil, or kerosene 8 Wood or pellet stove 10 Portable electric heaters 99 Other (please specify)</p> <p>Don't know</p>	
NEXT	If EQUIPM = 4: HPBACKUP Else: FUELHEAT
NOTE	
PROBES	<ul style="list-style-type: none"> ASK BEFORE PARTICIPANT SEES THE QUESTION, RESPONSE OPTIONS, AND IMAGES: What is the main type of heating equipment used to provide heat for your home? Did the images help you answer the question, or did they not? Do you think you would have answered differently if you hadn't seen the images? How confident are you that your response is correct? Did you need to guess? Are there any types of equipment listed in this question that you are not familiar with? (EXPLAIN) Are there any other terms you would use to refer to the equipment listed in this question? (EXPLAIN)

HPBACKUP	
ASK	If EQUIPM = 4
<p>Many heat pumps have a backup heating method that can be used when it is very cold. What type of backup heating does your heat pump use?</p> <p>1 Electric backup 2 Natural gas backup (dual-fuel system) 3 No backup</p> <p>Don't know</p>	
NEXT	FUELHEAT
NOTE	
PROBES	<ul style="list-style-type: none"> How confident are you that your response is correct? Did you need to guess? What other terms would you use to describe "backup heating?"

FUELHEAT	
ASK	If HEATHOME=1 and (TYPEHUQ in(1,2,3) or APTHEAT=1))
<p>What is the fuel used by your main heating equipment?</p> <p>5 Electricity 1 Natural gas from underground pipes 2 Propane (bottled gas) 3 Fuel oil 7 Wood or pellets 9 Other (please specify)</p> <p>Don't know</p>	
NEXT	If FUELHEAT=7: WOODAMT, PELLETAMT Else: EQUIPAUX
NOTE	Question is included to satisfy skip logic for wood amount (WOODAMT/PELLETAMT). Probe is meant to capture additional information related to HPBACKUP.
PROBES	<ul style="list-style-type: none"> [IF FUELHEAT = 1]: Is your gas bill higher in the winter compared to other times of year? (Yes, No, Don't Know)

WOODAMT/PELLETAMT	
ASK	If FUELHEAT=7
<p>In the past year, about how much wood or pellets did your household use?</p> <p>Total amount of wood logs used in the past year: _____ cords (WOODAMT)</p> <p>Total amount of wood pellets used in the past year: _____ [] 40-pound bags [] tons (PELLETAMT)</p>	

NEXT	EQUIPAUX
NOTE	
PROBES	<ul style="list-style-type: none"> • ASK BEFORE PARTICIPANT SEES THE QUESTION: In the past year, how much wood did your household use? • Did the images help you answer the question, or did they not? • Do you think you would have answered differently if you hadn't seen the images? • How easy or difficult was it to answer this question? • How accurate do you think your answer is? Did you need to guess? • IF NOT VERY ACCURATE OR GUESSED: Can you give me a range that you think your answer would fall within? (FOR EXAMPLE, 2-4 CORDS)

EQUIPAUX	
ASK	If HEATHOME=1
<p>In addition to your main heating equipment, does your household also use any of the following as a <u>second source</u> for heating your home? If more than one, select the type most frequently used.</p> <ul style="list-style-type: none"> 0 No other equipment used 1 Portable electric heater 2 Wood-burning stove 3 Natural gas fireplace 4 Wood-burning fireplace 9 Other (please specify equipment and fuel) <p>In addition to your main heating equipment, does your household also use any of the following as a <u>second source</u> for heating your home? If more than one, select the type most frequently used.</p> <ul style="list-style-type: none"> 0 No other equipment used 2 Central furnace 4 Central heat pump 11 Ductless heat pump, also known as a "mini-split" 3 Steam or hot water system with radiators or pipes 5 Built-in electric units installed in walls, ceilings, baseboards, or floors 6 Built-in room heater burning gas, oil, or kerosene 8 Wood or pellet stove 9 Fireplace 10 Portable electric heaters 99 Other (please specify) <p>Don't know</p>	

NEXT	MOISTURE
NOTE	
PROBES	<ul style="list-style-type: none"> • ASK BEFORE PARTICIPANT SEES THE QUESTIONS: In addition to your main heating equipment, does your household also use a second source of heating for your home? (DESCRIBE) • Which of these questions was easier to answer? Why? • Are any of the options listed in either question confusing or unclear? (EXPLAIN) • For people in apartments that did not get asked EQUIPM: Were you thinking about equipment in your unit or in other parts of the building?

