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Form EIA-871I – 22 minutes
Form EIA-871J – 36 minutes

Commercial Buildings Energy Consumption Survey (CBECS)

Form EIA-871A (Building Questionnaire)

Form EIA-871I (Mall Building Questionnaire)

Form EIA-871J (Mall Establishment Questionnaire)

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How to Use This Questionnaire

The 2018 Commercial Buildings Energy Consumption Survey (CBECS) is programmed and conducted in computer-assisted interview software called Blaise.

The 2018 CBECS is offered in two different modes: interviewer-administered and web. For the interviewer-assisted mode, a professional interviewer administers the questionnaire in-person with a respondent at the building using a Surface Pro tablet computer. For the web version, the respondent is provided with a URL and a PIN and completes the questionnaire on their own.

The purpose of this paper representation of the questionnaire is to document the question text, fills, and skip patterns within the 2018 CBECS questionnaire. *PLEASE NOTE:* All the question fills and skip patterns are handled automatically by the software and are transparent to the interviewer, so this document appears much more complex than the actual CBECS instrument.

Here is an example question to show the general question format of this document:

A11	**Cool roof materials** {CoolRoof*}* *see below*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A4
Question Text	Please look at Show Card A4. Some roofs are designed to reflect more sunlight or absorb less heat than a standard roof. Which special qualities, if any, describe the roof of this building?
Interviewer Instructions	Enter all that apply
QUESTION TEXT - web	
Question Text	Some roofs are designed to reflect more sunlight or absorb less heat than a standard roof. Which special qualities, if any, describe the roof of this building?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. White or highly reflective coating or paint		*CPCLRF*
2. White or highly reflective tiles or shingles		*TSCLRF*
3. Aluminum coating		*ALCLRF*
4. Ballasted roof system		*BLCLRF*
5. Vegetated roof		*VGCLRF*
6. Other		*OTCLRF*
7. None		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ A12 [Other cool roof] OTHERWISE ➔ A13 [Roof tilt]

In the first row, the black box (**A11** here) contains the question number, followed by the **Question name** (**Cool roof materials** here), the internal **Blaise programming variable** in brackets ({CoolRoof} here) and the ***SAS variable*** (if applicable) in the same row. If the SAS variable area says "*see below,*" (as it does in this example) the variables are found within the RESPONSE OPTIONS box.

The **ASK** line describes the conditions that need to be true for a question to be on path for the interview.

As shown in the next example below, sometimes there is a **FILL** line that describes any question fills and the conditions under which each appears.

The **QUESTION TEXT - interviewer-administered** box provides information about the question in interviewer-assisted mode. The **Show Card** box shows which Show Card, if any, is applicable for the question, and if so, text reading SHOW CARD A4 (e.g.) will display above the question on the screen. Show Cards allow respondents completing the interviewer-administered questionnaire to see the full list of response options (as well as definitions, examples, or images, where applicable) that are displayed on screen for web respondents. The **Question text** box shows the question to be displayed and the **Interviewer Instructions** box shows the text that will be displayed below the question in italics (or N/A if there are no instructions for the particular question).

The **QUESTION TEXT - web** box provides information about the question in web mode. There are no Show Cards for the web, so that box is not there. The **Question text** box shows the question to be displayed if it's different from the interviewer-assisted mode (or "No changes required" if it is the same).The **Respondent Instructions** show the text that will be displayed below the question in italics.

The **ITEM TYPE** box shows an **X** for whether the question is Enumerated, Numeric, String Text, or a Date. Each of these types then provides different information, as follows:

RESPONSE OPTIONS: ***Enumerated*** shows the response set for the question, the associated **Image** to be shown on the screen, if applicable (not many questions have images), and the **SAS Name**, if applicable.

RESPONSE OPTIONS: ***Numeric*** shows the response set for the question, the **Watermark** shows the text that will be displayed within the data entry box before the interviewer or respondent begins typing, the **Label** that will be displayed directly to the right of the data entry box, and the allowable **Range** of data.

RESPONSE OPTIONS: ***String Text*** are mostly used for "other specify" responses. The **Watermark** shows the text that that will be displayed within the data entry box before the interviewer or respondent begins typing.

RESPONSE OPTIONS
String Text
Watermark
Briefly describe the other activity associated with this gas station

RESPONSE OPTIONS: ***Date*** all show a **Watermark** of mm/dd/yyyy.

The **NONRESPONSE** box shows how the interviewer or respondent will proceed if they do not know the answer to the question. **Explicit DK** and **Explicit RF** mean that there will be a radio button or check box directly on the screen that says "I don't know" or "I'd rather not answer." **Missing Item Prompt Box** means that if the interviewer or respondent leaves the question blank, a message will appear that says "Did you mean to leave this question blank? If not, please provide an answer and select the "Next" button. Otherwise, select "Next" to skip the question." **Allow Blank** means that a question can be left blank without the missing item prompt box appearing.

The **NEXT** line details the routing for the next question. Follow these instructions in order. Once a true statement is reached, go to the question indicated by the arrow (⇨).

Example of **Numeric** response option:

A18	**Floor-to-ceiling height** {FloorToCeiling} *FLCEILHT*		
ASK	IF Building or Mall interview		
FILL	**{Floors}** IF A16 [Number of floors] = 1 = "in this building" OTHERWISE = "of the majority of floors in this building"		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	What is the typical floor-to-ceiling height {Floors}, measured in feet?		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		feet	7 to 500
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A19 [Attic]		

Section R: Respondent Questions

RRT	Respondent Question Routing
NOTE: If more than one contact is necessary to complete the interview, the questions in this section should be asked each time the case is re-started. IF interviewer-administered ⇨ R1 [Consent] IF web THEN: IF First time case started ⇨ R2 [Respondent function] IF Re-started case ⇨ R4 [Same respondent]	

R1	**Consent** {Consent} *R1CARI – RXCARI*		
ASK	IF interviewer-administered		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Some parts of this interview will be recorded for quality control purposes. I'd like to continue now unless you have any questions.		
Interviewer Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Gives consent to record interview			
2. Does <u>not</u> give consent to record interview			
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box • Allow Blank		
NEXT	IF First time case started ➔ R2 [Respondent function] IF Re-started case ➔ R4 [Same respondent]		

R2	**Respondent function** {Respondent} *R1JOB*		
ASK	IF First time case started		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD 1 Take out the Show Cards or make sure the respondent has access to them.		
Question Text	Please turn to Show Card 1. Which of these categories best describes your job function?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Which of the following categories best describes your job function?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Operations, maintenance, or engineering			
2. Property management			
3. Store management			
4. Mall management			
5. Administration or company management			
6. Energy or environmental management			
7. Building owner			
8. Business owner			
9. Accounting, finances, or payroll			
10. Executive official			
11. School official			
12. Religious official			
13. Support staff			
14. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other ➔ R3 [Other job function] OTHERWISE ➔ R7 [Building boundaries]		

R3	**Other job function** {RespSpecify} *R1JOBX*
ASK	IF Other IN R2 [Respondent function]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe your job function	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ R7 [Building boundaries]

c

R4	**Same respondent** {SameRespondent} *R2SAME - RXSAME*		
ASK	IF Re-started case		
FILL	**{StructDesc} =** name, description, or address from listing or screening		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	N/A		
Interviewer Instructions	It appears the survey for {StructDesc} been partially answered. Are you continuing the survey with the same respondent?		
QUESTION TEXT – web			
Question Text	It appears the survey for {StructDesc} been partially answered. Are you the person that answered the first portion of this survey?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ Next applicable question that has not been answered IF No OR Missing ➔ R5 [Respondent function]		

R5	**Respondent function** {NextResp} *R2JOB – RXJOB*		
ASK	IF R4 [Same response] = No OR Missing		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD 1 Take out the Show Cards or make sure the respondent has access to them.		
Question Text	Please turn to Show Card 1. Which of these categories best describes your job function?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Which of the following categories best describes your job function?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Operations, maintenance, or engineering			
2. Property management			
3. Store management			
4. Mall management			
5. Administration or company management			
6. Energy or environmental management			
7. Building owner			
8. Business owner			
9. Accounting, finances, or payroll			
10. Executive official			
11. School official			
12. Religious official			
13. Support staff			
14. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other ➔ R6 [Other job function] OTHERWISE ➔ R7 [Building boundaries]		

R6	**Other job function** {NextRespSpecify} *R2JOBX – RXJOBX*
ASK	IF Other IN R5 [Respondent function]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe your job function	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ R7 [Building boundaries]

R7	**Building boundaries** {BuildingBounds}
ASK	All structure types
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment” **{StructDesc} =** name, description, or address from listing or screening **{StartCont}** IF First time case started = “start the survey.” IF Re-started case = “continue the survey at the next un-answered question.”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The {Structure} that we’re going to be talking about today is the {StructDesc}.
Interviewer Instructions	If this is correct, please select the “Next” button to {StartCont} If this is incorrect, contact your supervisor.
QUESTION TEXT – web	
Question Text	When completing this survey, please consider only the {StructDesc}.
Respondent Instructions	If this is correct, please select the “Next” button to {StartCont} If this is incorrect or you are unsure, please call 555-555-5555.
ITEM TYPE	No space for answer , just Next button.
NONRESPONSE	N/A
NEXT	➔ A1 [Building name]

Section A: Size, Structural Characteristics, and Age

A1	**Building name** {BuildingName} *BLDGNAM*
ASK	All structure types
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Mall = “shopping center” IF Interview = Establishment = “establishment”
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	By what name is this {Structure} most commonly referred?
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building or Mall interview ➔ A2 [Street address] IF Establishment interview ➔ A6 [Square footage]

A2	**Street address** {StreetAddress} *ADDRESS*
ASK	IF Building or Mall interview
DISPLAY	A2-A5 are all on one screen
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Please tell me the address of the building, beginning with the street address. Street address:
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	What is the address of the building? Street address:
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A3 [City]

A3	**City** {City} *CITY*
ASK	IF Building or Mall interview
DISPLAY	A2-A5 are all on one screen
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	City:
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A2 [State]

A4	**State** {State} *STATE*		
ASK	IF Building or Mall interview		
DISPLAY	A2-A5 are all on one screen		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	State:		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
State list drop-down with “Select a state” as watermark. Alphabetic order by state name, beginning with state abbreviation. Example : AL - ALABAMA			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A5 [ZIP code]		

A5	**ZIP code** {ZIPcode} *ZIP*
ASK	IF Building or Mall interview
DISPLAY	A2-A5 are all on one screen
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	ZIP code:
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
None	None	00000 to 99999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A6 [Square footage]

A6	**Square footage** {SqFt} *SQFT*
ASK	All structure types
FILL	**{Structure}** IF Interview = Building or Mall = “building” IF Interview = Establishment = “establishment” **{ElevatorParking}** IF Interview = Building or Mall = “elevator shafts, and indoor parking levels?” IF Interview = Establishment = “and elevator shafts?”
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	What is the gross or total square footage of all the space in this {Structure}, both finished and unfinished, including basements, hallways, lobbies, stairways, {ElevatorParking}
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ A7 [Square footage category] IF Establishment interview ➔ B56 [Establishment activity] IF 1,000 square feet or less ➔ A8 [End of interview] OTHERWISE ➔ A9 [Wall construction material]

A7	**Square footage category** {SqFtRange} *SQFTC*
ASK	IF A6 [Square footage] = DK/Missing
FILL	**{Structure}** IF Interview = Building or Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A1
Question Text	I understand that it may be difficult to give an exact figure for square footage. Please look at Show Card A1 and tell me which category best describes the total gross square footage in this {Structure}.
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	Which category best describes the total gross square footage in this {Structure}?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1,000 square feet or less *(1,000 square feet is approximately 2 times the size of a two car garage)*		
2. 1,001 to 5,000 square feet *(Example: fast food restaurant)*		
3. 5,001 to 10,000 square feet *(Example: sit-down style chain restaurant)*		
4. 10,001 to 25,000 square feet *(Example: high school gym)*		
5. 25,001 to 50,000 square feet *(Example: supermarket)*		
6. 50,001 to 100,000 square feet *(Example: large discount or home improvement store)*		
7. 100,001 to 200,000 square feet *(Example: 3-level department store)*		
8. 200,001 to 500,000 square feet *(Example: professional basketball arena)*		
9. 500,001 to 1 million square feet *(Example: convention center)*		
10. Over 1 million square feet *(Example: skyscraper)*		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Establishment interview ➔ B56 [Establishment activity] IF 1,000 square feet or less ➔ A8 [End of interview] OTHERWISE ➔ A9 [Wall construction material]

A8	**End of interview** {TerminateSize}
ASK	IF Building or Mall interview & (A6 [Square footage] ≤ 1,000 OR A7 [Square footage category] = 1,000 or less)
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study only includes buildings that are larger than one thousand square feet.
Interviewer Instructions	If this is incorrect, and the building is larger than one thousand square feet, please select the “Back” button to change the previous answer. Otherwise, please select the “Next” button to finish the interview.
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button
NONRESPONSE	N/A
NEXT	TERMINATE

A9	**Wall construction material** {WallCons} *WLCNS*		
ASK	IF Building or Mall interview		
QUESTION TEXT - interviewer-administered			
Show Card	SHOW CARD A2		
Question Text	Please look at Show Card A2 for a list of different types of construction materials. Which one of these categories best describes the predominant exterior wall construction material used on this building?		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	Which one of these categories best describes the predominant exterior wall construction material used on this building?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Brick, stone, or stucco			
2. Pre-cast concrete panels			
3. Concrete block or poured concrete (above grade)			
4. Aluminum, asbestos, plastic, or wood materials (siding, shingles, tiles, or shakes)			
5. Sheet metal panels			
6. Window or vision glass (glass that <u>can</u> be seen through)			
7. Decorative or construction glass (glass that <u>cannot</u> be seen through)			
8. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A10 [Roof construction material]		

A10	**Roof construction material** {RoofCons} *RFCNS*		
ASK	IF Building or Mall interview		
QUESTION TEXT - interviewer-administered			
Show Card	SHOW CARD A3		
Question Text	Please look at Show Card A3 for a list of different types of roofing materials. Which one of these categories best describes the building's predominant exterior roof surface?		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	Which one of these categories best describes the building's predominant exterior roof surface?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Built-up (tar, felts, or fiberglass and a ballast, such as stone)			
2. Slate or tile shingles			
3. Wood shingles, shakes, or other wooden materials			
4. Asphalt, fiberglass, or other shingles			
5. Metal surfacing			
6. Plastic, rubber, or synthetic sheeting (single or multi ply)			
7. Concrete			
8. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A11 [Cool roof materials]		

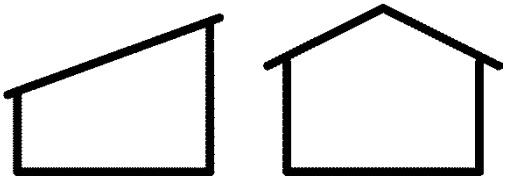
A11	**Cool roof materials** {CoolRoof} *see below*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A4
Question Text	Please look at Show Card A4. Some roofs are designed to reflect more sunlight or absorb less heat than a standard roof. Which special qualities, if any, describe the roof of this building?
Interviewer Instructions	Enter all that apply
QUESTION TEXT - web	
Question Text	Some roofs are designed to reflect more sunlight or absorb less heat than a standard roof. Which special qualities, if any, describe the roof of this building?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. White or highly reflective coating or paint		*CPCLRF*
2. White or highly reflective tiles or shingles		*TSCLRF*
3. Aluminum coating		*ALCLRF*
4. Ballasted roof system		*BLCLRF*
5. Vegetated roof		*VGCLRF*
6. Other		*OTCLRF*
7. None		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ A12 [Other cool roof] OTHERWISE ➔ A13 [Roof tilt]

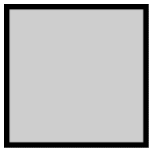
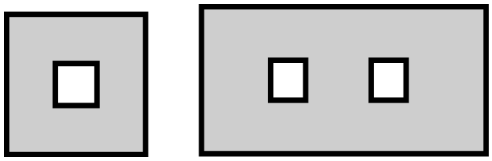
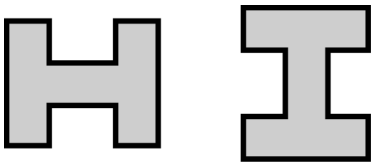
A12	**Other cool roof** {OtherCoofRoof} *OTCLRFX*
ASK	IF A11 [Cool roof materials] = Other
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other quality of the roof	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ A13 [Roof tilt]

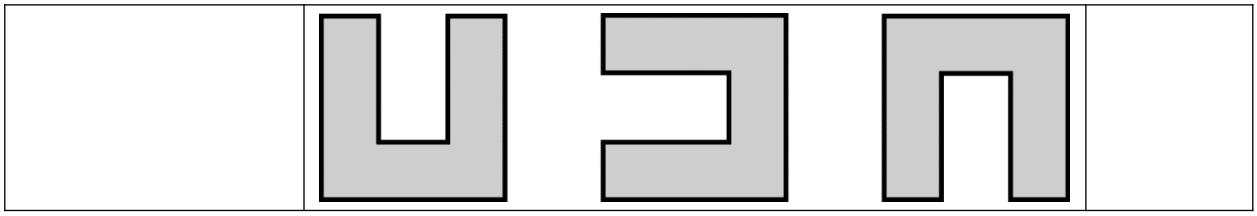
A13	**Roof tilt** {RoofTilt} *RFTILT*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A5
Question Text	Looking at Show Card A5, please tell me which one of these images best represents the tilt or pitch of the roof of this building.
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	Which one of these images best represents the tilt or pitch of the roof of this building?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

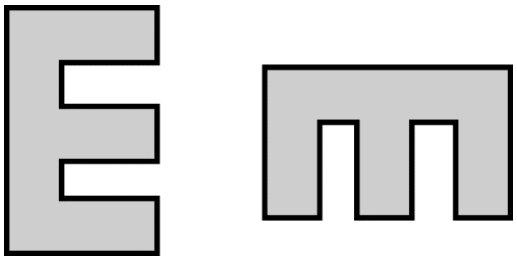
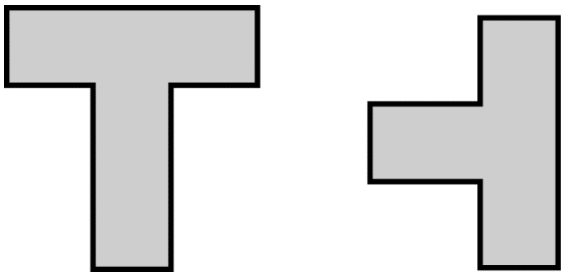
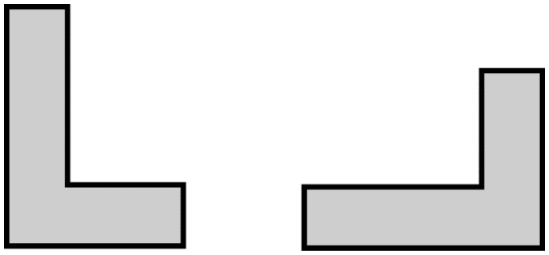
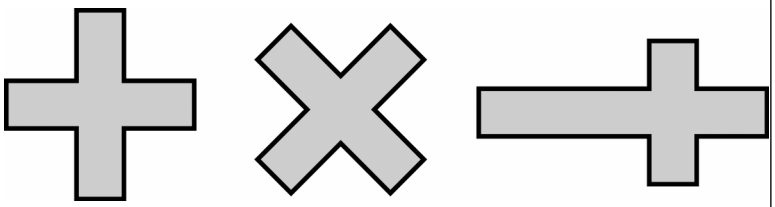
Response options	**Image**	**SAS Name**
1. Flat		
2. Shallow pitch		
3. Steeper pitch		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A14 [Building shape]

A14	**Building shape** {BldgShape} *BLDSHP*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A6
Question Text	Looking at Show Card A6, which one of these shapes best resembles the floorplan of this building at ground level? This is sometimes called the "footprint" of the building.
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	Which one of these shapes best resembles the floorplan of this building at ground level? This is sometimes called the "footprint" of the building.
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

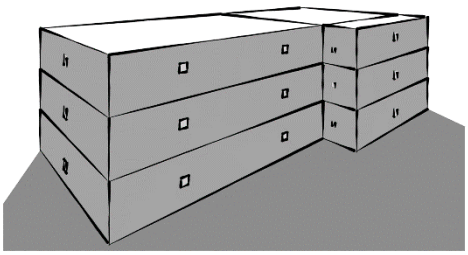
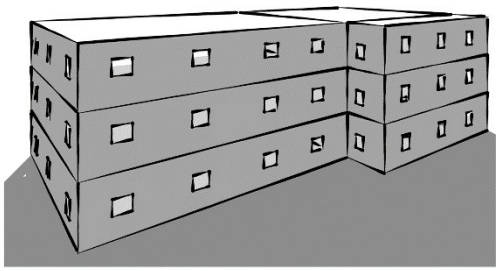
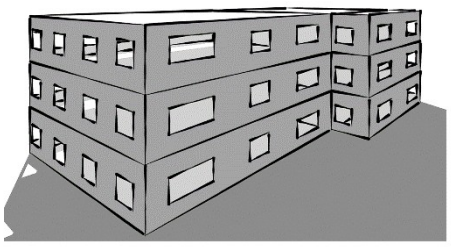
Response options	Image	SAS Name
1. Square		
2. Wide rectangle		
3. Narrow rectangle		
4. Rectangle or square with an interior courtyard		
5. “H” shaped		
6. “U” shaped		

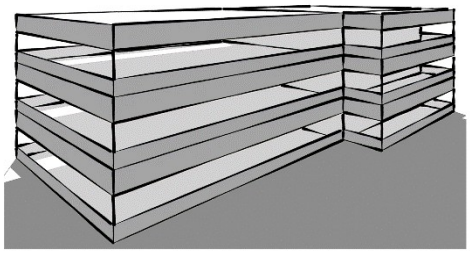
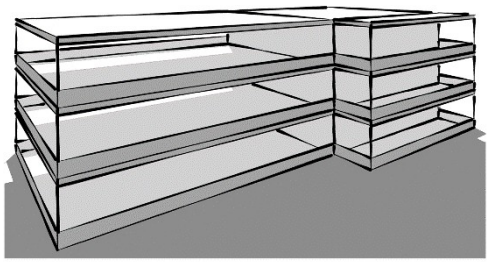
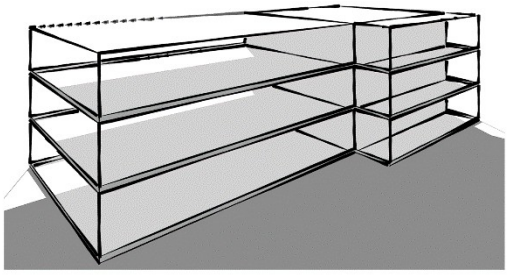


7. “E” shaped		
8. “T” shaped		
9. “L” shaped		
10. “+” or cross shaped		
11. Other shape		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A15 [Percent exterior glass]

A15	**Percent exterior glass** {GlassPct} *GLSSPC*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A7
Question Text	Which of the ranges on Show Card A7 best describes the percentage of the exterior wall surface of this building that is covered with window glass or glass doors?
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	Which of these ranges best describes the percentage of the exterior wall surface of this building that is covered with window glass or glass doors?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. 1 percent or less		
2. 2 to 10 percent		
3. 11 to 25 percent		

4. 26 to 50 percent		
5. 51 to 75 percent		
6. 76 to 100 percent		
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank	
NEXT	➔ A16 [Number of floors]	

A16	**Number of floors** {Floors} *NFLOOR*		
ASK	IF Building or Mall interview		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	How many floors are in the tallest section of the building? Include basements, parking levels, or any other floors below ground level. Exclude attics, half-floors, mezzanines, balconies, and lofts. If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		floors	1 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Mall interview OR Only one floor OR DK/Missing ➔ A18 [Floor to ceiling height] OTHERWISE ➔ A17 [Number of underground floors]		

A17	**Number of underground floors** {Basement} *BASEMNT*		
ASK	IF Building interview & A16 [Number of floors] > 1		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	How many of these floors are completely or partly below ground? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		underground floors	0 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A18 [Floor-to-ceiling height]		

A18	**Floor-to-ceiling height** {FloorToCeiling} *FLCEILHT*
ASK	IF Building or Mall interview
FILL	**{Floors}** IF A16 [Number of floors] = 1 = “in this building” OTHERWISE = “of the majority of floors in this building”
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	What is the typical floor-to-ceiling height {Floors}, measured in feet?
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	feet	7 to 500

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ A19 [Attic]

A19	**Attic** {Attic} *ATTIC*
ASK	IF Building or Mall interview
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Does this building have an attic? An attic is a space in a building that is directly below the roof, not permanently occupied, and not directly heated or cooled.
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF A16 [Number of floors] = 1 ➔ A24 [Year of construction] OTHERWISE ➔ A20 [Elevators]

A20	**Elevators** {Elevators} *ELEVTR*		
ASK	IF A16 [Number of floors] ≠ 1		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	Are there any elevators in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ A21 [Number of elevators] OTHERWISE ➔ A22 [Escalators]		

A21	**Number of elevators** {NumElevator} *NELVTR*		
ASK	IF A20 [Elevators] = Yes		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	How many elevators are there? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		elevators	1 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A22 [Escalators]		

A22	**Escalators** {Escalators} *ESCLTR*
ASK	IF A16 [Number of floors] ≠ 1
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Are there any escalators in this building?
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ A23 [Number of escalators] OTHERWISE ➔ A24 [Year of construction]

A23	**Number of escalators** {NumEscalator} *NESLTR*		
ASK	IF A22 [Escalators] = Yes		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	How many escalators are there? Count <u>each</u> escalator. For example, a pair of up and down escalators should be counted as two. “Moving sidewalks” should be counted as escalators. If you’re not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark	**Label**	**Range**	
Enter a number	escalators	1 to 99	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ A24 [Year of construction]		

A24	**Year of construction** {Year} *YRCON*		
ASK	IF Building or Mall interview		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	What year was this building constructed? If there have been major additions, give the year the largest portion of the building was completed.		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark	**Label**	**Range**	
Enter a year	None	1600 to 2019	
NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank		
NEXT	IF DK/Missing ➔ A25 [Year of construction category] IF 2018 ➔ A27 [Month ready for occupancy] IF 2019 ➔ A26 [End of interview] IF 2012 or earlier ➔ A28 [Renovations] IF 2013 to 2017 & Building interview ➔ B1 [Primary activity] IF 2013 to 2017 & Mall interview ➔ B42 [On a multibuilding complex]		

A25	**Year of construction category** {YearRange} *YRCONC*
ASK	IF A24 [Year of construction] = DK/Missing
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A8
Question Text	Please look at Show Card A8 and tell me which range best describes when this building was constructed.
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	Which range best describes when this building was constructed?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Before 1920		
2. 1920 to 1945		
3. 1946 to 1959		
4. 1960 to 1969		
5. 1970 to 1979		
6. 1980 to 1989		
7. 1990 to 1999		
8. 2000 to 2009		
9. 2010 to 2012		
10. 2013 to 2018		
11. 2019		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 2019 ➔ A26 [End of interview] IF Any category (OR DK/Missing) except 2013 to 2018 ➔ A28 [Renovations] IF 2013 to 2018 & Building interview ➔ B1 [Primary activity] IF 2013 to 2018 & Mall interview ➔ B42 [On a multibuilding complex]

A26	**End of interview** {Terminate2019}
ASK	IF A24 [Year of construction] OR A25 [Year of construction category] = 2019
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study only includes buildings that were ready for occupancy before January 1, 2019.
Interviewer Instructions	If this is incorrect, and the building was occupied before January 1, 2019, please select the “Back” button to change the previous answer. Otherwise, please select the “Next” button to finish the interview.
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

A27	**Month ready for occupancy** {Month} *MONCON*		
ASK	IF A24 [Year of construction] = 2018		
QUESTION TEXT - interviewer-administered			
Show Card	N/A		
Question Text	In what month of 2018 was this building first ready for occupancy?		
Interviewer Instructions	N/A		
QUESTION TEXT - web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. January			
2. February			
3. March			
4. April			
5. May			
6. June			
7. July			
8. August			
9. September			
10. October			
11. November			
12. December			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Building interview ➔ B1 [Primary activity] IF Mall interview ➔ B42 [On a multibuilding complex]		

A28	**Renovations** {Renovations} *RENOV*
ASK	IF A24 [Year of construction] = 2012 or earlier OR A25 [Year of construction category] = Any category (OR DK/Missing) except 2013 to 2018
FILL	**{Since2000orConstructed}** IF A24 [Year of construction] = 2000 or later OR A25 [Year of construction category] = 2000 to 2009 OR 2010 to 2012 = "since it was constructed" OTHERWISE = "since 2000"
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	Has any part of this building undergone renovations {Since2000orConstructed}?
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ A29 [What renovations] OTHERWISE: IF Building interview ➔ B1 [Primary activity] IF Mall interview ➔ B42 [On a multibuilding complex]

A29	**What renovations** {WhatRenovated} *see below*
ASK	IF A28 [Renovations] = Yes
FILL	**{Since2000orConstructed}** IF A24 [Year of construction] = 2000 or later OR A25 [Year of construction category} = 2000 to 2009 OR 2010 to 2012 = "since it was constructed" OTHERWISE = "since 2000"
QUESTION TEXT - interviewer-administered	
Show Card	SHOW CARD A9
Question Text	Please look at Show Card A9 and tell me which types of renovations have been done {Since2000orConstructed}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT - web	
Question Text	Which types of renovations have been done {Since2000orConstructed}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Cosmetic improvements (interior or exterior) *(Examples: new paint, siding, furniture, wallpaper, carpeting)*		*RENCOS*
2. Addition or annex		*RENADD*
3. Reduction of enclosed floorspace *(Example: demolition of unused wing of building)*		*RENRDC*
4. Interior wall re-configuration *(Example: individual offices turned into area for cubicles)*		*RENINT*
5. Roof replacement		*RENRFF*
6. Window replacement		*RENWIN*
7. HVAC (heating, ventilation, or air conditioning) equipment upgrade		*RENHVC*
8. Lighting upgrade		*RENLGT*
9. Plumbing system upgrade (includes hot water heaters)		*RENPLB*
10. Electrical upgrade		*RENELC*
11. Insulation upgrade		*RENINS*
12. Fire, safety, or security upgrade		*RENSAF*
13. Structural upgrade *(Examples: foundation upgrade, seismic upgrade)*		*RENSTR*
14. Other		*RENOTH*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ A30 [Other renovation] OTHERWISE: IF Building interview ➔ B1 [Primary activity] IF Mall interview ➔ B42 [On a multibuilding complex]

A30	**Other renovation** {OtherRenovation} *RENOTHX*
ASK	IF A29 [What renovations] = Other
QUESTION TEXT - interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT - web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of renovation	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building interview ➔ B1 [Primary activity] IF Mall interview ➔ B42 [On a multibuilding complex]

Section B: Building or Establishment Activity

B1	**Primary activity** {Activity} *ACT, ACT1*
ASK	IF Building interview
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B1
Question Text	Please look at Show Card B1. Which one of the activities on the list accounts for the majority of the floorspace in this building?
Interviewer Instructions	If there are equal shares of floorspace for more than one activity, select any one of those activities here.
QUESTION TEXT – web	
Question Text	Which one of these activities accounts for the majority of the floorspace in this building?
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Tooltip text
11. Office/Professional	Examples: administration; bank; brokerage/securities firm; consulting; government; insurance; law; mixed professional; non-profit; real estate; research and development; sales or leasing.
12. Data center	A data center is a group of networked computer servers that are housed in one location, usually a secure area. The servers perform functions such as data storage and processing. There are usually many servers stacked in rows of racks and they operate continuously, day and night. Data centers are generally kept very cool and require a dedicated uninterruptible power supply.
13. Warehouse/Storage	Includes non-refrigerated and refrigerated warehouses, distribution or shipping centers, other storage buildings, and public rental storage units.
14. Food sales or service	Examples: grocery store/supermarket; convenience store; restaurant; fast food; cafeteria; caterer; bar; enclosed farmer's market; fruit/vegetable market; meat/seafood store; specialty food store; sandwich shop; coffee shop.
15. Enclosed mall	An enclosed shopping mall contains multiple stores and other establishments, often anchored by one or more department stores, with interior walkways and common areas.
16. Retail (other than mall)	Examples: big-box chain store; department store; wholesale club; clothing store; home improvement/gardening/building supplies; automobile dealer/showroom; hardware store; drugstore; furniture/appliances; car rental; equipment rental; alcoholic beverage store; antique shop; pawn shop; bookstore.
17. Education	Buildings for academic or technical classroom instruction. Other activities that occur on school campuses (e.g., gyms, dormitories, libraries) should be reported in their respective categories. Examples of classroom education: preschool/daycare, elementary school,

	middle/junior high school, high school, college/university classroom, vocational school/career training, religious education.
18. Religious worship	Examples: chapel; church; mosque; synagogue; temple.

19. Public assembly	Buildings where people gather for entertainment, cultural, recreational, or social activities. Examples: art gallery; exhibit hall; library; museum; casino; concert hall; night club; observatory/planetarium; stadium/arena/coliseum; theater/cinema; amusement arcade; bowling alley; community center; gymnasium/health club; indoor racquet sports; recreation center; indoor swimming pool; skating rink; assembly hall/auditorium; convention center; funeral home; lecture hall; lodge hall; meeting hall; student union; senior center; town hall; armory; airport terminal; train/bus station.
20. Health care	Includes both inpatient (services involving overnight care) and outpatient services. Examples: medical care hospital; psychiatric hospital; substance abuse rehabilitation center; veterinary facilities; physical therapy center; dental clinic/office; medical clinic/office; mental health/psychiatric clinic; urgent care clinic; women's health clinic.
21. Service	Examples: motor vehicle repair or service; other repair or maintenance shop; dry cleaner; laundry; car wash; gas station; barber shop; salon/spa; animal shelter; kennel; doggie daycare; copy center/printing; post office/shipping center/mailbox facility.
22. Lodging	Buildings that offer group quarters for short-term or long-term residents. Examples: hotel; motel; inn/bed and breakfast; dormitory/sorority/fraternity; retirement home; nursing home; shelter/group home/children's home; halfway house; convent/monastery.
23. Public order and safety	Examples: fire station; police station; courthouse/probation office; jail/penitentiary/prison; reformatory; sheriff's office.
24. Residential	Living quarters for one or more households with individual kitchen facilities. Examples: apartment building; single family detached home; duplex; townhouse; row house; mobile home.
25. Industrial/Manufacturing	Buildings that involve the processing or procurement of goods, merchandise, raw materials or food. Examples: assembly factory; construction or natural resource procurement; food processing; manufacturing plant; mill; paper, chemical, rubber or petroleum processing; utility or sanitary service.
26. Agricultural	Buildings that involve the production, processing, sale, storage or housing of agricultural products, including livestock. Examples: greenhouse; livestock housing; nursery; grain storage.
27. Vacant	Buildings that were vacant during 2018, but were previously used for commercial purposes.
28. Other	Examples: laboratory; airplane hangar; public restroom/locker room/changing area; crematorium; enclosed parking garage; telephone switching facilities; broadcasting studio.
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Missing ➔ B42 [On a multibuilding complex] OTHERWISE ➔ B2 [One activity in building]

B2	**One activity in building** {OneAct} *ONEACT*
ASK	IF B1 [Primary activity] ≠ Missing
FILL	**{Activity}** IF B1 [Primary activity] = Office/Professional = “used as office space” IF B1 [Primary activity] = Data center = “used as a data center” IF B1 [Primary activity] = Warehouse/Storage = “used as warehouse or storage space” IF B1 [Primary activity] = Food sales or service = “used for food sales or service” IF B1 [Primary activity] = Enclosed mall = “an enclosed mall” IF B1 [Primary activity] = Retail = “used for retail” IF B1 [Primary activity] = Education = “used for education” IF B1 [Primary activity] = Religious worship = “used for religious worship” IF B1 [Primary activity] = Public assembly = “used for public assembly” IF B1 [Primary activity] = Health care = “used for health care” IF B1 [Primary activity] = Service = “used for service” IF B1 [Primary activity] = Lodging = “used for lodging” IF B1 [Primary activity] = Public order and safety = “used for public order and safety” IF B1 [Primary activity] = Residential = “residential” IF B1 [Primary activity] = Industrial/Manufacturing = “industrial or manufacturing” IF B1 [Primary activity] = Agricultural = “agricultural” IF B1 [Primary activity] = Vacant = “vacant” IF B1 [Primary activity] = Other = “used for this activity”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is 75 percent or more of the floorspace in this building {Activity}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes OR Missing THEN: IF B1 [Primary activity] = Office/Professional ➔ B5 [Office type] IF B1 [Primary activity] = Data center ➔ B6 [Verify data center] IF B1 [Primary activity] = Warehouse/Storage ➔ B9 [Warehouse type] IF B1 [Primary activity] = Food sales or service ➔ B10 [Food sales or service type] IF B1 [Primary activity] = Enclosed mall ➔ B32 [Assign CBECS Activity = Enclosed mall] IF B1 [Primary activity] = Retail ➔ B11 [Retail type] IF B1 [Primary activity] = Education ➔ B12 [Education type] IF B1 [Primary activity] = Religious worship ➔ B32 [Assign CBECS Activity = Religious worship] IF B1 [Primary activity] = Public assembly ➔ B13 [Assembly type] IF B1 [Primary activity] = Health care ➔ B14 [Health care type] IF B1 [Primary activity] = Service ➔ B15 [Service type] IF B1 [Primary activity] = Lodging➔ B19 [Lodging type] IF B1 [Primary activity] = Public order and safety ➔ B20 [Public order type] IF B1 [Primary activity] = Residential ➔ B21 [Residential type] IF B1 [Primary activity] = Industrial/Manufacturing ➔ B8 [Used as warehouse] IF B1 [Primary activity] = Agricultural ➔ B23 [Space for retail sales] IF B1 [Primary activity] = Vacant ➔ B24 [Vacant for noncommercial] IF B1 [Primary activity] = Other ➔ B26 [Other type] OTHERWISE ➔ B3 [Activities in building]

B3	**Activities in building** {MultiUse} *ACT2, ACT3*
ASK	IF B2 [One activity in building] = No
FILL	**{Activity}** IF B1 [Primary activity] = Office/Professional = “office” IF B1 [Primary activity] = Data center = “data center” IF B1 [Primary activity] = Warehouse/Storage = “warehouse or storage” IF B1 [Primary activity] = Food sales or service = “food sales or service” IF B1 [Primary activity] = Enclosed mall = “enclosed mall” IF B1 [Primary activity] = Retail = “retail” IF B1 [Primary activity] = Education = “education” IF B1 [Primary activity] = Religious worship = “religious worship” IF B1 [Primary activity] = Public assembly = “public assembly” IF B1 [Primary activity] = Health care = “health care” IF B1 [Primary activity] = Service = “service” IF B1 [Primary activity] = Lodging = “lodging” IF B1 [Primary activity] = Public order and safety = “public order and safety” IF B1 [Primary activity] = Residential = “residential” IF B1 [Primary activity] = Industrial/Manufacturing = “industrial or manufacturing” IF B1 [Primary activity] = Agricultural = “agricultural” IF B1 [Primary activity] = Vacant = “vacant” IF B1 [Primary activity] = Other = “the main activity”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B1
Question Text	Looking again at Show Card B1, which one or two activities account for the next largest amount of space in this building, after {Activity}? There may be other activities in the building, but just report up to two more.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which one or two activities account for the next largest amount of space in this building, after {Activity}? There may be other activities in the building, but just report up to two more.
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date

RESPONSE OPTIONS	
Enumerated	
Response options	**Tooltip text**
11. Office/Professional	See B1 [Primary activity]
12. Data center	
13. Warehouse/Storage	
14. Food sales or service	
15. Enclosed mall	
16. Retail (other than mall)	
17. Education	
18. Religious worship	
19. Public assembly	
20. Health care	
21. Service	
22. Lodging	
23 Public order and safety	
24. Residential	
25. Industrial/Manufacturing	
26. Agricultural	
27. Vacant	
28. Other	