MOISTURE	
ASK	All respondents
<p>Humidifiers add moisture to the air and are often used in the winter. Is a humidifier used in your home?</p> <p>1 Yes, a <u>portable</u> humidifier 2 Yes, a <u>whole-home</u> humidifier 0 No</p>	
NEXT	If MOISTURE>0: USEMOISTURE Else: AIRCOND
NOTE	
PROBES	<ul style="list-style-type: none"> • What do you think is the difference between a portable humidifier and a whole-home humidifier? • Is anything about this question confusing or unclear? (EXPLAIN)

USEMOISTURE	
ASK	If MOISTURE>0
<p>In the last year, how many months was the humidifier used?</p> <p>_____ months</p> <p>{ALLOW RANGE 0 – 12}</p>	
NEXT	AIRCOND
NOTE	
PROBES	<ul style="list-style-type: none"> • How confident are you that your response is correct? Did you need to guess?

AIRCOND	
ASK	All respondents
<p>Is any air conditioning equipment used in your home?</p>	

	1 Yes 0 No
NEXT	If AIRCOND=1 and TYPEHUQ in(4,5): APTCOOL Else if AIRCOND=1 and TYPEHUQ in(1,2,3): ACEQUIPM Else if HEATHOME = 1: THERMAIN Else if TYPEHUQ = 4 OR 5: APTH20 Else if TYPEHUQ in (1, 2, 3): WHEATSIZ Else: LGTINNUM
NOTE	Question is included to satisfy skip logic for air conditioning equipment (ACEQUIPM) and thermostat (THERMAIN).
PROBES	None

APTCOOL	
ASK	If TYPEHUQ in(4,5) and AIRCOND=1
<p>Is your main air conditioning equipment located in your apartment unit, or is it located somewhere else in the building?</p> <p>1 In apartment unit 2 Somewhere else in building</p> <p>Don't know</p>	
NEXT	If APTCOOL=1: ACEQUIPM Else: THERMAIN
NOTE	Question is included to satisfy skip logic for air conditioning equipment (ACEQUIPM).
PROBES	None

ACEQUIPM	
ASK	If AIRCOND=1 and (TYPEHUQ in(1,2,3) or APTCOOL=1))
<p>What is the main type of air conditioning equipment used to cool your home?</p> <p>0 Central air conditioner 1 Central heat pump 2 Ductless heat pump, also known as a "mini-split" 3 Window or wall air conditioner 4 Portable air conditioner 5 Evaporative or swamp cooler</p> <p>Don't know</p>	

NEXT	THERMAIN
NOTE	
PROBES	<ul style="list-style-type: none"> • Did the images help you answer the question, or did they not? • Do you think you would have answered differently if you hadn't seen the images? • How confident are you that your response is correct? Did you need to guess? • Are there any types of equipment listed in this question that you are not familiar with? (EXPLAIN) • Are there any other terms you would use to refer to the equipment listed in this question? (EXPLAIN)

NUMCFAN, NUMFLOORFAN	
ASK	All respondents
<p>How many of the following types of fans does your household use? <i>If none, please enter "0."</i></p> <p>_____ Number of <u>ceiling</u> fans (NUMCFAN) _____ Number of <u>floor or window</u> fans (NUMFLOORFAN)</p> <p>{ALLOW RANGE 0 – 50 FOR ALL}</p>	
NEXT	NOTMOIST
NOTE	
PROBES	<ul style="list-style-type: none"> • Can you tell me how and when your household uses these fans?