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Answered ➔ B4 [Percents for activities] IF Missing ➔ IF B1 [Primary activity] = Office/Professional ➔ B5 [Office type] IF B1 [Primary activity] = Data center ➔ B6 [Verify data center] IF B1 [Primary activity] = Warehouse/Storage ➔ B9 [Warehouse type] IF B1 [Primary activity] = Food sales or service ➔ B10 [Food sales or service type] IF B1 [Primary activity] = Enclosed mall ➔ B32 [Assign CBECS Activity = Enclosed mall] IF B1 [Primary activity] = Retail ➔ B11 [Retail type] IF B1 [Primary activity] = Education ➔ B12 [Education type] IF B1 [Primary activity] = Religious worship ➔ B32 [Assign CBECS Activity = Religious worship] IF B1 [Primary activity] = Public assembly ➔ B13 [Assembly type] IF B1 [Primary activity] = Health care ➔ B14 [Health care type] IF B1 [Primary activity] = Service ➔ B15 [Service type] IF B1 [Primary activity] = Lodging➔ B19 [Lodging type] IF B1 [Primary activity] = Public order and safety ➔ B20 [Public order type] IF B1 [Primary activity] = Residential ➔ B21 [Residential type] IF B1 [Primary activity] = Industrial/Manufacturing ➔ B8 [Used as warehouse] IF B1 [Primary activity] = Agricultural ➔ B23 [Space for retail sales] IF B1 [Primary activity] = Vacant ➔ B24 [Vacant for noncommercial] IF B1 [Primary activity] = Other ➔ B26 [Other type]

B4	**Percents for activities** {ActPcts} *ACT1PCT, ACT2PCT, ACT3PCT*
ASK	IF B2 [One activity in building] = No; Ask for *ACT1*, *ACT2*, and *ACT3*
FILL	**{ActivityLabel}** IF Office/Professional = “Office” IF Data center = “Data center” IF Warehouse/Storage = “Warehouse” IF Food sales or service = “Food sales or service” IF Enclosed mall = “Enclosed mall” IF Retail = “Retail” IF Education = “Education” IF Religious worship = “Religious worship” IF Public assembly = “Public assembly” IF Health care = “Health care” IF Service = “Service” IF Lodging = “Lodging” IF Public order and safety = “Public order and safety” IF Residential = “Residential” IF Industrial/Manufacturing = “Industrial or manufacturing” IF Agricultural = “Agricultural” IF Vacant = “Vacant” IF Other = “The other activity”
DISPLAY	ACT1PCT, ACT2PCT, and ACT3PCT are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	About what percentage of the total space is… {ActivityLabel}? (For ACT1) {ActivityLabel}? (For ACT2) {ActivityLabel}? (For ACT3)
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
1 to 100	%	1 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank

NEXT	IF There is an activity with a maximum percent, assign that as the primary activity IF There are equal maximum percents (e.g. 50% and 50%), or if they are all missing, assign the primary activity as the most energy-intensive one (based on 2012 CBECS data, in this order: *Data center, Food sales or service, Health care, Other, Lodging, Public order and safety, Public assembly, Office/Professional, Education, Enclosed mall, Retail, Service, Religious worship, Warehouse/Storage, Vacant*). THEN, follow here based on the assigned primary activity: IF Office/Professional ➔ B5 [Office type] IF Data center ➔ B6 [Verify data center] IF Warehouse/Storage ➔ B9 [Warehouse type] IF Food sales or service ➔ B10 [Food sales or service type] IF Enclosed mall ➔ B32 [Assign CBECS Activity = Enclosed mall] IF Retail ➔ B11 [Retail type] IF Education ➔ B12 [Education type] IF Religious worship ➔ B32 [Assign CBECS Activity = Religious worship] IF Public assembly ➔ B13 [Assembly type] IF Health care ➔ B14 [Health care type] IF Service ➔ B15 [Service type] IF Lodging ➔ B19 [Lodging type] IF Public order and safety ➔ B20 [Public order type] IF Residential ➔ B21 [Residential type] IF Industrial/Manufacturing ➔ B8 [Used as warehouse] IF Agricultural ➔ B23 [Space for retail sales] IF Vacant ➔ B24 [Vacant for noncommercial] IF Other ➔ B26 [Other type]

B5	**Office type** {OfficeSpec} *OFFCSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Office/Professional
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of office." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B2
Question Text	{ActivityExplanation} Looking at the list on Show Card B2, what type of office is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of office is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Administrative or professional office building *(Examples: consulting, insurance, law, utility/telephone company, publishing, or college administration)*		
2. Government office		
3. Mixed-use office		
4. Bank or other financial institution		
5. Doctor's or dentist's office		
6. Sales or leasing office *(Examples: vehicles or real estate)*		
7. Contractor's office *(Examples: construction, plumbing, or HVAC)*		
8. Non-profit or social services office		
9. Research and development office		
10. City hall or city center		
11. Religious office		
12. Call center		
13. Courthouse or probation office		
14. Veterinarian's office		
15. Vacant		

16. Other type of office			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Administrative or professional office building; Government office; Mixed-use office; Bank or other financial institution; Doctor's or dentist's office; Sales office; Contractor's office; Non-profit or social services office; Research and development office; City hall or city center; Religious office; Call center; OR Missing ➔ B32 [Assign CBECS Activity = Office] IF Courthouse or probation office ➔ B32 [Assign CBECS Activity = Public order and safety] IF Veterinarian's office ➔ B32 [Assign CBECS Activity = Outpatient health] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of office ➔ B27 [Specify other activity]		

B6	**Verify data center** {DataSpec} *DATACTR*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Data center
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of data center." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{ActivityExplanation} A data center is a group of networked computer servers that are housed in one location, usually a secure area. The servers perform functions such as data storage and processing. There are usually many servers stacked in rows of racks and they operate continuously, day and night. Data centers are generally kept very cool and require a dedicated uninterruptible power supply. Does this accurately describe this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ B32 [Assign CBECS Activity = Data center] IF No OR Missing ➔ B7 [Classify as office]

B7	**Classify as office** {DataSpecRecode} *NODCTR*
ASK	IF B6 [Verify data center] = No OR Missing
FILL	N/A
DISPLAY	Shown on same screen as B6
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Then, for the purposes of this study, this building will be classified as an office.
Interviewer Instructions	Enter “Next” to continue.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	➔ B32 [Assign CBECS Activity = Office]

B8	**Used as warehouse** {Warecheck} *WARECHK*		
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Industrial/Manufacturing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is this building used primarily as a warehouse or distribution center?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ B9 [Warehouse type] OTHERWISE ➔ B23 [Space for retail sales]		

B9	**Warehouse type** {WareSpec} *WARESP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Warehouse/Storage
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of warehouse." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B3
Question Text	{ActivityExplanation} Looking at the list on Show Card B3, what type of warehouse is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of warehouse is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Non-refrigerated warehouse		
2. Refrigerated warehouse		
3. Distribution or shipping center		
4. Public rental storage units		
5. Vehicle storage and/or maintenance (car barn)		
6. Other storage building		
7. Airplane hangar		
8. Vacant		
9. Other type of warehouse		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Non-refrigerated warehouse; Distribution or shipping center; Public rental storage units; Other storage building; OR Missing ➔ B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Refrigerated warehouse ➔ B32 [Assign CBECS Activity = Refrigerated warehouse] IF Vehicle storage and/or maintenance ➔ B32 [Assign CBECS Activity = Service] IF Airplane hangar ➔ B32 [Assign CBECS Activity = Other] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of warehouse ➔ B27 [Specify other activity]

B10	**Food sales or service type** {FoodSpec} *FOODSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Food sales or service
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of food sales or service." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B4
Question Text	{ActivityExplanation} Looking at the list on Show Card B4, what type of food sales or service building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of food sales or service building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Restaurant or cafeteria		
2. Fast food		
3. Bar, pub, or lounge		
4. Grocery store, supermarket, or specialty food market		
5. Gas station with convenience store		
6. Convenience store		
7. Beer, wine, or liquor store		
8. Reception hall		
9. Catering service		
10. Coffee, doughnut, or bagel shop		
11. Ice cream or frozen yogurt shop		
12. Bakery		
13. Vacant		
14. Other type of food sales or service		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Restaurant or cafeteria; Fast food; Bar, pub, or lounge; Reception hall; Catering service; Coffee, doughnut, or bagel shop; OR Ice cream or frozen yogurt shop ➔ B32 [Assign CBECS Activity = Food service] IF Grocery store, supermarket, or specialty food market; Gas station with a convenience store; Convenience store; Bakery; OR Missing ➔ B32 [Assign CBECS Activity = Food sales] IF Beer, wine, or liquor store ➔ B32 [Assign CBECS Activity = Retail] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of food sales or service ➔ B27 [Specify other activity]

B11	**Retail type** {RetailSpec} *RETLSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Retail
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of retail." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B5
Question Text	{ActivityExplanation} Looking at the list on Show Card B5, what type of retail building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of retail building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Retail store *(Examples: big-box chain store, department store, furniture, clothing, hardware, drugstore, bookstore, building supplies, auto parts, lumber, home improvement, farm equipment, lawn and garden, floral, crafts, gifts, antiques, pawn shop, or wholesale club)*		
2. Bank or other financial institution		
3. Convenience store		
4. Beer, wine, or liquor store		
5. Rental center *(Examples: equipment, furnishings, or movies)*		
6. Dealership or showroom for vehicles or boats		
7. Auto service or auto repair shop		
8. Studio or gallery		
9. Grocery store, supermarket, or specialty food market		
10. Salon, spa, or barber shop		
11. Copy center or printing shop		
12. Distribution or shipping center		
13. Gas station with a convenience store		
14. Gas station		
15. Post office, postal center, or mail sorting		

16. Recreation *(Examples: gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)*		

17. Repair shop			
18. Vacant			
19. Other type of retail			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Gas station ➔ B17 [Gas station building use] IF Retail store; Beer, wine, or liquor store; Rental center; Dealership or showroom; Studio or gallery; OR Missing ➔ B32 [Assign CBECS Activity = Retail] IF Bank or other financial institution➔ B32 [Assign CBECS Activity = Office] IF Convenience store; Grocery store, supermarket, or specialty food market; OR Gas station with a convenience store ➔ B32 [Assign CBECS Activity = Food sales] IF Auto service or auto repair shop; Salon, spa, or barber shop; Copy center or printing service; Post office, postal center, or mail sorting; OR Repair shop ➔ B32 [Assign CBECS Activity = Service] IF Distribution or shipping center ➔ B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Recreation ➔ B32 [Assign CBECS Activity = Public assembly] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of retail ➔ B27 [Specify other activity]		

B12	**Education type** {EducSp} *EDUCSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Education
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of education." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B6
Question Text	{ActivityExplanation} Looking at the list on Show Card B6, what type of education building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of education building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Elementary school		
2. Middle or junior high school		
3. High school		
4. Other multi-grade primary or secondary school (any combination pre-K through 12)		
5. College or university		
6. Preschool or daycare		
7. Adult education		
8. Career or vocational training		
9. Religious education		
10. Library		
11. Recreation *(Examples: gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)*		
12. Entertainment or culture *(Examples: museum, theater, cinema, sports arena, stadium, casino, or night club)*		
13. Laboratory		
14. Vacant		
15. Other type of classroom education		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Elementary school; Middle or junior high school; High school; Other multi-grade primary or secondary school; College or university; Preschool or daycare; Adult education; Career or vocational training; Religious education; OR Missing ➔ B32 [Assign CBECS Activity = Education] IF Library; Recreation; OR Entertainment or culture ➔ B32 [Assign CBECS Activity = Public assembly] IF Laboratory ➔ B32 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of classroom education ➔ B27 [Specify other activity]

B13	**Assembly type** {AssemblySpec} *ASSMSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Public assembly
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of public assembly." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B7
Question Text	{ActivityExplanation} Looking at the list on Show Card B7, what type of public assembly building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of public assembly building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Social or meeting *(Examples: community center, lodge, meeting hall, convention center, event space, or senior center)*		
2. Recreation *(Examples: gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)*		
3. Entertainment or culture *(Examples: museum, theater, cinema, sports arena, stadium, casino, or night club)*		
4. Library		
5. Religious worship		
6. Funeral home		
7. Student activities center		
8. Armory		
9. Exhibition hall		
10. Transportation terminal *(Examples: airport terminal, bus station, or train station)*		
11. Bar, pub, or lounge		
12. Vacant		
13. Other type of public assembly		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Social or meeting; Recreation; Entertainment or culture; Library; Funeral home; Student activities center; Armory; Exhibition hall; Transportation terminal; OR Missing ➔ B32 [Assign CBECS Activity = Public assembly] IF Religious worship ➔ B32 [Assign CBECS Activity = Religious worship] IF Bar, pub, or lounge ➔ B32 [Assign CBECS Activity = Food service] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of public assembly ➔ B27 [Specify other activity]

B14	**Health care type** {HealthSpec} *HLTHSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Health care
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of health care." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B8
Question Text	{ActivityExplanation} Looking at the list on Show Card B8, what type of health care building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of health care building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Doctor's or dentist's office		
2. Clinic or other outpatient health care building		
3. Hospital (inpatient)		
4. Outpatient rehabilitation center		
5. Inpatient rehabilitation center		
6. Nursing home, assisted living center, or other residential care building		
7. Retirement home		
8. Veterinarian's office		
9. Laboratory		
10. Vacant		
11. Other type of health care		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Clinic or other outpatient health care building; Outpatient rehabilitation center; Veterinarian's office; OR Missing ➔ B32 [Assign CBECS Activity = Outpatient health care] IF Hospital (inpatient); OR Inpatient rehabilitation ➔ B32 [Assign CBECS Activity = Inpatient health care] IF Doctor's or dentist's office ➔ B32 [Assign CBECS Activity = Office] IF Nursing home, assisted living center, or other residential care building ➔ B32 [Assign CBECS Activity = Nursing] IF Retirement home ➔ B32 [Assign CBECS Activity = Lodging] IF Laboratory ➔ B32 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of health care ➔ B27 [Specify other activity]

B15	**Service type** {ServiceSpec} *SERVSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Service
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of service." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B9
Question Text	{ActivityExplanation} Looking at the list on Show Card B9, what type of service building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of service building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Auto service or auto repair shop		
2. Vehicle storage and/or maintenance (car barn)		
3. Airplane hangar		
4. Car wash		
5. Gas station with a convenience store		
6. Gas station		
7. Building and ground maintenance shop		
8. Contractor's office *(Examples: construction, plumbing, or HVAC)*		
9. Kennel		
10. Repair shop		
11. Dry cleaner or laundromat		
12. Copy center or printing shop		
13. Post office, postal center, or mail sorting		
14. Distribution or shipping center		
15. Bank or other financial institution		
16. Salon, spa, or barber shop		
17. Bar, pub, or lounge		
18. Transportation terminal		

(Examples: airport terminal, bus station, or train station)		

19. Recreation *(Examples: gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)*		
20. Social or meeting *(Examples: community center, lodge, meeting hall, convention center, event space, or senior center)*		
21. Student activities center		
22. Library		
23. Non-profit or social services office		
24. Funeral home		
25. Rental center *(Examples: equipment, furnishings, or movies)*		
26. Vacant		
27. Other type of service		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Dry cleaner or laundromat ➔ B16 [Dry cleaning onsite] IF Gas station ➔ B17 [Gas station building use] IF Auto service or auto repair shop; Building and grounds maintenance shop; Vehicle storage and/or maintenance; Repair shop; Post office, postal center, or mail sorting; Car wash; Spa, salon, or barber shop; Copy center or printing shop; Kennel; OR Missing ➔ B32 [Assign CBECS Activity = Service] IF Contractor's office; Bank or other financial institution; OR Non-profit or social services office ➔ B32 [Assign CBECS Activity = Office] IF Bar, pub, or lounge ➔ B32 [Assign CBECS Activity = Food service] IF Gas station with convenience store ➔ B32 [Assign CBECS Activity = Food sales] IF Airplane hangar ➔ B32 [Assign CBECS Activity = Other] IF Distribution or shipping center ➔ B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Funeral home; Library; Recreation; Social or meeting; Student activities center; OR Transportation terminal ➔ B32 [Assign CBECS Activity = Public assembly] IF Rental center ➔ B32 [Assign CBECS Activity = Retail] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of service ➔ B27 [Specify other activity]

B16	**Dry cleaning onsite** {DryCleaningOnsite} *DRYCL*		
ASK	IF B15 [Service type] = Dry cleaner or laundromat		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the dry cleaning or laundry done in this building, or is it done off-site?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. In this building			
2. Off-site			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B32 [Assign CBECS Activity = Service]		

B17	**Gas station building use** {GasBldg} *GASBLDG*		
ASK	IF B11 [Retail type] = Gas station OR B15 [Service type] = Gas station		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Which activity accounts for most of the space in the building that is associated with this gas station: convenience store, auto service, car wash, or something else?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Which activity accounts for most of the space in the building that is associated with this gas station?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Convenience store			
2. Auto service			
3. Car wash			
4. Something else			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Something else ➔ B18 [Other gas station bldg use] IF Convenience store ➔ B32 [Assign CBECS Activity = Food sales] OTHERWISE ➔ B32 [Assign CBECS Activity = Service]		

B18	**Other gas station bldg use** {OtGasBldg} *OTGASBLDX*
ASK	IF B17 [Gas station building use] = Something else
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other activity associated with this gas station	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ B32 [Assign CBECS Activity = Service]

B19	**Lodging type** {LodgeSpec} *LODGSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Lodging
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of lodging." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B10
Question Text	{ActivityExplanation} Looking at the list on Show Card B10, what type of lodging building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of lodging building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Hotel or resort		
2. Motel, inn, or bed and breakfast		
3. Dormitory, fraternity, or sorority		
4. Retirement home		
5. Nursing home, assisted living center, or other residential care building		
6. Convent or monastery		
7. Shelter, group home, or children's home		
8. Halfway house		
9. Jail, reformatory, or penitentiary		
10. Vacant		
11. Other type of lodging		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Hotel or resort; Motel, inn, or bed and breakfast; Dormitory, fraternity, or sorority; Retirement home; Convent or monastery; Shelter, group home, or children's home; Halfway house; OR Missing ➔ B32 [Assign CBECS Activity = Lodging] IF Nursing home, assisted living center, or other residential care building ➔ B32 [Assign CBECS Activity = Nursing] IF Jail, reformatory, or penitentiary ➔ B32 [Assign CBECS Activity = Public order and safety] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of lodging ➔ B27 [Specify other activity]

B20	**Public order type** {OrderSpec} *ORDRSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Public order and safety
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of public order and safety." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B11
Question Text	{ActivityExplanation} Looking at the list on Show Card B11, what type of public order and safety building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of public order and safety building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Police station		
2. Fire station		
3. Combination police and fire station		
4. Jail, reformatory, or penitentiary		
5. Courthouse or probation office		
6. Halfway house		

7. Armory			
8. City hall or city center			
9. Vacant			
10. Other type of public order and safety			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Police station; Fire station; Combination police and fire station; Jail, reformatory, or penitentiary; Courthouse or probation office; OR Missing ➔ B32 [Assign CBECS Activity = Public order and safety] IF Halfway house ➔ B32 [Assign CBECS Activity = Lodging] IF Armory ➔ B32 [Assign CBECS Activity = Public assembly] IF City hall or city center ➔ B32 [Assign CBECS Activity = Office] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of public order and safety ➔ B27 [Specify other activity]		

B21	**Residential type** {ResidSpec} *RESDSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Residential
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of residential." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B12
Question Text	{ActivityExplanation} Looking at the list on Show Card B12, what type of residential building is this?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} What type of residential building is this?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Hotel or resort		
2. Motel, inn, or bed and breakfast		
3. Dormitory, fraternity, or sorority		
4. Retirement home		
5. Nursing home, assisted living center, or other residential care building		
6. Convent or monastery		
7. Shelter, group home, or children's home		
8. Halfway house		
9. Jail, reformatory, or penitentiary		
10. Other type of residential		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Hotel or resort; Motel, inn, or bed and breakfast; Dormitory, fraternity, or sorority; Retirement home; Convent or monastery; Shelter, group home, or children's home; Halfway house; OR Missing ➔ B32 [Assign CBECS Activity = Lodging] IF Nursing home, assisted living center, or other residential care building ➔ B32 [Assign CBECS Activity = Nursing] IF Jail, reformatory, or penitentiary ➔ B32 [Assign CBECS Activity = Public order and safety] IF Other type of residential ➔ B28 [End of interview]

B22	**Space for retail sales** {IndusCheck} *INDRET*
ASK	IF (B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Industrial/Manufacturing) & B8 [Used as warehouse] = No OR Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any of the space in this building used for retail sales of the products that are made here?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ B32 [Assign CBECS Activity = Other] IF No OR Missing ➔ B29 [End of interview]

B23	**Space for retail sales** {AgricCheck} *AGRRET*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Agricultural
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any of the space in this building used for retail sales of the products that are grown here?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ B32 [Assign CBECS Activity = Other] IF No OR Missing ➔ B29 [End of interview]

B24	**Vacant for noncommercial** {VacantUse} *VACUSE*		
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Vacant		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Was the vacant space used for or intended to be used for either agricultural, industrial, manufacturing, or residential purposes or as a parking garage?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ B31 [End of interview] IF No OR Missing: IF B2 [One activity in building] ≠ Yes ➔ B32 [Assign CBECS Activity = Vacant] OTHERWISE ➔ B25 [Completely vacant]		

B25	**Completely vacant** {AllVacant} *VACANT*		
ASK	IF B2 [One activity in building] = Yes & B1 [Primary activity] = Vacant		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is this building completely vacant?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B32 [Assign CBECS Activity = Vacant]		

B26	**Other type** {OtherSpec} *OTHRSP*
ASK	IF B1 [Primary activity] OR B4 [Percents for activities] assigned activity = Other
FILL	**{ActivityExplanation}** IF (B2 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of other types of buildings." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B13
Question Text	{ActivityExplanation} Looking at the list on Show Card B13, which of these activities best describes this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Activity Explanation} Which of these activities best describes this building?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Laboratory		
2. Airplane hangar		
3. Broadcasting studio		
4. Telephone switching facilities		
5. Funeral home		
6. Crematorium		
7. Vehicle storage and/or maintenance (car barn)		
8. Public restroom, locker room, or changing area		
9. Indoor parking garage		
10. Dry cleaner or laundromat		
11. Library		
12. Post office, postal center, or mail sorting		
13. Distribution or shipping center		
14. Social or meeting *(Examples: community center, lodge, meeting hall, convention center, event space, or senior center)*		
15. Entertainment or culture *(Examples: museum, theater, cinema, sports arena, stadium, casino, or night club)*		

16. Recreation *(Examples: gymnasium, health club, bowling alley, ice rink, field house, or indoor sports)*		
17. Transportation terminal *(Examples: airport terminal, bus station, or train station)*		
18. Veterinarian's office		
19. Vacant		
20. Agricultural building with some retail space		
21. Manufacturing or industrial building with some retail space		
22. Some other activity		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Laboratory ➔ B32 [Assign CBECS Activity = Laboratory] IF Airplane hangar; Broadcasting studio; Telephone switching facilities; Crematorium; Public restroom, locker room, or changing area; Agricultural building with some retail space; Manufacturing or industrial building with some retail space; OR Missing ➔ B32 [Assign CBECS Activity = Other] IF Funeral home; Library; Social or meeting; Entertainment or culture; Recreation; OR Transportation terminal ➔ B32 [Assign CBECS Activity = Public assembly] IF Vehicle storage and/or maintenance; OR Post office, postal center, or mail sorting ➔ B32 [Assign CBECS Activity = Service] IF Indoor parking garage: IF B2 [One activity in building] = Yes ➔ B30 [End of interview] IF B2 [One activity in building] ≠ Yes ➔ B32 [Assign CBECS Activity = Other] IF Dry cleaner or laundromat ➔ B16 [Dry cleaning onsite] IF Distribution or shipping center ➔ B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Veterinarian's office ➔ B32 [Assign CBECS Activity = Outpatient health care] IF Vacant: IF More than one activity ➔ B32 [Assign CBECS Activity = Vacant] IF Only one activity ➔ B25 [Completely vacant] IF Other type of building ➔ B27 [Specify other activity]

B27	**Specify other activity** {ActSpecify} *PBASPX*
ASK	IF B5 [Office type] = Other type of office OR IF B9 [Warehouse type] = Other type of warehouse OR IF B10 [Food sales or service type] = Other type of food sales or service OR IF B11 [Retail type] = Other type of retail OR IF B12 [Education type] = Other type of classroom education OR IF B13 [Assembly type] = Other type of public assembly OR IF B14 [Health care type] = Other type of health care OR IF B15 [Service type] = Other type of service OR IF B19 [Lodging type] = Other type of lodging OR IF B20 [Public order type] = Other type of public order and safety OR IF B26 [Other type] = Other type of building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please describe this other type of activity.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Previous question was: B5 [Office type] ➔ B32 [Assign CBECS Activity = Office] B9 [Warehouse type] ➔ B32 [Assign CBECS Activity = Nonrefrigerated warehouse] B10 [Food sales or service type] ➔ B32 [Assign CBECS Activity = Food service] B11 [Retail type] ➔ B32 [Assign CBECS Activity = Retail] B12 [Education type] ➔ B32 [Assign CBECS Activity = Education] B13 [Assembly type] ➔ B32 [Assign CBECS Activity = Public assembly] B14 [Health care type] ➔ B32 [Assign CBECS Activity = Outpatient health care] B15 [Service type] ➔ B32 [Assign CBECS Activity = Service] B19 [Lodging type] ➔ B32 [Assign CBECS Activity = Lodging] B20 [Public order type] ➔ B32 [Assign CBECS Activity = Public order and safety] B26 [Other type] ➔ B32 [Assign CBECS Activity = Other]

B28	**End of interview** {TerminateResid}
ASK	IF B21 [Residential type] = Other type of residential
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study does not include buildings that are primarily residential.
Interviewer Instructions	If this is incorrect, and the primary activity of the building is something else, please select the “Back” button to change the previous answer. Otherwise, please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

B29	**End of interview** {TerminateAgrInd}
ASK	IF B22 [Space for retail sales] = No OR Missing OR B23 [Space for retail sales] = No OR Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study does not include buildings that are primarily industrial or agricultural.
Interviewer Instructions	If this is incorrect, and the primary activity of the building is something else, please select the “Back” button to change the previous answer. Otherwise, please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

B30	**End of interview** {TerminateParking}
ASK	IF B26 [Other type] = Indoor parking garage
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study does not include parking garages.
Interviewer Instructions	If this is incorrect, and the primary activity of the building is something else, please select the “Back” button to change the previous answer. Otherwise, please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

B31	**End of interview** {TerminateVacUse}
ASK	IF B24 [Vacant for noncommercial] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study only includes buildings intended for commercial use.
Interviewer Instructions	Please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

B32	**Assign CBECS Activity** {CBECS_Act} *PBA*
ASK	IF Building interview
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – this item assigns CBECS building activity only, no question text for respondents
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	N/A
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric • String Text • Date
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box • Allow Blank
NEXT	**1** **Vacant** ➔ B42 [On a multibuilding complex] **2** **Office** ➔ B42 [On a multibuilding complex] **3** **Data center** ➔ B42 [On a multibuilding complex] **4** **Laboratory** ➔ B42 [On a multibuilding complex] **5** **Nonrefrigerated warehouse** ➔ B42 [On a multibuilding complex] **6** **Food sales** ➔ B42 [On a multibuilding complex] **7** **Public order and safety** ➔ B42 [On a multibuilding complex] **8** **Outpatient health care** ➔ B42 [On a multibuilding complex] **11** **Refrigerated warehouse** ➔ B42 [On a multibuilding complex] **12** **Religious worship** ➔ B33 [Religious worship seating capacity] **13** **Public assembly** ➔ B34 [Assembly seating capacity] **14** **Education** ➔ B35 [Number of classroom seats] **15** **Food service** ➔ B36 [Food service seating capacity] **16** **Inpatient health care** ➔ B38 [Licensed bed capacity] **17** **Nursing** ➔ B39 [Licensed bed capacity] **18** **Lodging** ➔ B40 [Number of guest rooms] **24** **Enclosed mall** ➔ B41 [Food court] **25** **Retail** ➔ B42 [On a multibuilding complex] **26** **Service** ➔ B42 [On a multibuilding complex] **91** **Other** ➔ B42 [On a multibuilding complex]

B33	**Religious worship seating capacity** {ReligSeat} *RWSEAT*		
ASK	IF CBECS Activity = Religious worship		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the total seating capacity of the religious worship areas in this building? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		seats	0 to 99,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B34	**Assembly seating capacity** {AssemSeat} *PBSEAT*		
ASK	IF CBECS Activity = Public assembly		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the fixed seating capacity of the public assembly areas in this building? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		seats	0 to 99,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B35	**Number of classroom seats** {EducSeat} *EDSEAT*		
ASK	IF CBECS Activity = Education		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many students can be seated in all of the classrooms in this building at one time? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		classroom seats	0 to 99,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B36	**Food service seating capacity** {FoodSeat} *FDSEAT*
ASK	IF CBECS Activity = Food service
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the total seating capacity of the food service areas in this building? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	seats	0 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF B10 [Food sales or service type = Restaurant, Fast food, Coffee, doughnut, or bagel shop, OR Ice cream or frozen yogurt shop} ➔ B37 [Drive thru] ELSE ➔ B42 [On a multibuilding complex]

B37	**Drive thru** {DriveThru} *DRVTHRU*		
ASK	IF B10 [Food sales or service type] = Restaurant, Fast food, Coffee, doughnut, or bagel shop, OR Ice cream or frozen yogurt shop		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does this building have any drive-thru windows?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B38	**Licensed bed capacity** {HospBed} *HCBED*		
ASK	IF CBECS Activity = Inpatient health care		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the inpatient licensed bed capacity in this building? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		beds	0 to 99,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B39	**Licensed bed capacity** {NurseBed} *NRSBED*
ASK	IF CBECS Activity = Nursing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the skilled or residential care licensed bed capacity in this building? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	beds	0 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ B42 [On a multibuilding complex]

B40	**Number of guest rooms** {LodgeRoom} *LODGRM*		
ASK	IF CBECS Activity = Lodging		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many guest rooms or occupant rooms are there in this building? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		rooms	0 to 99,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B42 [On a multibuilding complex]		

B41	**Food court** {FoodCourt} *COURT*
ASK	IF CBECS Activity = Enclosed mall
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there a food court in this mall?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ B42 [On a multibuilding complex]

B42	**On a multibuilding complex** {Facility} *FACIL*		
ASK	IF Building or Mall interview		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is this building part of a multibuilding campus or complex? A campus or complex is a group of two or more buildings on the same site that are owned or operated by a single organization or individual.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ B43 [Number of buildings on complex] OTHERWISE: IF Building interview ➔ C1 [Government owned] IF Mall interview ➔ C3 [Owner]		

B43	**Number of buildings on complex** {NumFacBldgs} *FACBLDGS*		
ASK	IF B42 [On a multibuilding complex] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many buildings are part of this multibuilding campus or complex? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		buildings	2 to 500
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B44 [Multibuilding complex name]		

B44	**Multibuilding complex name** {FacilityName} *FACNAME*
ASK	IF B42 [On a multibuilding complex] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	By what name is this multibuilding campus or complex most commonly referred?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview ➔ B45 [Federal complex] IF Mall interview ➔ B46 [Type of complex]

B45	**Federal complex** {FedFacil} *FEDFAC*		
ASK	IF Building interview & B42 [On a multibuilding complex] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is this campus or complex owned by the Federal government?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B46 [Type of complex]		

B46	**Type of complex** {FacAct} *FACACT*
ASK	IF B42 [On a multibuilding complex] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B14
Question Text	Looking at the list on Show Card B14, what is the primary business or function of this group of buildings as a whole?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What is the primary business or function of this group of buildings as a whole?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. College, university, or junior college		
2. Primary or secondary school [grades K-12]		
3. Other type of school		
4. Office complex		
5. Retail complex		
6. Storage or distribution complex		
7. Religious campus or complex		
8. Hospital or other health care complex		
9. Lodging or resort complex		
10. Post office complex		
11. Prison or correctional facility		
12. Other type of government complex		
13. Industrial complex		
14. Transportation complex such as terminal, depot, or airport		
15. Other type of campus or complex		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Industrial complex ➔ B47 [Manufacturing industrial] IF Mall interview ➔ C3 [Owner] OTHERWISE ➔ B50 [Central physical plant]

B47	**Manufacturing industrial** {ManInd} *MANIND*
ASK	IF B46 [Type of complex] = Industrial complex
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is it a manufacturing industrial complex? Manufacturing industrial complexes involve the production or processing of goods, merchandise, raw materials, or food.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ B48 [Same owner as manufacturing] IF Mall interview ➔ C3 [Owner] OTHERWISE ➔ B50 [Central physical plant]

B48	**Same owner as manufacturing** {SameOwn} *MANFAC*		
ASK	IF B47 [Manufacturing industrial] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does this building have the same owner and operator as the manufacturing campus or complex?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ B49 [End of interview] IF Mall interview ➔ C3 [Owner] OTHERWISE ➔ B50 [Central physical plant]		

B49	**End of interview** {TerminateMan}
ASK	IF B48 [Same owner as manufacturing] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study does not include buildings on manufacturing facilities.
Interviewer Instructions	Please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

B50	**Central physical plant** {Plant} *PLANT*		
ASK	IF Building interview & B42 [On a multibuilding complex] = Yes & **NOT** B48 [Same owner as manufacturing] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does this campus or complex have a central physical plant that produces and distributes district hot water, district steam, district chilled water, or electricity to more than one building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ B51 [Plant produces district steam] OTHERWISE ➔ C1 [Government owned]		

B51	**Plant produces district steam** {PlantSteam} *FACDST*
ASK	IF B50 [Central physical plant] = Yes
DISPLAY	B51-B54 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the central plant produce… District steam?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ B52 [Plant produces district hot water]

B52	**Plant produces district hot water** {PlantHW} *FACDHW*		
ASK	IF B50 [Central physical plant] = Yes		
DISPLAY	B51-B54 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	District hot water?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B53 [Plant produces district chilled water]		

B53	**Plant produces district chilled water** {PlantCW} *FACDCW*		
ASK	IF B50 [Central physical plant] = Yes		
DISPLAY	B51-B54 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	District chilled water?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B54 [Plant produces electricity]		

B54	**Plant produces electricity** {PlantElec} *FACELC*		
ASK	IF B50 [Central physical plant] = Yes		
DISPLAY	B51-B54 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Electricity?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ B55 [Central plant in building]		

B55	**Central plant in building** {PlantInBldg} *BLDPLT*		
ASK	IF B50 [Central physical plant] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the central physical plant for this campus or complex located in this building or is it in another building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. In this building			
2. In another building			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ C1 [Government owned]		

B56	**Establishment activity** {EstabAct} *PEA*
ASK	IF Establishment interview
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B15
Question Text	Please look at the list of activities on Show Card B15. Which one of these activities accounts for the majority of the floorspace in this establishment?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which one of these activities accounts for the majority of the floorspace in this establishment?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Retail store		
2. Food sales *(Examples: grocery store, supermarket, convenience store, butcher shop, seafood market, produce market)*		
3. Food service/Bar/Night club *(Examples: restaurant, fast food, sandwich shop, pizzeria, coffee shop, doughnut or bagel shop, ice cream parlor, bakery, bar, night club)*		
4. Dry cleaner/Laundromat		
5. Office/Financial *(Examples: bank, credit union, insurance, tax assistance, loans, check cashing, real estate, lawyer, accountant, recruiting)*		
6. Medical/Dental		
7. Education/Child care *(Examples: tutoring, adult education, art school, preschool, daycare)*		
8. Movie theater/Cinema		
9. Salon/Spa/Barber shop		
10. Fitness center/Dance studio *(Includes martial arts)*		
11. Vacant		
12. Other		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other ➔ B57 [Specify other activity] IF Dry cleaner/Laundromat ➔ B58 [Dry cleaning onsite] OTHERWISE ➔ C21 [Occupied/vacant all 2018]

B57	**Specify other activity** {EstabActSpecify} *PEASPX*
ASK	IF B56 [Establishment activity] = Other
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of activity	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ C21 [Occupied/vacant all 2018]

B58	**Dry cleaning onsite** {EstabDryCleaningOnsite} *DRYCLESTB*		
ASK	IF B56 [Establishment activity] = Dry cleaner/Laundromat		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the dry cleaning or laundry done in this establishment, or is it done off-site?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. In this establishment			
2. Off-site			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ C21 [Occupied/vacant all 2018]		

Section C: Ownership/Occupancy, Operating Hours, and Employment

C1	**Government owned** {GovOwn} *GOVOWN*
ASK	IF Building interview
FILL	**{BldgIntro}** IF B42 [On a multibuilding complex] = Yes = "For the rest of this survey, I will be asking you only about this building, not the entire campus or complex." OTHERWISE = BLANK **{SchoolExample}** IF B12 [Education type] = Elementary OR Middle or junior high school OR High School OR Other multi-grade primary or secondary school = ", such as a local school district" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{BldgIntro} Is this building owned by a government agency {SchoolExample}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ C2 [Type of government] IF No OR Missing ➔ C3 [Owner]

C2	**Type of government** {GovType} *GOVTYP*
ASK	IF C1 [Government owned] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is it owned by the Federal government, a State government, or a local government?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Federal		
2. State		
3. Local		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF B25 [Completely vacant] = Yes ➔ C10 [Owner operates] OTHERWISE ➔ C5 [Number of businesses]

C3	**Owner** {Owner} *OWNER*		
ASK	IF Building or Mall interview & **NOT** C1 [Government owned] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD C1		
Question Text	Looking at Show Card C1, please tell me which category best describes the owner of this building.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Which category best describes the owner of this building?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Real estate investment trust (REIT)			
2. Other public or private corporation, partnership, LLC, or LLP			
3. Individual owner(s)			
4. Religious organization			
5. Non-profit organization (other than religious or government)			
6. Private academic institution			
7. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other ➔ C4 [Other owner] OTHERWISE: IF **NOT** B25 [Completely vacant] = Yes ➔ C5 [Number of businesses] IF B25 [Completely vacant] = Yes: IF Owner known ➔ C10 [Owner operates] IF Missing ➔ C18 [Months in use]		

C4	**Other owner** {OtherOwner} *OTHOWNX*
ASK	IF C3 [Owner] = Other
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other owner	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF **NOT** B25 [Completely vacant] = Yes ➔ C5 [Number of businesses] IF B25 [Completely vacant] = Yes: IF Owner known ➔ C10 [Owner operates] IF Missing ➔ C18 [Months in use]

C5	**Number of businesses** {NumOcc} *NOCC*
ASK	IF Building or mall interview & **NOT** B25 [Completely vacant] = Yes
FILL	**{BldgMall}** IF Building interview = "How many different businesses or organizations use space full-time in this building?" IF Mall interview = "How many tenant spaces are there in this building, including vacant spaces?" **{ActExplain}** IF Residential selected IN B3 [Activities in building] = "Include any residential units in this number." IF B12 [Education type] = Elementary OR Middle or junior high school OR High School OR Other multi-grade primary or secondary school OR CBECS Activity = Religious worship = "Do not include clubs or organizations that use space part-time." IF B9 [Warehouse type] = Public rental storage units = "Do not count each storage unit separately." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{BldgMall} {ActExplain}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	None	0 to 9,999