NOTMOIST	
ASK	All respondents
<p>Dehumidifiers remove moisture from the air and are often used in the summer. Is a dehumidifier used in your home?</p> <p>1 Yes, a <u>portable</u> dehumidifier 2 Yes, a <u>whole-home</u> dehumidifier 0 No</p>	
NEXT	If NOTMOIST>0: USENOTMOIST Else: THERMAIN
NOTE	
PROBES	<ul style="list-style-type: none"> • What do you think is the difference between a portable dehumidifier and a whole-home dehumidifier? • Is anything about this question confusing or unclear? (EXPLAIN)

USENOTMOIST	
ASK	If NOTMOIST>0
<p>In the last year, how many months was the dehumidifier used?</p>	

_____ months {ALLOW RANGE 0 – 12}	
NEXT	THERMAIN
NOTE	
PROBES	<ul style="list-style-type: none"> • How confident are you that your response is correct? Did you need to guess?

THERMAIN	
ASK	If HEATHOME=1 or AIRCOND=1
<p>What kind of thermostat does your household use to control the temperature inside your home?</p> <ol style="list-style-type: none"> 1 Manual or non-programmable thermostat 2 Programmable thermostat 3 “Smart” or Internet-connected thermostat 4 Not applicable. Household does not use a thermostat <p>Don't know</p>	
NEXT	If HEATHOME=1: EQUIPMUSE If AIRCOND=1: ACEQUIPMUSE Else if TYPEHUQ = 4 OR 5: APTH20 Else if TYPEHUQ in (1, 2, 3): WHEATSIZ Else: LGTINNUM
NOTE	
PROBES	<ul style="list-style-type: none"> • How easy or difficult was it to answer this question? • Do you have multiple thermostats in your home? If so, which were you thinking about when answering?

EQUIPMUSE	
ASK	If HEATHOME=1
<p>Which of the following best describes how your household controls the indoor temperature during the winter?</p> <ol style="list-style-type: none"> 1 Set one temperature and leave it there most of the time 2 Manually adjust the temperature 3 Programmable or smart thermostat automatically adjusts the temperature 4 Turn equipment on or off as needed 5 Our household does not have control over the equipment 9 Other (please specify) 	

NEXT	If AIRCOND=1: ACEQUIPMUSE Else if TYPEHUQ = 4 OR 5: APTH20 Else if TYPEHUQ in (1, 2, 3): WHEATSIZ Else: LGTINNUM
NOTE	
PROBES	<ul style="list-style-type: none"> • Did you have any difficulty choosing your response? (EXPLAIN) • Do you live with anyone else? If so, how did you answer this question? Were you thinking about your own behavior or all household members?

ACEQUIPMUSE	
ASK	If AIRCOND=1
<p>Which of the following best describes how your household controls the indoor temperature during the <u>summer</u>?</p> <ol style="list-style-type: none"> 1 Set one temperature and leave it there most of the time 2 Manually adjust the temperature 3 Programmable or smart thermostat automatically adjusts the temperature 4 Turn equipment on or off as needed 5 Our household does not have control over the equipment 9 Other (please specify) 	
NEXT	If TYPEHUQ = 4 OR 5: APTH20 Else if TYPEHUQ in (1, 2, 3): WHEATSIZ Else: LGTINNUM
NOTE	
PROBES	<ul style="list-style-type: none"> • Does your household control the temperature differently in the summer or winter? Why or why not? • Did you have any difficulty choosing your response? (EXPLAIN)

APTH20	
ASK	If TYPEHUQ = 4 OR 5
<p>Is your water heater located in your apartment unit, or is it located somewhere else in the building?</p> <ol style="list-style-type: none"> 1 In apartment unit 2 Somewhere else in building <p>Don't know</p>	
NEXT	If TYPEHUQ in (1, 2, 3) or APTH20=1: WHEATSIZ Else: LGTINNUM
NOTE	Question is included to satisfy skip logic for air water heater question (WHEATBKT).
PROBES	None