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ C6 [Number of businesses category] IF >1 OR Mall interview ➔ C8 [Multi-occupant owner occupies] IF 1 ➔ C7 [Single occupant owner occupies] IF 0 & **NOT** (C1 [Government owned] = Missing & C3 [Owner] = Missing) ➔ C10 [Owner operates] IF 0 & (C1 [Government owned] = Missing & C3 [Owner] = Missing) ➔ C18 [Months in use]

C6	**Number of businesses category** {OccupantsCategory} *NOCCAT*
ASK	IF C5 [Number of businesses] = DK/Missing
FILL	**{BusTen}** IF Building interview = “businesses or organizations that use space full-time” IF Mall interview = “tenant spaces” **{Zero}** IF Building interview = “Zero” IF Mall interview = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD C2
Question Text	Which category on Show Card C2 best describes the number of {BusTen} in this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which category best describes the number of {BusTen} in this building?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
0. {Zero}		
1. One		
2. 2 to 5		
3. 6 to 10		
4. 11 to 20		
5. 21 to 50		
6. 51 to 100		
7. More than 100		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Any category except Zero or One OR Mall interview ➔ C8 [Multi-occupant owner occupies] IF One ➔ C7 [Single occupant owner occupies] IF Zero OR Missing & **NOT** (C1 [Government owned] = Missing & C3 [Owner] = Missing) ➔ C10 [Owner operates] IF Zero OR Missing & (C1 [Government owned] = Missing & C3 [Owner] = Missing) ➔ C18 [Months in use]

C7	**Single occupant owner occupies** {SingleOccOwnOcc} *SOWNOCC*
ASK	IF Building interview & (C5 [Number of businesses] = 1 OR C6 [Number of businesses category] = One)
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the owner occupy the building or is it leased to a tenant?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Owner occupies		
2. Leased to tenant		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF C1 [Government owned] = Missing & C3 [Owner] = Missing ➔ C18 [Months in use] OTHERWISE ➔ C10 [Owner operates]

C8	**Multi-occupant owner occupies** {MultOccOwnOcc} *MOWNOCC*		
ASK	IF (Building interview & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] NOT Zero, One, Missing)) OR Mall interview		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does the owner occupy any space in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Building interview ➔ C9 [Number of tenants] IF Mall interview: IF C3 [Owner] = Missing ➔ C18 [Months in use] OTHERWISE ➔ C10 [Owner operates]		

C9	**Number of tenants** {NumTenants} *NTENANT*		
ASK	IF Building interview & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] NOT Zero, One, Missing)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many tenants lease space in this building? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		tenants	0 to 9,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF C1 [Government owned] = Missing & C3 [Owner] = Missing ➔ C18 [Months in use] OTHERWISE ➔ C10 [Owner operates]		

C10	**Owner operates** {OwnerOperates} *OWNOPR*		
ASK	IF (Building interview & **NOT** (C1 [Government owned] = Missing & C3 [Owner] = Missing)) OR (Mall interview & NOT C3 [Owner] = Missing)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the building owner responsible for the operation of the energy systems?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ C11 [Owner has purchasing power] IF No ➔ C14 [Nonowner operator] IF Missing ➔ C18 [Months in use]		

C11	**Owner has purchasing power** {OwnerPurchasePower} *OWNPPR*		
ASK	IF C10 [Owner operates] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does the building owner also have direct input on decisions regarding purchases of energy-related equipment?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes OR Missing ➔C18 [Months in use] IF No ➔ C12 [Nonowner with purchasing power]		

C12	**Nonowner with purchasing power** {NonOwnerPurchPower} *NWNPPR*		
ASK	IF C11 [Owner has purchasing power] = No		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD C3		
Question Text	Looking at Show Card C3, please tell me who <u>does</u> have direct input on decisions regarding purchases of energy-related equipment.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Who has direct input on decisions regarding purchases of energy-related equipment?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Property management company or leasing agent			
2. Business owner or tenant			
3. Facilities personnel employed directly by the building owner			
4. Facilities or energy management consultant			
5. Volunteer member of the organization			
6. Manager with general supervisory duties			
7. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other ➔ C13 [Other nonowner purchasing power] OTHERWISE ➔ C18 [Months in use]		

C13	**Other nonowner purchasing power** {OtherNonOwnPurchPower} *OTNWNPPRX*
ASK	IF C12 [Nonowner with purchasing power] = Other
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe who has the most direct input regarding purchases of energy-related equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ C18 [Months in use]

C14	**Nonowner operator** {NonOwnerOperator} *NWNOPR*
ASK	IF C10 [Owner operates] = No
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD C3
Question Text	Looking at Show Card C3, please tell me who is responsible for the operation of the energy systems.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Who is responsible for the operation of the energy systems?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Property management company or leasing agent		
2. Business owner or tenant		
3. Facilities personnel employed directly by the building owner		
4. Facilities or energy management consultant		
5. Volunteer member of the organization		
6. Manager with general supervisory duties		
7. Other		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other ➔ C15 [Other operator] OTHERWISE ➔ C16 [Who has purchasing power]

C15	**Other operator** {OtherOperator} *OTNWNOPRX*
ASK	IF C14 [Nonowner operator] = Other
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe who is responsible for the operation of energy systems	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ C16 [Who has purchasing power]

C16	**Who has purchasing power** {PurchPowerOwnOpr} *WHOPPR*		
ASK	IF C10 [Owner operates] = No		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Who has the most direct input on decisions regarding purchases of energy-related equipment – the building owner or the party who is responsible for operation of the energy systems?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Building owner			
2. Party responsible for operation of energy systems			
3. Both (either they have equal input, or are the same person)			
4. Other			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other ➔ C17 [Other with purchasing power] OTHERWISE ➔C18 [Months in use]		

C17	**Other with purchasing power** {OtherPurchPower} *OTPPRX*
ASK	IF C16 [Who has purchasing power] = Other
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe who has the most direct input regarding purchases of energy-related equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔C18 [Months in use]

C18	**Months in use** {MonUse} *MONUSE*
ASK	IF Building or Mall interview
FILL	**{DiffActivity}** IF CBECS Activity = Education = "The next question is about the number of months that the building was in use. If there were months when the building was only entered by a limited number of staff, do not count those months. How many months was this building in use during calendar year 2018?" IF CBECS Activity = Nonrefrigerated warehouse OR Refrigerated warehouse = "The next question is about the number of months that the building was in use. If there were goods being stored, even if there was not much activity in the building, it should count as being "in use." How many months was this building in use during calendar year 2018?" OTHERWISE = "Thinking of calendar year 2018, for how many months was this building in use?"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{DiffActivity}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 12	months	0 to 12

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 0 THEN: IF B25 [Completely vacant] = Yes ➔ D1 [Heating] OTHERWISE ➔ C19 [Zero months in use check] OTHERWISE: IF B25 [Completely vacant] = Yes ➔ C20 [Previous use] IF CBECS Activity = Office OR Enclosed Mall OR Outpatient health care OR Mall interview ➔ C26 [Percent occupancy] IF B19 [Lodging type] = Hotel or resort OR Motel, inn, or bed and breakfast OR Retirement home OR B21 [Residential type] = Hotel or resort OR Motel, inn, or bed and breakfast OR Retirement home OR B14 [Health care type] = Retirement home ➔ C27 [Lodging room percent occupancy] OTHERWISE ➔ C28 [Open 24 hours a day]

C19	**Zero months in use check** {MonUseCheck}
ASK	IF C18 [Months in use] = 0 & **NOT** B25 [Completely vacant] = Yes
FILL	**{Warehouse}** IF CBECS Activity = Nonrefrigerated warehouse OR Refrigerated warehouse = "If goods are stored in the building, then it should be considered "in use" by CBECS definition." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Your previous answers did <u>not</u> indicate that this building was completely vacant in 2018. Unless the building was completely vacant and unused, there should be at least one month in use. {Warehouse}
Interviewer Instructions	Please select the "Back" button to change the months in use, or the "Next" button to keep your current answer.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	➔ D1 [Heating]

C20	**Previous use** {PreviousUse} *PREVUSE*
ASK	IF B25 [Completely vacant] = Yes & **NOT** C18 [Months in use] = 0
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Since this building was not completely vacant for all of 2018, please think about the equipment and the energy that was used during the time that the building was in use when answering this questionnaire. What was the building used for during the months that it was used in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ D1 [Heating]

C21	**Occupied/vacant all 2018** {EstabSameSpace} *ESTOCC*
ASK	IF Establishment interview
FILL	**{VacOcc}** IF Establishment Activity = Vacant = "Was this establishment vacant" IF Establishment Activity ≠ Vacant = "Did this establishment occupy this same space"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{VacOcc} for all of calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes OR Missing: IF Establishment Activity = Vacant ➔ D1 [Heating] IF Establishment Activity ≠ Vacant ➔ C28 [Open 24 hours a day] IF No ➔ C22 [Month occupied/vacant]

C22	**Month occupied/vacant** {MonthEstab} *MONOCC*
ASK	IF C21 [Occupied/vacant all 2018] = No
FILL	**{VacOcc}** IF Establishment Activity = Vacant = “become vacant” OTHERWISE = “begin occupying this space”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	In what month of 2018 did this establishment {VacOcc}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. January		
2. February		
3. March		
4. April		
5. May		
6. June		
7. July		
8. August		
9. September		
10. October		
11. November		
12. December		
13. Establishment did not {VacOcc} until 2019		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Establishment did not begin occupying space until 2019 THEN: IF Establishment Activity ≠ Vacant ➔ C23 [Vacant in 2018] IF Establishment Activity = Vacant ➔ C24 [Prior establishment activity] OTHERWISE: IF Establishment Activity = Vacant ➔ D1 [Heating] OTHERWISE ➔ C28 [Open 24 hours a day]

C23	**Vacant in 2018** {VacantPriorYear} *VACPRIOR*
ASK	IF C22 [Month occupied/vacant] = Establishment did not begin occupying space until 2019 & Establishment Activity ≠ Vacant
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	This study is about the use of this space during 2018. Was this space vacant for all of 2018, or did some other establishment occupy this space for all or part of 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Vacant for all of 2018		
2. Some other establishment occupied the space		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other establishment occupied the space ➔ C24 [Prior establishment activity] OTHERWISE ➔ C25 [End of interview]

C24	**Prior establishment activity** {PriorActivity} *ACTPRIOR*
ASK	IF (C22 [Month occupied/vacant] = Establishment did not begin occupying space until 2019 & Establishment Activity = Vacant) OR C23 [Vacant in 2018] = Some other establishment occupied the space
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD B15
Question Text	Looking at the list of activities on Show Card B15, which one best describes the activity of the establishment that occupied this space in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which of the following activities best describes the activity of the establishment that occupied this space in 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Retail store		
2. Food sales *(Examples: grocery store, supermarket, convenience store, butcher shop, seafood market, produce market)*		
3. Food service/Bar/Night club *(Examples: restaurant, fast food, sandwich shop, pizzeria, coffee shop, doughnut or bagel shop, ice cream parlor, bakery, bar, night club)*		
4. Dry cleaner/Laundromat		
5. Office/Financial *(Examples: bank, credit union, insurance, tax assistance, loans, check cashing, real estate, lawyer, accountant, recruiting)*		
6. Medical/Dental		
7. Education/Child care *(Examples: tutoring, adult education, art school, preschool, daycare)*		
8. Movie theater/Cinema		
9. Salon/Spa/Barber shop		
10. Fitness center/Dance studio *(Includes martial arts)*		
11. Vacant		
12. Other		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ C25 [End of interview]

C25	**End of interview** {Terminate2019}
ASK	IF C22 [Month occupied/vacant] = Establishment did not begin occupying space until 2019
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for your time and help. This completes your interview since this study only includes establishments that were occupying this space in 2018.
Interviewer Instructions	Please select the “Next” button to finish the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes requires
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	N/A
NEXT	TERMINATE

C26	**Percent occupancy** {OccupancyPct}

	OCCUPYP
ASK	IF (CBECS Activity = Office OR Enclosed Mall OR Outpatient health care) OR Mall interview) & **NOT** C18 [Months in use] = 0
FILL	**{MonthsInUse}** IF C18 [Months in use] < 12 = "Thinking about the months that this building was in use in 2018, about " OTHERWISE = "In 2018, about "
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{MonthsInUse} what percentage of the total floorspace of this building was occupied? If occupancy varied, please provide the average.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview ➔ C28 [Open 24 hours a day] IF Mall interview ➔ D1 [Heating]

C27	**Lodging room percent occupancy** {LodgeRoomOccupyPct} *LODOCCP*
ASK	IF (B19 [Lodging type] = Hotel or resort OR Motel, inn, or bed and breakfast OR Retirement home OR B21 [Residential type] = Hotel or resort OR Motel, inn, or bed and breakfast OR Retirement home OR B14 [Health care type] = Retirement home) & **NOT** C18 [Months in use] = 0
FILL	**{LodgeRooms}** IF B40 [Number of guest rooms] known = "B40 [Number of guest rooms]" IF B40 [Number of guest rooms] = Missing = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	In 2018, on average, what percentage of the {LodgeRooms} guest or occupant rooms in this building were occupied per night?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ C28 [Open 24 hours a day]

C28	**Open 24 hours a day** {Open24Hrs} *OPEN24*
ASK	IF (Building interview & **NOT** B25 [Completely vacant] = Yes & **NOT** C18 [Months in use] = 0) OR (Establishment interview & Establishment Activity ≠ Vacant)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Occur}** IF C18 [Months in use] = 12 OR C21 [Occupied/vacant all 2018] = Yes OR Missing = "occur" OTHERWISE = "occurred during the months when the {Structure} was in use" **{HoursInstruct}** IF C18 [Months in use] = 12 OR C21 [Occupied/vacant all 2018] = Yes OR Missing = "If the hours of operation varied throughout the year, report the most typical hours." OTHERWISE = "If the hours of operation varied throughout this time, consider the hours for the most typical months."
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The next questions are about the hours that this {Structure} is normally open. "Normally open" means the hours when the usual activities {Occur}. Do <u>not</u> consider the {Structure} to be open if <u>only</u> maintenance, housekeeping, or security personnel are present. {HoursInstruct} Is this {Structure} normally open 24 hours a day, seven days a week?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ C34 [Number of employees] IF No OR Missing ➔ C29 [Open during week]

C29	**Open during week** {OpenMonFri} *OPNMF*
ASK	IF C28 [Open 24 hours a day] = No OR Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thinking of Monday through Friday, is this {Structure} open all five days, open some of these days, or is it not open at all Monday through Friday?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. All five days		
2. Some of these days		
3. Not open at all Monday through Friday		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ C30 [Open on weekend]

C30	**Open on weekend** {OpenWeekend} *OPNWE*
ASK	IF C28 [Open 24 hours a day] = No OR Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is this {Structure} normally open at all on the weekend? If it is only open one day of the weekend, consider it to be open.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No & C29 [Open during week] = Not open at all Monday through Friday ➔ C31 [No operating hours] OTHERWISE ➔ C32 [Total hours open per week]

C31	**No operating hours** {NoHours} *NOHRS*		
ASK	IF C29 [Open during week] = Not open at all Monday through Friday & C30 [Open on weekend] = No		
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Based on your previous answers, it appears this {Structure} does not have any normal operating hours. Is that correct?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Correct, no operating hours			
2. Incorrect, there are some operating hours			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Correct, no operating hours ➔ ➔ D1 [Heating] IF Incorrect, there are some operating hours OR Missing ➔ C32 [Total hours open per week]		

C32	**Total hours open per week** {WeeklyHrs} *WKHRS*
ASK	IF C29 [Open during week] = All five days OR Some of these days OR Missing OR C30 [Open on weekend] = Yes OR Missing OR C31 [No operating hours] = Incorrect, there are some operating hours OR Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many total hours per week is the {Structure} normally open? "Normally open" means the hours when the usual activities occur. If the hours vary for different parts of the building, report the hours for most of the building, based on square footage.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 168	hours	0 to 168

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ C33 [Weekly hours category] OTHERWISE ➔ C34 [Number of employees]

C33	**Weekly hours category** {WeeklyHrsCat} *WKHRSC*
ASK	IF C32 [Total hours open per week] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD C4
Question Text	Please look at Show Card C4. Which category best describes the total hours per week that the {Structure} is normally open?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which category best describes the total hours per week that the {Structure} is normally open?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 39 *(For example, open only a few hours per day, or only on weekends)*		
2. 40 to 48 *(For example, open 8 or 9 hours a day, Monday through Friday)*		
3. 49 to 60 *(For example, open 10 to 12 hours a day, Monday through Friday, or 7 or 8 hours a day, every day)*		
4. 61 to 84 *(For example, open 9 to 12 hours a day, every day)*		
5. 85 to 167 *(Open most of the time)*		
6. 168 *(Open 24 hours a day)*		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ C34 [Number of employees]

C34	**Number of employees** {Workers} *NWKER*
ASK	IF ((Building interview & **NOT** B25 [Completely vacant] = Yes & **NOT** C18 [Months in use] = 0) OR (Establishment interview & Establishment Activity ≠ Vacant)) & **NOT** C31 [No operating hours] = Correct, no operating hours
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many employees work in the {Structure} during the main shift, that is, when most employees are present? Please note that this is not a total count of workers, but rather a count of workers who are present at the same time. Include any volunteer workers. Do not include employees who always work outside the building, such as drivers with delivery routes.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	workers (main shift)	0 to 99,999

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ C35 [Number of employees category] IF Number given ➔ D1 [Heating]

C35	**Number of employees category** {WorkersCat} *NWKERC*
ASK	IF C34 [Number of employees] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD C5
Question Text	Please look at Show Card C5. Which category best describes how many employees work in the {Structure} during the main shift?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which category best describes how many employees work in the {Structure} during the main shift?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. None		
2. 1 to 4		
3. 5 to 9		
4. 10 to 19		
5. 20 to 49		
6. 50 to 99		
7. 100 to 249		
8. 250 to 499		
9. 500 to 999		
10. 1,000 to 2,499		
11. 2,500 to 4,999		
12. 5,000 or More		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ D1 [Heating]

Section D: Energy Sources, Uses, and Equipment

D1	**Heating** {Heating} *HT1*
ASK	All structure types
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The next section is about energy sources, uses, and equipment. For the next five questions, please tell me whether or not energy was used in this {Structure} for any of these purposes during calendar year 2018. Was any energy used for heating the {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	The next section is about energy sources, uses, and equipment. For the next five questions, please report whether or not energy was used in this {Structure} for any of these purposes during calendar year 2018. Was any energy used for heating the {Structure}?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** Establishment Activity = Vacant ➔ D2 [Why no heating] OTHERWISE ➔ D4 [Cooling]

D2	**Why no heating** {WhyNoHeating} *NOHEAT*
ASK	IF D1 [Heating] = No & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** Establishment Activity = Vacant
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please briefly tell me why this {Structure} wasn't heated during 2018.
Interviewer Instructions	Select option that best matches respondent's answer
QUESTION TEXT – web	
Question Text	Which of the following reasons best explains why this {Structure} wasn't heated during 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options		**Image**	**SAS Name**
1. Previous answer incorrect, {Structure} does have heating			
2. Climate doesn't require heating			
3. {Structure} wasn't used during the 2018 heating season			
4. Waste heat from other equipment is sufficient			
5. Heating equipment was broken during 2018			
6. Some other reason			

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other reason ➔ D3 [Other no heating specify] OTHERWISE ➔ D4 [Cooling]

D3	**Other no heating specify** {OtherNoHeatReason} *NOHEATX*
ASK	IF D2 [Why no heating] = Some other reason
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the reason there was no heating	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ D4 [Cooling]

D4	**Cooling** {Cooling} *COOL*
ASK	All structure types
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	(Was any energy used...) For air conditioning?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Was any energy used for air conditioning?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** (A24 [Year of construction = 2018] & A27 [Month ready for occupancy] = September, October, November, OR December) & **NOT** Establishment Activity = Vacant & **NOT** C22 [Month occupied/vacant] = September, October, November, OR December] ➔ D5 [Why no cooling] OTHERWISE ➔ D7 [Water heating]

D5	**Why no cooling** {WhyNoCooling} *NOCOOL*
ASK	IF D4 [Cooling] = No & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** (A24 [Year of construction = 2018] & A27 [Month ready for occupancy] = September, October, November, OR December) & **NOT** Establishment Activity = Vacant & **NOT** C22 [Month occupied/vacant] = September, October, November, OR December]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please briefly tell me why this {Structure} wasn't air conditioned during 2018.
Interviewer Instructions	Select option that best matches respondent's answer
QUESTION TEXT – web	
Question Text	Which of the following reasons best explains why this {Structure} wasn't air conditioned during 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Previous answer incorrect, {Structure} does have air conditioning		
2. Climate doesn't require air conditioning		
3. {Structure} wasn't used during the 2018 cooling season		
4. {Structure} is used for storage		
5. Air conditioning equipment was broken during 2018		
6. Can not afford air conditioning		
7. Some other reason		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other reason ➔ D6 [Other no heating specify] OTHERWISE ➔ D7 [Water heating]

D6	**Other no cooling specify** {OtherNoCoolReason} *NOCOOLX*
ASK	IF D5 [Why no cooling] = Some other reason
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the reason there was no air conditioning	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ D7 [Water heating]

D7	**Water heating** {WaterHeat} *WATR*		
ASK	All structure types		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	(Was any energy used...) For heating water for purposes such as washing hands, dishes, or clothes?		
Interviewer Instructions	Select option that best matches respondent's answer		
QUESTION TEXT – web			
Question Text	Was any energy used for heating water for purposes such as washing hands, dishes, or clothes?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF No & **NOT** (D1 [Heating] = No & D4 [Cooling] = No) & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** Establishment Activity = Vacant ➔ D8 [Why no water heating] OTHERWISE ➔ D10 [Cooking]		

D8	**Why no water heating** {WhyNoWaterHeating} *NOWATR*
ASK	IF D7 [Water heating] = No & **NOT** (D1 [Heating] = No & D4 [Cooling] = No) & **NOT** CBECS Activity = Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & **NOT** Establishment Activity = Vacant
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please briefly tell me why there was no water heating in this {Structure} during 2018.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which of the following reasons best explains why there was no water heating in this {Structure} during 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Previous answer incorrect, {Structure} does have water heating		
2. No plumbing in {Structure}		
3. Cold water only		
4. Water heating was broken during 2018		
5. Some other reason		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other reason ➔ D9 [Other no water heating specify] OTHERWISE ➔ D10 [Cooking]

D9	**Other no water heating specify** {OtherNoWatrReason} *NOWATRX*
ASK	IF D8 [Why no water heating] = Some other reason
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the reason there was no water heating	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ D10 [Cooking]

D10	**Cooking** {Cooking} *COOK*
ASK	All structure types
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	(Was any energy used...) For cooking?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Was any energy used for cooking?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ D11 [Manufacturing]

D11	**Manufacturing** {Manufacturing} *MANU*
ASK	All structure types
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	(Was any energy used...) For manufacturing?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Was any energy used for manufacturing?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (No OR Missing) & (D1 [Heating] = No OR Missing) & (D4 [Cooling] = No OR Missing) & (D7 [Water heating] = No OR Missing) & (D10 [Cooking] = No OR Missing) → D12 [Any energy used] OTHERWISE → D13 [Energy sources used]

D12	**Any energy used** {AnyEnergy} *ANYEGY*
ASK	IF (D1 [Heating] = No OR Missing) & (D4 [Cooling] = No OR Missing) & (D7 [Water heating] = No OR Missing) & (D10 [Cooking] = No OR Missing) & (D11 [Manufacturing] = No OR Missing)
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Based on your previous answers, it appears there are no major uses of energy in this {Structure}. Did this {Structure} use <u>any</u> energy in 2018 for other purposes, such as lighting or appliances?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes, some energy was used in 2018		
2. No, no energy was used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes, some energy was used OR Missing ⇨ D13 [Energy sources used] IF No, no energy was used ⇨ E83 [Window glass type]

D13	**Energy sources used** {Sources} *see below*
ASK	IF **NOT** D12 [Any energy used] = No, no energy was used
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D1
Question Text	Looking at this list of energy sources on Show Card D1, please tell me which ones were used in this {Structure} for any purpose in 2018.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which energy sources were used in this {Structure} for any purpose in 2018?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELUSED*
2. Natural gas		*NGUSED*
3. Fuel oil, diesel, or kerosene		*FKUSED*
4. Propane, also known as bottled gas or LPG		*PRUSED*
5. District steam piped in from a separate building or utility		*STUSED*
6. District hot water piped in from a separate building or utility		*HWUSED*
7. District chilled water piped in from a separate building or utility		*CWUSED*
8. Wood		*WOUSED*
9. Coal		*COUSED*
10. Solar		*SOUSED*
11. Other source		*OTUSED*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other source selected ⇨ D14 [Other energy source] IF Answered & **NOT** Electricity selected ⇨ D15 [Verify no electricity] IF Fuel, oil, diesel, or kerosene selected ⇨ D16 [Fuel oil, diesel, or kerosene] IF Solar selected ⇨ D17 [Type of solar] IF District steam OR District hot water selected & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ⇨ D18 [From central plant] OTHERWISE: IF Building OR Mall interview & D1 [Heating] = Yes ⇨ D20 [Percent heated] IF Establishment interview & D1 [Heating] = Yes ⇨ D22 [Source for main heating] IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] OTHERWISE ⇨ D139 [Electricity generation capability]

D14	**Other energy source** {OthSourceSp1} *OTUSDX*
ASK	IF Other source IN D13 [Energy sources used]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other energy source used	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF **NOT** Electricity IN D13 [Energy sources used] ⇨ D15 [Verify no electricity] IF Fuel, oil, diesel, or kerosene IN D13 [Energy sources used] ⇨ D16 [Fuel oil, diesel, or kerosene] IF Solar IN D13 [Energy sources used] ⇨ D17 [Type of solar] IF District steam OR District hot water IN D13 [Energy sources used] & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ⇨ D18 [From central plant] IF Building OR Mall interview & D1 [Heating] = Yes ⇨ D20 [Percent heated] IF Establishment interview & D1 [Heating] = Yes ⇨ D22 [Source for main heating] IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & **NOT** Electricity used & **NOT** District chilled water used ⇨ D92 [Sources for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] OTHERWISE ⇨ D139 [Electricity generation capability]

D15	**Verify no electricity** {NoELCheck}
ASK	IF D13 [Energy sources used] given & **NOT** Electricity used
FILL	**{Structure}** IF Interview = Building OR Mall= “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You did not indicate that electricity was used in this {Structure} in 2018. This is unusual.
Interviewer Instructions	Please select the “Back” button to add electricity, or the “Next” button to keep your current answer.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	No space for answer, just Next button.
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Fuel, oil, diesel, or kerosene IN D13 [Energy sources used] ⇨ D16 [Fuel oil, diesel, or kerosene] IF Solar IN D13 [Energy sources used] ⇨ D17 [Type of solar] IF District steam OR District hot water IN D13 [Energy sources used] & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ⇨ D18 [From central plant] IF Building OR Mall interview & D1 [Heating] = Yes ⇨ D20 [Percent heated] IF Establishment interview & D1 [Heating] = Yes ⇨ D22 [Source for main heating] IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] OTHERWISE ⇨ D139 [Electricity generation capability]

D16	**Fuel oil, diesel, or kerosene** {TypeFuelOil} *FKTYPE*
ASK	IF Fuel, oil, diesel, or kerosene IN D13 [Energy sources used]
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	Verify if volunteered in previous question
Question Text	You mentioned fuel oil, diesel, or kerosene. Which of these were used (in this {Structure} in 2018)?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported fuel oil, diesel, or kerosene. Which of these were used in this {Structure} in 2018?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Fuel oil		
2. Diesel		
3. Kerosene		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Solar IN D13 [Energy sources used] ⇨ D17 [Type of solar] IF District steam OR District hot water IN D13 [Energy sources used] & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ⇨ D18 [From central plant] IF Building OR Mall interview & D1 [Heating] = Yes ⇨ D20 [Percent heated] IF Establishment interview & D1 [Heating] = Yes ⇨ D22 [Source for main heating] IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & **NOT** Electricity used & **NOT** District chilled water used ⇨ D92 [Sources for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] OTHERWISE ⇨ D139 [Electricity generation capability]

D17	**Type of solar** {TypeSolar} *see below*
ASK	IF Solar IN D13 [Energy sources used]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which type of solar was used: solar panels to generate electricity or solar thermal energy, which is the direct use of solar energy without generating electricity?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Solar panels used to generate electricity		*PVC/SOGENR/ CAPGEN*
2. Solar thermal energy (use of solar energy without generating electricity)		*SOTHERM*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF District steam OR District hot water IN D13 [Energy sources used] & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ⇨ D18 [From central plant] IF Building OR Mall interview & D1 [Heating] = Yes ⇨ D20 [Percent heated] IF Establishment interview & D1 [Heating] = Yes ⇨ D22 [Source for main heating] IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & **NOT** Electricity used & **NOT** District chilled water used ⇨ D92 [Sources for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF Solar panels used to generate electricity ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D18	**From central plant** {DistFromPlant} *DHFRPL*
ASK	IF District steam OR District hot water IN D13 [Energy sources used] & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the district steam or hot water piped in from a central plant that is part of the same campus or complex as this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No OR Missing ⇨ D19 [Purchase from offsite] IF Yes: IF D1 [Heating] = Yes ⇨ D20 [Percent heated] IF D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D19	**Purchase from offsite** {DistFromOffsite} *DHOFF*
ASK	IF D18 [From central plant] = No OR Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the district steam or hot water purchased from somewhere off-site, such as a commercial or municipal plant?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D1 [Heating] = Yes ⇨ D20 [Percent heated] IF D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D20	**Percent heated** {HeatPct} *HEATP*
ASK	IF Building OR Mall interview & D1 [Heating] = Yes
FILL	**{SqFt}** IF A6 [Square footage] known = “A6 [Square footage]” IF A6 [Square footage] = DK/RF = “floorspace”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	These next questions are about heating in this building. What percentage of the {SqFt} in this building was heated to at least 50 degrees Fahrenheit during 2018, including basements and indoor parking levels if they were heated to at least 50 degrees? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 0 ⇨ D21 [Heated to less than 50 degrees] OTHERWISE ⇨ D22 [Source for main heating]

D21	**Heated to less than 50 degrees** {HeatLess50} *HTLS50*
ASK	IF D20 [Percent heated] = 0
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Was any of this building heated to less than 50 degrees Fahrenheit? Areas may be heated to less than 50 degrees to prevent pipes from freezing.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes OR Missing ⇨ D22 [Source for main heating] IF No: IF D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D22	**Source for main heating** {HeatSource} *see below*
ASK	IF D1 [Heating] = Yes & **NOT** ([D20 [Percent heated] = 0 & D21 [Heated to less than 50 degrees] = No)
FILL	**{Intro}** IF Interview = Establishment = "These next questions are about heating in this establishment." IF Interview = Building OR Mall = BLANK **{Ht1SourcesList}** = List of all energy sources used **{Electricity} – {Other}** = If a source is used, it appears **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Intro} What was the main energy source for heating? (Was it {Ht1SourcesList}?)
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	{Intro} What was the main energy source for heating?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELHT1*
2. {Natural gas}		*NGHT1*
3. {FuelOilType}		*FKHT1*
4. {Propane}		*PRHT1*
5. {District steam}		*STHT1*
6. {District hot water}		*HWHT1*
7. {Wood}		*WOHT1*
8. {Coal}		*COHT1*
9. {Solar thermal}		*SOHT1*
10. {Other}		*OTHT1*
11. Some other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source ⇨ D23 [Other source for main heating] IF Missing ⇨ D31 [Heating equipment for unknown source] OTHERWISE: IF More than one energy source used ⇨ D24 [Which other sources for heating] IF Only one energy source used ⇨ D25 [Any other sources for heating]

D23	**Other source for main heating** {OtHt1Source} *see below*
ASK	IF D22 [Source for main heating] = Some other energy source
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the other energy source used for <u>main</u> space heating?
Interviewer Instructions	Read choices if necessary
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELHT1*
2. Natural gas		*NGHT1*
3. Fuel Oil/Diesel/Kerosene		*FKHT1*
4. Propane		*PRHT1*
5. District steam		*STHT1*
6. District hot water		*HWHT1*
7. Wood		*WOHT1*
8. Coal		*COHT1*
9. Solar thermal		*SOHT1*
10. Some other energy source		*OTHT1*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D24 [Which other sources for heating]

D24	**Which other sources for heating** {SecHtSource} *HT2 & see below*
ASK	IF D1 [Heating] = Yes & More than one energy source used & **NOT** D22 [Source for main heating] = Missing
FILL	**{Ht2SourcesList}** = List of all energy sources used, other than the one used for main heating **{Electricity} – {Other}** = If a source is used (other than for main space heating), it appears **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which other energy sources, if any, were used for heating? Do not include electricity if it is used only to run fan motors. (Was it {Ht2SourcesList}?)
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which other energy sources, if any, were used for heating? Do not include electricity if it is used only to run fan motors.
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELHT2*
2. {Natural gas}		*NGHT2*
3. {FuelOilType}		*FKHT2*
4. {Propane}		*PRHT2*
5. {District steam}		*STHT2*
6. {District hot water}		*HWHT2*
7. {Wood}		*WOHT2*
8. {Coal}		*COHT2*
9. {Solar thermal}		*SOHT2*
10. {Other}		*OTHT2*
11. Some other energy source		
12. No other sources for heating		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source ⇨ D26 [Other source for heating] OTHERWISE ⇨ DRT [Main heating routing]

D25	**Any other sources for heating** {SecOthSource} *HT2*
ASK	IF D1 [Heating] = Yes & Only one energy source used & **NOT** D22 [Source for main heating] = Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Where there any other energy sources used for heating?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ D26 [Other source for heating] OTHERWISE ⇨ DRT [Main heating routing]

D26	**Other source for heating** {OtHt2Source} *see below*
ASK	IF D24 [Which other sources for heating] = Some other energy source OR D25 [Any other sources for heating] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the other energy source used for secondary space heating?
Interviewer Instructions	Read choices if necessary
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELHT2*
2. Natural gas		*NGHT2*
3. Fuel Oil/Diesel/Kerosene		*FKHT2*
4. Propane		*PRHT2*
5. District steam		*STHT2*
6. District hot water		*HWHT2*
7. Wood		*WOHT2*
8. Coal		*COHT2*
9. Solar thermal		*SOHT2*
10. Some other energy source		*OTHT2*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ DRT [Main heating routing]

NOTE ON ENERGY SOURCES:

Throughout the rest of this questionnaire, there will be references such as “Electricity used” or “Natural gas used.” In addition to the energy sources that were given in D13 [Energy sources used], if sources are added along the way, such as in D23 [Other source for main heating] OR D26 [Other source for heating], those sources are then also considered to be used.

DRT	Main heating routing
NEXT	IF D22 [Source for main heating] = District steam & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes ⇨ D27 [Where does steam come from] IF D22 [Source for main heating] = District hot water & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes ⇨ D29 [Where does hot water come from] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Electricity ⇨ D33 [Elec main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Natural gas ⇨ D35 [Nat gas main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Fuel oil/Diesel/Kerosene ⇨ D37 [Fuel oil main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Propane ⇨ D39 [Propane main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = District steam ⇨ D41 [District steam distribution] IF D22 [Source for main heating] OR D23 [Other source for main heating] = District hot water ⇨ D42 [District hot water distribution] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Wood ⇨ D43 [Wood main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Coal ⇨ D45 [Coal main heating equipment] IF D22 [Source for main heating] OR D23 [Other source for main heating] = Solar thermal ⇨ D47 [Solar thermal heating equipment] IF D22 [Source for main heating] = {Other} OR D23 [Other source for main heating] = Some other energy source ⇨ D48 [Other source main heating equipment]

D27	**Where does steam come from** {WhereSteam} *STLOCTN*
ASK	IF D22 [Source for main heating] = District steam & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the steam come from a boiler in another building, from a utility, or from a boiler <u>inside</u> this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. From a boiler in another building		
2. From a district steam utility		
3. From a boiler <u>inside</u> this building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF From a boiler inside this building ⇨ D28 [Steam boiler fuel] OTHERWISE ⇨ D41 [District steam distribution]

D28	**Steam boiler fuel** {SteamFuel} *STBLFL*
ASK	IF D27 [Where does steam come from] = From a boiler inside the building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What energy source does the boiler use to make the district steam: natural gas, fuel oil, propane, coal, electricity, or some other energy source?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What energy source does the boiler use to make the district steam?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Natural gas		
2. Fuel oil		
3. Propane		
4. Coal		
5. Electricity		
6. Other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Answered ⇨ D51 [Boiler distribution] IF Missing ⇨ D41 [District steam distribution]

D29	**Where does hot water come from** {WhereDistHW} *HWLOCTN*
ASK	IF D22 [Source for main heating] = District hot water & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the district hot water come from a boiler in another building, from a utility, or from a boiler inside this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. From a boiler in another building		
2. From a district hot water utility		
3. From a boiler inside this building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF From a boiler inside this building ⇨ D30 [Hot water boiler fuel] OTHERWISE ⇨ D42 [District hot water distribution]

D30	**Hot water boiler fuel** {DistHWFuel} *HWBLFL*
ASK	IF D29 [Where does hot water come from] = From a boiler inside the building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What energy source does the boiler use to make the district hot water: natural gas, fuel oil, propane, coal, electricity, or some other energy source?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What energy source does the boiler use to make the district hot water?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Natural gas		
2. Fuel oil		
3. Propane		
4. Coal		
5. Electricity		
6. Other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Answered ⇨ D51 [Boiler distribution] IF Missing ⇨ D42 [District hot water distribution]

D31	**Heating equipment for unknown source** {HeatEquip_DK_Source} *see below*
ASK	IF D22 [Source for main heating] = DK/Missing
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D2
Question Text	Even though you aren't sure of the energy source used for heating this {Structure}, you may still be familiar with the equipment. Looking at the list of heating equipment and distribution types on Show Card D2, please tell me which one (or ones) are used in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Even though you aren't sure of the energy source used for heating this {Structure}, you may still be familiar with the equipment. Which of these heating equipment and distribution types are used in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_DK*
2. Boilers that produce steam or hot water for space heating		*BOILER_DK*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_DK*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_DK*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Examples include electric baseboards, electric radiant or quartz heaters, heating panels, infrared radiant heaters, gas- or kerosene-fired unit heaters, wood stoves, heating elements in Packaged Terminal Air Conditioners (PTACs), and Packaged Terminal Heat Pumps (PTHPs).)*		*SLFCON_DK*
6. Fireplaces		*FIREPLC_DK*
7. Central air handlers		*AIRHAND_DK*
8. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating*		*FANCOIL_DK*

coil and circulate the air within a room.)		