WHEATSIZ	
ASK	If TYPEHUQ in (1, 2, 3) OR APTH20 = 1
<p>What is the approximate size of your main water heater?</p> <p>1 Small (30 gallons or less) 2 Medium (31 to 49 gallons) 3 Large (50 gallons or more) 4 Tankless or on-demand</p> <p>Don't know</p>	
NEXT	WHEATBKT
NOTE	Question is included to satisfy skip logic for air water heater question (WHEATBKT).
PROBES	None

WHEATBKT	
ASK	If WHEATSIZ in (1,2,3)
<p>If your main water heater insulated using a water heater blanket?</p> <p>1 Yes 0 No</p> <p>Don't know</p>	
NEXT	LGTINNUM
NOTE	
PROBES	<ul style="list-style-type: none"> Do you know what a water heater blanket is? (EXPLAIN) How confident are you that your response is correct? Did you need to guess?

LGTINNUM	
ASK	All respondents
<p>About how many light bulbs are installed inside your home? Include light bulbs in ceiling fixtures and fans, table and floor lamps, as well as those used infrequently, such as in hallways, closets, and garages. For fixtures with multiple bulbs, count each bulb separately.</p> <p>1 Fewer than 20 light bulbs 2 20 to 39 light bulbs 3 40 to 59 light bulbs 4 60 to 79 light bulbs 5 80 or more light bulbs</p> <p>Don't Know</p>	

NEXT	ILTUSE
NOTE	Question is included to provide context for OLTWHEN.
PROBES	None

ILTUSE	
ASK	All respondents
<p>How many of the light bulbs inside your home are turned on for...</p> <p>a. Between 1 and 4 hours per day? _____</p> <p>b. Between 4 and 8 hours per day? _____</p> <p>c. More than 8 hours per day? _____</p>	
NEXT	OLTUSE
NOTE	
PROBES	<ul style="list-style-type: none"> • How did you come up with your answer to this question? • How easy or difficult was it to answer this question? • Does your use of indoor lights vary from day to day, or do you use them consistently each day? (EXPLAIN) • Does your use of indoor lights vary from season to season, or do you use them consistently regardless of the season? (EXPLAIN)

OLTUSE	
ASK	All respondents
<p>Does your home have any outside lights? For apartments, only consider light bulbs connected to or controlled by your unit.</p> <p>1 Yes 0 No</p>	
NEXT	If OLTUSE = 1; OLTWHEN Else: EV1
NOTE	Question is included to ease into OLTWHEN. The probe findings from OLTUSE also apply to OLTWHEN.
PROBES	<ul style="list-style-type: none"> • What do you think "outdoor lights" refers to in this question? • Can you describe the outdoor lights that you have at your home? (E.G., WHERE ARE THEY? WHAT ARE THEY USED FOR?) • Did you include holiday lights?

OLTWHEN	
ASK	All respondents
<p>When do you use outdoor lights?</p> <p>_____</p>	

NEXT	EV1
NOTE	The probe findings from OLTUSE also apply to OLTWHEN.
PROBES	<ul style="list-style-type: none"> Does your use of outdoor lights vary from day to day, or do you use them consistently each day? (EXPLAIN) Does your use of outdoor lights vary from season to season, or do you use them consistently regardless of the season? (EXPLAIN)

EV1	
ASK	All respondents
<p>Do you or any member of your household own or lease an electric vehicle? <i>Please include both all-electric and plug-in hybrid electric vehicles.</i></p> <p>1 Yes 0 No</p>	
NEXT	If EV1=1: EV2 Else: END
NOTE	
PROBES	<ul style="list-style-type: none"> In your own words, what is an electric vehicle? How does an electric vehicle differ from other vehicles? IF EV1=1: How many electric vehicles does your household have?

EV2	
ASK	If EV1 = 1
<p>What is the make and model of your electric vehicle?</p>	
NEXT	EV3
NOTE	
PROBES	None

EV3	
ASK	If EV1 = 1
<p>In what month and year did you purchase or lease your electric vehicle?</p>	
NEXT	EV4
NOTE	
PROBES	<ul style="list-style-type: none"> Did you have any difficulty recalling this information? How confident are you that the date you reported is correct? IF HH HAS MULTIPLE EVs: Which of your electric vehicles did you report in this question? How did you decide which to report?