9. Duct reheat *(Heating coils located within ducts)*			*REHEAT_DK*
10. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*			*RADIATR_DK*
11. Radiant floor/ceiling panels			*RADFLR_DK*
12. Other heating equipment			*OTHTEQ_DK*
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other heating equipment selected ⇨ D32 [Unknown source heat equip specify] IF Boilers selected & Building interview ⇨ D50 [Where is the boiler located] OTHERWISE ⇨ ART [Heating follow-up routing] STEP 10		

D32	**Unknown source heat equip specify** {OthHeatSpecify_DK_Source} *OTHTEQX_DK*
ASK	IF D31 [Heating equipment for unknown source] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building interview & Boilers IN D31 [Heating equipment for unknown source] ⇨ D50 [Where is the boiler located] OTHERWISE ⇨ ART [Heating follow-up routing] STEP 10

D33	**Elec main heating equipment** {HeatEquip_ELHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Electricity
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D3
Question Text	Looking at the list of heating equipment types on Show Card D3, please tell me which one (or ones) are powered by electricity in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are powered by electricity in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_EL*
2. Boilers that produce steam or hot water for space heating		*BOILER_EL*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_EL*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_EL*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. They can be freestanding or self-contained units mounted along baseboards or in walls, ceilings, or windows. Examples include electric baseboards, electric radiant or quartz heaters, heating panels, infrared radiant heaters, heating elements in Packaged Terminal Air Conditioners (PTACs), and Packaged Terminal Heat Pumps (PTHPs).)*		*SLFCON_EL*
6. Fireplaces		*FIREPLC_EL*
7. Duct reheat *(Heating coils located within ducts)*		*REHEAT_EL*
8. Other heating equipment		*OTHTEQ_EL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D34 [Elec other main heat equip specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D34	**Elec other main heat equip specify** {OthHeatSpecify_ELHT1} *OTHT1X_EL*
ASK	IF D33 [Elec main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D33 [Elec main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D35	**Nat gas main heating equipment** {HeatEquip_NGHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Natural gas
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D4
Question Text	Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by natural gas in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by natural gas in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.*		*PKGHT_NG*
2. Boilers that produce steam or hot water for space heating		*BOILER_NG*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_NG*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_NG*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_NG*
6. Fireplaces		*FIREPLC_NG*
7. Other heating equipment		*OTHTEQ_NG*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D36 [Nat gas other main heat equip specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D36	**Nat gas other main heat equip specify** {OthHeatSpecify_NGHT1} *OTHT1X_NG*
ASK	IF D35 [Nat gas main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D35 [Nat gas main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D37	**Fuel oil main heating equipment** {HeatEquip_FKHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Fuel Oil/Diesel/Kerosene
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D5
Question Text	Looking at the list of heating equipment types on Show Card D5, please tell me which one (or ones) are fueled by {FuelOilType} in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by {FuelOilType} in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Boilers that produce steam or hot water for space heating		*BOILER_FK*
2. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_FK*
3. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_FK*
4. Other heating equipment		*OTHTEQ_FK*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D38 [Fuel oil other main heat equip specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D38	**Fuel oil other main heat equip specify** {OthHeatSpecify_FKHT1} *OTHT1X_FK*
ASK	IF D37 [Fuel oil main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D37 [Fuel oil main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview & ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D39	**Propane main heating equipment** {HeatEquip_PRHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Propane
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D4
Question Text	Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by propane in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by propane in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_PR*
2. Boilers that produce steam or hot water for space heating		*BOILER_PR*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_PR*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_PR*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_PR*
6. Fireplaces		*FIREPLC_PR*
7. Other heating equipment		*OTHTEQ_PR*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D40 [Propane other main heat equip specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D40	**Propane other main heat equip specify** {OthHeatSpecify_PRHT1} *OTHT1X_PR*
ASK	IF D39 [Propane main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D39 [Propane main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D41	**District steam distribution** {HeatEquip_STHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = District steam
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the district steam in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the district steam in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*AIRHAND_ST*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*FANCOIL_ST*
3. Duct reheat *(Heating coils located within ducts)*		*REHEAT_ST*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*RADIATR_ST*
5. Radiant floor/ceiling panels		*RADFLR_ST*
6. Water loop heat pumps		*WTLOOP_ST*
7. Other distribution equipment		*OTDIST_ST*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing]

D42	**District hot water distribution** {HeatEquip_HWHT1} *see below*		
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = District hot water		
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD D6		
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the district hot water in this {Structure}.		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	Which of these heating distribution types are used with the district hot water in this {Structure}?		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Central air handlers			*AIRHAND_HW*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*			*FANCOIL_HW*
3. Duct reheat *(Heating coils located within ducts)*			*REHEAT_HW*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*			*RADIATR_HW*
5. Radiant floor/ceiling panels			*RADFLR_HW*
6. Water loop heat pumps			*WTLOOP_HW*
7. Other distribution equipment			*OTDIST_HW*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ SRT [Secondary heating routing]		

D43	**Wood main heating equipment** {HeatEquip_WOHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Wood
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D7
Question Text	Looking at the list of heating equipment types on Show Card D7, please tell me which one (or ones) are fueled by wood in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by wood in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_WO*
2. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_WO*
3. Fireplaces		*FIREPLC_WO*
4. Other heating equipment		*OTHTEQ_WO*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D44 [Wood other main heat equip specify] OTHERWISE ⇨ SRT [Secondary heating routing]

D44	**Wood other main heat equip specify** {OthHeatSpecify_WOHT1} *OTHT1X_WO*
ASK	IF D43 [Wood main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	OTHERWISE ⇨ SRT [Secondary heating routing]

D45	**Coal main heating equipment** {HeatEquip_COHT1} *see below*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Coal
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D8
Question Text	Looking at the list of heating equipment types on Show Card D8, please tell me which one (or ones) are fueled by coal in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by coal in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Boilers that produce steam or hot water for space heating		*BOILER_CO*
2. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_CO*
3. Other heating equipment		*OTHTEQ_CO*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D46 [Coal other main heat equip specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D46	**Coal other main heat equip specify** {OthHeatSpecify_COHT1} *OTHT1X_CO*
ASK	IF D45 [Coal main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D45 [Coal main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D47	**Solar thermal heating equipment** {HeatEquip_SOTHERMHT1} *SOHT_HT1X*
ASK	IF D22 [Source for main heating] OR D23 [Other source for main heating] = Solar thermal
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please describe the solar thermal heating system.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ SRT [Secondary heating routing]

D48	**Other source main heating equipment** {HeatEquip_OTHT1} *see below*
ASK	IF D22 [Source for main heating] = {Other} OR D23 [Other source for main heating] = Some other energy source
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D9
Question Text	Looking at the list of heating equipment types on Show Card D9, please tell me which one (or ones) are fueled by the other energy source in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating equipment types are fueled by the other energy source in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_OT*
2. Boilers that produce steam or hot water for space heating		*BOILER_OT*
3. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_OT*
4. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_OT*
5. Other heating equipment		*OTHTEQ_OT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D49 [Other source other main heat specify] IF Boilers selected THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D49	**Other source other main heat specify** {OthHeatSpecify_OTHT1} *OTHT1X_OT*
ASK	IF D48 [Other source main heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D48 [Other source main heating equipment] THEN: IF Building interview ⇨ D50 [Where is the boiler located] IF Mall OR Establishment interview ⇨ D51 [Boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing]

D50	**Where is the boiler located** {WhereBoiler} *BLLOCTN*
ASK	IF Building interview & (Boilers IN D31 [Heating equipment for unknown source] OR D33 [Elec main heating equipment] OR D35 [Nat gas main heating equipment] OR D37 [Fuel oil main heating equipment] OR D39 [Propane main heating equipment] OR D45 [Coal main heating equipment] OR D48 [Other source main heating equipment])
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the boiler located in this building or in another building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. In this building		
2. In another building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D22 [Source for main heating] = DK/Missing ⇨ ART [Heating follow-up routing] STEP 10 OTHERWISE ⇨ D51 [Boiler heat distribution]

D51	**Boiler heat distribution** {BoilerDistrib} *see below*
ASK	IF Boilers for any main heating equipment OR D28 [Steam boiler fuel] answered OR D30 [Hot water boiler fuel] answered
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the boiler.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the boiler?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*BLRAIR_HT1*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*BLRFNCL_HT1*
3. Duct reheat *(Heating coils located within ducts)*		*BLRDUCT_HT1*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*BLRRAD_HT1*
5. Radiant floor/ceiling panels		*BLRRDFL_HT1*
6. Water loop heat pumps		*BLRWTLP_HT1*
7. Other distribution equipment		*BLROTD_HT1*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing]

SRT	Secondary heating routing	
NEXT	STEP 1	IF Electricity IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D52 [Elec secondary heating equipment]
	STEP 2	IF Natural gas IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D55 [Nat gas secondary heating equipment]
	STEP 3	IF Fuel Oil/Diesel/Kerosene IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D58 [Fuel oil secondary heating equipment]
	STEP 4	IF Propane IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D61 [Propane secondary heating equipment]
	STEP 5	IF District steam IN D24 [Which other sources for heating] OR D26 [Other source for heating] THEN: IF **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes ⇨ D64 [Where does steam come from] OTHERWISE ⇨ D66 [District steam distribution]
	STEP 6	IF District hot water IN D24 [Which other sources for heating] OR D26 [Other source for heating] THEN: IF **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes ⇨ D67 [Where does hot water come from] OTHERWISE ⇨ D69 [District hot water distribution]
	STEP 7	IF Wood IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D70 [Wood secondary heating equipment]
	STEP 8	IF Coal IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D72 [Coal secondary heating equipment]
	STEP 9	IF Solar thermal IN D24 [Which other sources for heating] OR D26 [Other source for heating] ⇨ D75 [Solar thermal secondary heating equipment]
	STEP 10	IF {Other} IN D24 [Which other sources for heating] OR D26 [Other source for heating] = Some other energy source ⇨ D76 [Other source secondary heating equipment]
	STEP 11	⇨ ART [Heating follow-up routing]

D52	**Elec secondary heating equipment** {HeatEquip_ELHT2} *see below*
ASK	IF Electricity IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D3
Question Text	You mentioned that electricity was also used for heating. Looking at the list of heating equipment types on Show Card D3, please tell me which one (or ones) are powered by electricity in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that electricity was also used for heating. Which of these heating equipment types are powered by electricity in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date

RESPONSE OPTIONS

Enumerated

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_EL*
2. Boilers that produce steam or hot water for space heating		*BOILER_EL*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_EL*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_EL*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. They can be freestanding or self-contained units mounted along baseboards or in walls, ceilings, or windows. Examples include electric baseboards, electric radiant or quartz heaters, heating panels, infrared radiant heaters, heating elements in Packaged Terminal Air Conditioners (PTACs), and Packaged Terminal Heat Pumps (PTHPs).)*		*SLFCON_EL*
6. Fireplaces		*FIREPLC_EL*
7. Duct reheat *(Heating coils located within ducts)*		*REHEAT_EL*
8. Other heating equipment		*OTHTEQ_EL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D53 [Elec other secondary heat equip] IF Boilers selected ⇨ D54 [Elec boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 2

D53	**Elec other secondary heat equip** {OthHeatSpecify_ELHT2} *OTHT2X_EL*
ASK	IF D52 [Elec secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D52 [Elec secondary heating equipment] ⇨ D54 [Elec boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 2

D54	**Elec boiler heat distribution** {BoilerDistrib_ELHT2} *see below*		
ASK	IF Boilers IN D52 [Elec secondary heating equipment]		
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD D6		
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>electric boiler</u> in this {Structure}.		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	Which of these heating distribution types are used with the <u>electric boiler</u> in this {Structure}?		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Central air handlers			*BLRAIR_EL2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*			*BLRFNCL_EL2*
3. Duct reheat *(Heating coils located within ducts)*			*BLRDUCT_EL2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*			*BLRRAD_EL2*
5. Radiant floor/ceiling panels			*BLRRDFL_EL2*
6. Water loop heat pumps			*BLRWTLP_EL2*
7. Other distribution equipment			*BLROTD_EL2*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ SRT [Secondary heating routing] STEP 2		

D55	**Nat gas secondary heating equipment** {HeatEquip_NGHT2} *see below*
ASK	IF Natural gas IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D4
Question Text	You mentioned that natural gas was also used for heating. Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by natural gas in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that natural gas was also used for heating. Which of these heating equipment types are fueled by natural gas in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.*		*PKGHT_NG*
2. Boilers that produce steam or hot water for space heating		*BOILER_NG*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_NG*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_NG*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_NG*
6. Fireplaces		*FIREPLC_NG*
7. Other heating equipment		*OTHTEQ_NG*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D56 [Nat gas other secondary heat equip] IF Boilers selected ⇨ D57 [Nat gas boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 3

D56	**Nat gas other secondary heat equip** {OthHeatSpecify_NGHT2} *OTHT2X_NG*
ASK	IF D55 [Nat gas secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D55 [Nat gas secondary heating equipment] ⇨ D57 [Nat gas boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 3

D57	**Nat gas boiler heat distribution** {BoilerDistrib_NGHT2} *see below*
ASK	IF Boilers IN D55 [Nat gas secondary heating equipment]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the natural gas boiler in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the natural gas boiler in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*BLRAIR_NG2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*BLRFNCL_NG2*
3. Duct reheat *(Heating coils located within ducts)*		*BLRDUCT_NG2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*BLRRAD_NG2*
5. Radiant floor/ceiling panels		*BLRRDFL_NG2*
6. Water loop heat pumps		*BLRWTLP_NG2*
7. Other distribution equipment		*BLROTD_NG2*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 3

D58	**Fuel oil secondary heating equipment** {HeatEquip_FKHT2} *see below*
ASK	IF Fuel Oil/Diesel/Kerosene IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D5
Question Text	You mentioned that {FuelOilType} was also used for heating. Looking at the list of heating equipment types on Show Card D5, please tell me which one (or ones) are fueled by {FuelOilType} in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that {FuelOilType} was also used for heating. Which of these heating equipment types are fueled by {FuelOilType} in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Boilers that produce steam or hot water for space heating		*BOILER_FK*
2. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_FK*
3. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_FK*
4. Other heating equipment		*OTHTEQ_FK*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D59 [Fuel oil other secondary heat equip] IF Boilers selected ⇨ D60 [Fuel oil boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 4

D59	**Fuel oil other secondary heat equip** {OthHeatSpecify_FKHT2} *OTHT2X_FK*
ASK	IF D58 [Fuel oil secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D58 [Fuel oil secondary heating equipment] ⇨ D60 [Fuel oil boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 4

D60	**Fuel oil boiler heat distribution** {BoilerDistrib_FKHT2} *see below*
ASK	IF Boilers IN D58 [Fuel oil secondary heating equipment]
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the {FuelOilType} boiler in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the {FuelOilType} boiler in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*BLRAIR_FK2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*BLRFNCL_FK2*
3. Duct reheat *(Heating coils located within ducts)*		*BLRDUCT_FK2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*BLRRAD_FK2*
5. Radiant floor/ceiling panels		*BLRRDFL_FK2*
6. Water loop heat pumps		*BLRWTLP_FK2*
7. Other distribution equipment		*BLROTD_FK2*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 4

D61	**Propane secondary heating equipment** {HeatEquip_PRHT2} *see below*
ASK	IF Propane IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D4
Question Text	You mentioned that propane was also used for heating. Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by propane in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that propane was also used for heating. Which of these heating equipment types are fueled by propane in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_PR*
2. Boilers that produce steam or hot water for space heating		*BOILER_PR*
3. Heat pumps (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPH_PR*
4. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_PR*
5. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_PR*
6. Fireplaces		*FIREPLC_PR*
7. Other heating equipment		*OTHTEQ_PR*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D62 [Propane other secondary heat equip] IF Boilers selected ⇨ D63 [Propane boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 5

D62	**Propane other secondary heat equip** {OthHeatSpecify_PRHT2} *OTHT2X_PR*
ASK	IF D61 [Propane secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D61 [Propane secondary heating equipment] ⇨ D63 [Propane boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 5

D63	**Propane boiler heat distribution** {BoilerDistrib_PRHT2} *see below*
ASK	IF Boilers IN D61 [Propane secondary heating equipment]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the propane boiler in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the propane boiler in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*BLRAIR_PR2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*BLRFNCL_PR2*
3. Duct reheat *(Heating coils located within ducts)*		*BLRDUCT_PR2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*BLRRAD_PR2*
5. Radiant floor/ceiling panels		*BLRRDFL_PR2*
6. Water loop heat pumps		*BLRWTLP_PR2*
7. Other distribution equipment		*BLROTD_PR2*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 5

D64	**Where does steam come from** {WhereSteam_HT2} *ST2LOCTN*
ASK	IF (District steam IN D24 [Which other sources for heating] OR D26 [Other source for heating]) & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You mentioned that district steam was also used for heating. Does the steam come from a boiler in another building, from a utility, or from a boiler inside this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You reported that district steam was also used for heating. Does the steam come from a boiler in another building, from a utility, or from a boiler inside this building?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. From a boiler in another building		
2. From a district steam utility		
3. From a boiler inside this building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF From a boiler inside this building ⇨ D65 [Steam boiler fuel] OTHERWISE ⇨ D66 [District steam distribution]

D65	**Steam boiler fuel** {SteamFuel_HT2} *ST2BLFL*
ASK	IF D64 [Where does steam come from] = From a boiler inside the building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What energy source does the boiler use to make the district steam: natural gas, fuel oil, propane, coal, electricity, or some other energy source?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What energy source does the boiler use to make the district steam?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Natural gas		
2. Fuel oil		
3. Propane		
4. Coal		
5. Electricity		
6. Other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D66 [District steam distribution]

D66	**District steam distribution** {HeatEquip_STHT2} *see below*
ASK	IF District steam IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the district steam in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the district steam in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*AIRHAND_ST*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*FANCOIL_ST*
3. Duct reheat *(Heating coils located within ducts)*		*REHEAT_ST*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*RADIATR_ST*
5. Radiant floor/ceiling panels		*RADFLR_ST*
6. Water loop heat pumps		*WTLOOP_ST*
7. Other distribution equipment		*OTDIST_ST*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 6

D67	**Where does hot water come from** {WhereDistHW_HT2} *HW2LOCTN*
ASK	IF (District hot water IN D24 [Which other sources for heating] OR D26 [Other source for heating]) & **NOT** D18 [From central plant] = Yes & **NOT** D19 [Purchase from offsite] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You mentioned that district hot water was also used for heating. Does the district hot water come from a boiler in another building, from a utility, or from a boiler inside this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You reported that district hot water was also used for heating. Does the district hot water come from a boiler in another building, from a utility, or from a boiler inside this building?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. From a boiler in another building		
2. From a district hot water utility		
3. From a boiler inside this building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF From a boiler inside this building ⇨ D68 [Hot water boiler fuel] OTHERWISE ⇨ D69 [District hot water distribution]

D68	**Hot water boiler fuel** {DistHWFuel_HT2} *HW2BLFL*
ASK	IF D67 [Where does hot water come from] = From a boiler inside the building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What energy source does the boiler use to make the district hot water: natural gas, fuel oil, propane, coal, electricity, or some other energy source?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What energy source does the boiler use to make the district hot water?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Natural gas		
2. Fuel oil		
3. Propane		
4. Coal		
5. Electricity		
6. Other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D69 [District hot water distribution]

D69	**District hot water distribution** {HeatEquip_HWHT2} *see below*
ASK	IF District hot water IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the district hot water in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the district hot water in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*AIRHAND_HW*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*FANCOIL_HW*
3. Duct reheat *(Heating coils located within ducts)*		*REHEAT_HW*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*RADIATR_HW*
5. Radiant floor/ceiling panels		*RADFLR_HW*
6. Water loop heat pumps		*WTLOOP_HW*
7. Other distribution equipment		*OTDIST_HW*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 7

D70	**Wood secondary heating equipment** {HeatEquip_WOHT2} *see below*
ASK	IF Wood IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D7
Question Text	You mentioned that wood was also used for heating. Looking at the list of heating equipment types on Show Card D7, please tell me which one (or ones) are fueled by wood in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that wood was also used for heating. Which of these heating equipment types are fueled by wood in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_WO*
2. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_WO*
3. Fireplaces		*FIREPLC_WO*
4. Other heating equipment		*OTHTEQ_WO*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D71 [Wood other secondary heat equip] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 8

D71	**Wood other secondary heat equip** {OthHeatSpecify_WOHT2} *OTHT2X_WO*
ASK	IF D70 [Wood secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	OTHERWISE ⇨ SRT [Secondary heating routing] STEP 8

D72	**Coal secondary heating equipment** {HeatEquip_COHT2} *see below*
ASK	IF Coal IN D24 [Which other sources for heating] OR D26 [Other source for heating]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D8
Question Text	You mentioned that coal was also used for heating. Looking at the list of heating equipment types on Show Card D8, please tell me which one (or ones) are fueled by coal in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that coal was also used for heating. Which of these heating equipment types are fueled by coal in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Boilers that produce steam or hot water for space heating		*BOILER_CO*
2. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_CO*
3. Other heating equipment		*OTHTEQ_CO*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D73 [Coal other secondary heat equip] IF Boilers selected ⇨ D74 [Coal boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 9