EV4	
ASK	If EV1 = 1
<p>During a typical week, at which of the following places do you charge your electric vehicle? <i>Please select all that apply.</i></p> <ol style="list-style-type: none"> 1 Your home 2 Your apartment building or complex 3 Your workplace or school 4 Shopping center or business you frequent 5 Supercharger 6 Municipal parking lot or building, including libraries and post offices 7 Car dealership 8 Highway rest stop 9 Some other type of public charging station 	
NEXT	EV5
NOTE	
PROBES	<ul style="list-style-type: none"> • Do your charging patterns vary from week to week? (EXPLAIN) • For what time period would it be easiest for you to report your typical charging behavior? (E.G., A TYPICAL DAY VS. WEEK VS. MONTH, ETC.) • Do you know what a Supercharger is? (IF YES: How would you describe it?) • Do you charge your electric vehicle in any places not listed in the question? • Can you think of any other charging locations that are missing from this list? • Are there any aspects of this question we haven't already discussed that were difficult for you?

EV5	
ASK	If EV1 = 1
<p><i>[Web: SF home and "Your home" selected in EV4]</i> During a typical week, about how much of the charging for your electric vehicle is done at your home?</p> <ol style="list-style-type: none"> 1. All at home (100%) 2. Almost all at home (80% - 99%) 3. Most at home (60% - 80%) 4. About half at home (40% - 60%) 5. Some at home (20% - 40%) 6. Very little or none at home (0% - 20%) 	
NEXT	EV6
NOTE	
PROBES	<ul style="list-style-type: none"> • Does the amount of charging you do at home vary from week to week? Please explain. • Did you have any difficulty determining which answer to select? Please explain. • These categories include a range of percentages. What do you think of the percentages—do they match their corresponding categories, or do you think they need to be adjusted? Please explain any changes you would make, if you think they should be changed.

EV6	
ASK	If EV1 = 1
<p><i>[Web: SF home and "Your home" selected in EV4] When charging at home, what time of day is your electric vehicle typically charged? Please select all that apply.</i></p> <ol style="list-style-type: none"> 1. Morning 2. Afternoon 3. Evening 4. Late night 	
NEXT	EV7
NOTE	
PROBES	<ul style="list-style-type: none"> • Does the time of day you typically charge at home vary, or is it consistent? (EXPLAIN) • Did you have any difficulty determining which answer to select? (EXPLAIN) • When you selected your response, what actual time were you thinking of? (E.G., 6:00 PM – 8:00 AM)

EV7	
ASK	If EV1 = 1
<p><i>[If SF home and "Your home" selected in EV4] Which best describes the electric vehicle charger used at your home?</i></p> <ul style="list-style-type: none"> • Level 1 charger (typical household 120 volt outlet) • Level 2 charger (higher-powered 240 volt outlet) 	
NEXT	EV8
NOTE	
PROBES	<ul style="list-style-type: none"> • How confident are you that your answer is correct? • In your own words, what is a Level 1 charger? • In your own words, what is a Level 2 charger? • Do you always use the same type of charger at home, or do you sometimes use a different type?

EV8	
ASK	If EV1 = 1
<p>During a typical week, about how many total miles are driven in your electric vehicle?</p>	
NEXT	END
NOTE	
PROBES	<ul style="list-style-type: none"> • IF HH HAS MULTIPLE EVs: Which of your electric vehicles did you report in this question? How did you decide which to report? • IF HH HAS MULTIPLE EVs: During a typical week, how many total miles are driven in your other electric vehicle(s)? • How did you come up with your answer? (HOW PRECISE IS IT?) • What time period would be easiest for you to answer about? (TYPICAL WEEK,

	TYPICAL YEAR, ETC.)
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Those are all the questions I have for you. Do you have any other feedback you'd like to share about the survey that we haven't already discussed?

Thank you so much for participating!