D73	**Coal other secondary heat equip** {OthHeatSpecify_COHT2} *OTHT2X_CO*
ASK	IF D72 [Coal secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D72 [Coal secondary heating equipment] ⇨ D74 [Coal boiler heat distribution] OTHERWISE ⇨ SRT [Secondary heating routing] STEP 9

D74	**Coal boiler heat distribution** {BoilerDistrib_COHT2} *see below*		
ASK	IF Boilers IN D72 [Coal secondary heating equipment]		
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD D6		
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the coal boiler in this {Structure}.		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	Which of these heating distribution types are used with the coal boiler in this {Structure}?		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Central air handlers			*BLRAIR_CO2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*			*BLRFNCL_CO2*
3. Duct reheat *(Heating coils located within ducts)*			*BLRDUCT_CO2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*			*BLRRAD_CO2*
5. Radiant floor/ceiling panels			*BLRRDFL_CO2*
6. Water loop heat pumps			*BLRWTLP_CO2*
7. Other distribution equipment			*BLROTD_CO2*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ SRT [Secondary heating routing] STEP 9		

D75	**Solar thermal secondary heating equipment** {HeatEquip_SOTHERMHT2} *SOHT_HT2X*
ASK	IF Solar thermal IN D24 [Which other sources for heating] OR D26 [Other source for heating]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You mentioned that solar thermal was also used for heating. Please describe the solar thermal heating system.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You reported that solar thermal was also used for heating. Please describe the solar thermal heating system.
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ SRT [Secondary heating routing] STEP 10

D76	**Other source secondary heating equipment** {HeatEquip_OTHT2} *see below*
ASK	IF {Other} IN D24 [Which other sources for heating] OR D26 [Other source for heating] = Some other energy source
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D9
Question Text	You mentioned that some other energy source was also used for heating. Looking at the list of heating equipment types on Show Card D9, please tell me which one (or ones) are fueled by the other energy source in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that some other energy source was also used for heating. Which of these heating equipment types are fueled by the other energy source in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged central units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Some packaged heating units will contain air conditioning equipment. Packaged heating units may also be known as self-contained units.)*		*PKGHT_OT*
2. Boilers that produce steam or hot water for space heating		*BOILER_OT*
3. Residential-type furnaces *(Furnaces heat air directly and circulate the warm air through ducts and vents.)*		*FURNAC_OT*
4. Individual space heaters *(Individual space heaters directly heat only the room or area where they are located. Individual space heaters are not connected to external sources of heat via pipes or air ducts. Examples include gas- or kerosene-fired unit heaters, wood stoves, and infrared radiant heaters.)*		*SLFCON_OT*
5. Other heating equipment		*OTHTEQ_OT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other heating equipment selected ⇨ D77 [Other source other secondary heat] IF Boilers selected ⇨ D78 [Other source boiler heat distribution] OTHERWISE ⇨ ART [Heating follow-up routing]

D77	**Other source other secondary heat equip** {OthHeatSpecify_OTHT2} *OTHT2X_OT*
ASK	IF D76 [Other source secondary heating equipment] = Other heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of heating equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Boilers IN D76 [Other source secondary heating equipment] ⇨ D78 [Other source boiler heat distribution] OTHERWISE ⇨ ART [Heating follow-up routing]

D78	**Other source boiler heat distribution** {BoilerDistrib_OTHT2} *see below*
ASK	IF Boilers IN D76 [Other source secondary heating equipment]
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D6
Question Text	Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the other energy source boiler in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these heating distribution types are used with the other energy source boiler in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*BLRAIR_OT2*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a heating coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the heating coil and circulate the air within a room.)*		*BLRFNCL_OT2*
3. Duct reheat *(Heating coils located within ducts)*		*BLRDUCT_OT2*
4. Radiators *(Radiators heat by circulating hot water or steam, using convection and radiation without fans; typically located along baseboards)*		*BLRRAD_OT2*
5. Radiant floor/ceiling panels		*BLRRDFL_OT2*
6. Water loop heat pumps		*BLRWTLP_OT2*
7. Other distribution equipment		*BLROTD_OT2*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing]

ART	Heating follow-up routing	
NEXT	STEP 1	IF (Furnaces IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) & Furnaces for any other source main or secondary heating equipment ⇨ D79 [Furnace with >1 source]
	STEP 2	IF Boilers for two or more main or secondary heating equipment ⇨ D80 [Boiler with >1 source]
	STEP 3	IF (Packaged IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) & **NOT** Packaged for any other source main or secondary heating equipment ⇨ D81 [Heat pump in packaged unit]
	STEP 4	IF (Heat pumps IN D35 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D55 [Nat gas secondary heating equipment] OR D61 [Propane secondary heating equipment]) & **NOT** (Heat pumps IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) ⇨ D82 [Heat pump with no elec]
	STEP 5	IF Heat pumps IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) OR D82 [Heat pump with no elec] = Heat pumps uses only electricity ⇨ D83 [Heat pumps are PTHPs]
	STEP 6	IF (D81 [Heat pump in packaged unit] = Yes & **NOT** Heat pump for any main or secondary heating equipment) OR D82 [Heat pump with no elec] = Heat pump uses only {GasType}; Heat pump uses both {GasType} and electricity; OR DK/Missing OR D83 [Heat pumps are PTHPs] = No; Heat pumps are both PTHP and split system; OR DK/Missing ⇨ D84 [Heat pump heating type]
	STEP 7	IF Individual space heaters IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment] ⇨ D86 [Space heaters are PTHPs]
	STEP 8	IF Building OR Mall interview & More than one selected heating source/equipment combination ⇨ D87 [Percent heated by type]
	STEP 9	IF Building OR Mall interview & Only one selected heating equipment & **NOT** District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D89 [Main heating replaced]
	STEP 10	IF Building OR Mall interview & D4 [Cooling] = Yes ⇨ D90 [Percent cooled] IF Establishment interview & D4 [Cooling] = Yes & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & **NOT** Electricity used & **NOT** District chilled water used ⇨ D92 [Sources for cooling] IF Establishment interview & D4 [Cooling] = Yes & District chilled water used ⇨ D94 [EL or CW for cooling] IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D79	**Furnace with >1 source** {FurnaceWith2Sources} *FURN2SRC*
ASK	IF (Furnaces IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) & Furnaces for any other source main or secondary heating equipment
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{SecondFuel} =** The non-electric energy source reported with a furnace
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Structure} runs a furnace with electricity and {SecondFuel}. Is the electricity for components such as the fans, igniter, or thermostat, or are there two or more furnaces that run on different energy sources?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity is for fans, igniter, thermostat, etc.		
2. Two or more furnaces		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 2

D80	**Boiler with >1 source** {BoilerWith2Sources} *BOIL2SRC*
ASK	IF Boilers for Two or more main or secondary heating equipment
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{BoilerFuels}** = Sources reported with boiler **{ElectricityBoiler}** IF Electricity reported as a boiler fuel = "Is the electricity used to run components such as fans or pumps, is this one boiler that can switch fuels," OTHERWISE = "Is this one boiler that can switch fuels" **{ElectricityResponse}** IF Electricity reported as a boiler fuel = "Electricity is for fans, pumps, controls, thermostat, etc." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Stucture} runs a boiler with {BoilerFuels}. {ElectricityBoiler} or is it two or more boilers that run on different energy sources?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {ElectricityResponse}		
2. The boiler can switch fuels		
3. Two or more boilers		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 3

D81	**Heat pump in packaged unit** {HeatPumpInPackagedUnit} *PKGHPH*
ASK	IF (Packaged IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) & **NOT** Packaged for any other source main or secondary heating equipment
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Structure} uses a packaged central unit. Does the packaged unit contain a heat pump?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 4

D82	**Heat pump with no elec** {HeatPumpWithNoEL} *HPCHKEL*
ASK	IF (Heat pumps IN D35 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D55 [Nat gas secondary heating equipment] OR D61 [Propane secondary heating equipment]) & **NOT** (Heat pumps IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment])
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{GasType}** = "natural gas" or "propane" based on what type of heat pump is reported
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Structure} runs a heat pump with only {GasType}. This is fairly unusual. Does the heat pump use only {GasType}, is it a dual-fuel/hybrid heat pump that also uses electricity, or does it only use electricity?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heat pump uses only {GasType}		
2. Heat pump is both {GasType} and electricity (dual-fuel/hybrid)		
3. Heat pump uses only electricity		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 5

D83	**Heat pumps are PTHPs** {HeatPump_PTHP} *HPHPTHP*
ASK	IF Heat pumps IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]) OR D82 [Heat pump with no elec] = Heat pumps uses only electricity
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Structure} uses heat pumps. Are the heat pumps "Packaged Terminal Heat Pumps"? These are also referred to as PTHPs.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		
3. Heat pumps are both PTHP and split system		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 6

D84	**Heat pump heating type** {HeatPumpType} *see below*
ASK	IF (D81 [Heat pump in packaged unit] = Yes & **NOT** Heat pump for any main or secondary heating equipment) OR D82 [Heat pump with no elec] = Heat pump uses only {GasType}; Heat pump uses both {GasType} and electricity; OR DK/Missing OR D83 [Heat pumps are PTHPs] = No; Heat pumps are both PTHP and split system; OR DK/Missing
FILL	**{HeatPumpType}** IF D81 [Heat pump in packaged unit] = Yes = "type of heat pump is in this packaged unit?" OTHERWISE = "types of heat pumps are used in this {Structure}?" **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D10
Question Text	Looking at the list on Show Card D10, which {HeatPumpType}
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which {HeatPumpType}
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Air source heat pump		*HPHAIR*
2. Ground source or ground water heat pump (geothermal)		*HPHGRD*
3. Combination air source and geothermal		*HPHDUAL*
4. Water loop heat pump		*HPHWATR*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D85 [VRF system]

D85	**VRF system** {VRFSystem} *HPHVRF*
ASK	IF (D81 [Heat pump in packaged unit] = Yes & **NOT** Heat pump for any main or secondary heating equipment) OR D82 [Heat pump with no elec] = Heat pump uses only {GasType}; Heat pump uses both {GasType} and electricity; OR DK/Missing OR D83 [Heat pumps are PTHPs] = No; Heat pumps are both PTHP and split system; OR DK/Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the heat pump system a variable refrigerant flow, or VRF, system?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 7

D86	**Space heaters are PTHPs** {SpaceHeat_PTHP} *SPHTPTHP*
ASK	IF Individual space heaters IN D33 [Elec main heating equipment] OR D52 [Elec secondary heating equipment]
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	You reported that this {Structure} uses individual space heaters. Are the space heaters “Packaged Terminal Heat Pumps”? These are also referred to as PTHPs.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		
3. Space heaters are both PTHP and other types		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 8

D87	**Percent heated by type** {HtEqPct} *various*
ASK	IF Building OR Mall interview & More than one selected heating source/equipment combination
FILL	**{Explanation}** IF D20 [Percent heated] ≠ 100 = "We are talking only about the heated portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of equipment can heat the same area, it is also possible for them to add up to more than 100." IF D20 [Percent heated] = 100 = "These percentages must add up to at least 100, but since more than one type of equipment can heat the same area, it is also possible for them to add up to more than 100." **{SourceEquipment}** Combination of selected heating source and equipment, for example: "Electric furnace"
INTRO TEXT	All selected heating source/equipment combinations are one screen, with this introduction: The next questions are about the percentage of floorspace heated by each type of equipment. Please keep in mind: {Explanation} What percentage of the heated area in this building is served by each of the following equipment types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SourceEquipment}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
1 to 100	%	1 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF there are equal maximum percents OR Missing ⇨ D88 [Main heating equipment] IF Main heating equipment **NOT** District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D89 [Main heating replaced] OTHERWISE ⇨ ART [Heating follow-up routing] STEP 10

D88	**Main heating equipment** {MainHeatSelect} *MAINHTX*
ASK	IF D87 [Percent heated by type] has equal maximum percents OR Missing
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{SourceEquipmentMaxList}** = List of all source/equipment combinations with equal maximum percents, for example: "the electric furnace or the natural gas boiler" **{SourceEquipmentMax}** = Each source/equipment combination with an equal maximum percent, for example: "Electric furnace"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which do you consider to be the main heating equipment for this {Structure}: {SourceEquipmentMaxList}?
Interviewer Instructions	N/A}
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {SourceEquipmentMax1}		
2. {SourceEquipmentMax2}		
3. {Etc.}		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Main heating equipment known & **NOT** District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D89 [Main heating replaced] OTHERWISE ⇨ ART [Heating follow-up routing] STEP 10

D89	**Main heating replaced** {ReplaceHtEq} *NWMNHT*
ASK	IF Building OR Mall interview & Main heating equipment known & **NOT** District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018)
FILL	**{MainSourceEquipment}** Combination of main heating source and equipment, for example: "electric furnace"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Has the {MainSourceEquipment} been replaced since the year 2000?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ ART [Heating follow-up routing] STEP 10

D90	**Percent cooled** {CoolPct} *COOLP*
ASK	IF Building OR Mall interview & D4 [Cooling] = Yes
FILL	**{SqFt}** IF A6 [Square footage] known = "A6 [Square footage]" IF A6 [Square footage] = DK/RF = "floorspace"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	These next questions are about cooling in this building. What percentage of the {SqFt} in this building was cooled by air conditioning equipment during 2018? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 0 THEN: IF D20 [Percent heated] ≠ 0 & Building interview ⇨ D122 [Building automation system] IF D20 [Percent heated] ≠ 0 & Mall interview ⇨ D121 [Who has temperature control] IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability] OTHERWISE: IF Electricity used & **NOT** District chilled water used ⇨ D91 [Electricity only for cooling] IF Establishment interview & D4 [Cooling] = Yes & **NOT** Electricity used & **NOT** District chilled water used ⇨ D92 [Sources for cooling] IF District chilled water used ⇨ D94 [EL or CW for cooling] OTHERWISE ⇨ D92 [Sources for cooling]

D91	**Electricity only for cooling** {ElecCoolSource} *see below*
ASK	IF D4 [Cooling] = Yes & Electricity used & **NOT** District chilled water used & **NOT** D90 [Percent cooled] = 0
FILL	**{Intro}** IF Interview = Establishment = "These next questions are about cooling in this establishment." IF Interview = Building OR Mall = BLANK **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Intro} Was electricity the only energy source used for air conditioning in this {Structure} in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes, electricity was the only energy source for air conditioning		*ELCOOL*
2. No, some other energy source was used in addition to or instead of electricity for air conditioning		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ CRT [Cooling routing] IF No ⇨ D92 [Sources for cooling] IF Missing THEN: IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D92	**Sources for cooling** {OtCoolSourceAll} *see below*
ASK	IF D4 [Cooling] = Yes & (D91 [Electricity only for cooling] = No OR (**NOT** Electricity used & **NOT** District chilled water used & **NOT** D90 [Percent cooled] = 0))
FILL	**{Intro}** IF Interview = Establishment & **NOT** Electricity used & **NOT** District chilled water used = "These next questions are about cooling in this establishment." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Intro} Which energy source or sources were used for air conditioning?
Interviewer Instructions	Read choices if necessary Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELCOOL*
2. Natural gas		*NGCOOL*
3. Fuel Oil/Diesel/Kerosene		*FKCOOL*
4. Propane		*PRCOOL*
5. District steam		*STCOOL*
6. District chilled water		*CWCOOL*
7. Some other energy source		*OTCOOL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source selected ⇨ D93 [Other type of cooling source] IF Missing THEN: IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system] OTHERWISE ⇨ CRT [Cooling routing]

D93	**Other type of cooling source** {OtCoolSourceAllSp} *OTCOOL1X*
ASK	IF Some other energy source IN D92 [Sources for cooling]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other energy source	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing]

D94	**EL or CW for cooling** {ELCWCoolSource} *see below*
ASK	IF D4 [Cooling] = Yes & District chilled water used & **NOT** D90 [Percent cooled] = 0
FILL	**{Intro}** IF Interview = Establishment = "These next questions are about cooling in this establishment." OTHERWISE = BLANK **{ACSourceList}** IF Electricity used = "(…electricity or district chilled water?)" IF **NOT** Electricity used = "(Was district chilled water used?)" **{Electricity}** = If electricity is used it appears
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Intro} Which energy sources were used for air conditioning? {ACSourceList}
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	{Intro} Which energy sources were used for air conditioning?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELCOOL*
2. District chilled water		*CWCOOL*
3. Some other energy source		*OTCOOL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source selected ⇨ D95 [Other source for cooling] IF Missing THEN: IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system] OTHERWISE ⇨ CRT [Cooling routing]

D95	**Other source for cooling** {OtCoolSource} *see below*
ASK	IF Some other energy source IN D94 [EL or CW for cooling]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the other energy source used for air conditioning?
Interviewer Instructions	Read choices if necessary
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELCOOL*
2. Natural gas		*NGCOOL*
3. Fuel Oil/Diesel/Kerosene		*FKCOOL*
4. Propane		*PRCOOL*
5. District steam		*STCOOL*
6. District chilled water		*CWCOOL*
7. Some other energy source		*OTCOOL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source selected ⇨ D96 [Other type of cooling source] IF Missing THEN: IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system] OTHERWISE ⇨ CRT [Cooling routing]

D96	**Other type of cooling source** {OtCoolSourceSp} *OTCOOL2X*
ASK	IF Some other energy source IN D95 [Other source for cooling]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other energy source	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing]

CRT	Cooling routing	
NEXT	STEP 1	IF D91 [Electricity only for cooling] = Yes OR (Electricity IN D92 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling]) ⇨ D97 [Elec cooling equipment]
	STEP 2	IF Natural gas IN D92 [Sources for cooling] OR D95 [Other source for cooling] ⇨ D104 [Nat gas cooling equipment]
	STEP 3	IF Fuel oil/Diesel/Kerosene IN D92 [Sources for cooling] OR D95 [Other source for cooling] ⇨ D106 [Fuel oil cooling equipment]
	STEP 4	IF Propane IN D92 [Sources for cooling] OR D95 [Other source for cooling] ⇨ D108 [Propane cooling equipment]
	STEP 5	IF District steam IN D92 [Sources for cooling] OR D95 [Other source for cooling] ⇨ D110 [District steam cooling equipment]
	STEP 6	IF Some other energy source IN D92 [Sources for cooling] OR D95 [Other source for cooling] ⇨ D112 [Other source other cool equip specify]
	STEP 7	IF District chilled water IN D92 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling] ⇨ D113 [Where does CW come from]
	STEP 8	⇨ BRT [Cooling follow-up routing]

D97	**Elec cooling equipment** {HeatEquip_ELHT1} *see below*
ASK	IF D91 [Electricity only for cooling] = Yes OR (Electricity IN D92 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling])
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D11
Question Text	Looking at the list of electric air conditioning equipment types on Show Card D11, please tell me which types are used in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these electric air conditioning equipment types are used in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Packaged air conditioning units (such as rooftop units, or RTUs) *(Packaged units contain all of their components in a single outdoor enclosure that sits on either the roof or to the side of a building. Packaged air conditioning units may also be known as self-contained units or packaged direct expansion (DX) units.)*		*PKGCL_EL*
2. Central chillers that chill water for air conditioning		*CHILLR_EL*
3. Heat pumps for air conditioning (other than components of a packaged central unit) *(These types of heat pumps may also be referred to as split system heat pumps.)*		*HTPMPC_EL*
4. Residential-type split system air conditioners *(Central split system air conditioners cool air directly and use a fan or blower to circulate it through a system of air ducts without using chilled water. These systems consist of an outdoor condensing unit connected by refrigerant lines to an indoor evaporator or cooling coil.)*		*RCAC_EL*
5. Individual room or portable air conditioners *(Room or portable air conditioners directly cool only the room or area where they are located. Room air conditioners are self-contained units installed in or through walls or windows, and include Packaged Terminal Air Conditioners (PTACs), Packaged Terminal Heat Pumps (PTHPs), and window air conditioning units. Portable air conditioners are freestanding with a tube to vent warm air outside.)*		*ACWNWL_EL*
6. "Swamp" coolers or evaporative coolers *(A unit that uses the cooling effect of water evaporation to cool air.)*		*EVAPCL_EL*
8. Other air conditioning equipment		*OTCLEQ_EL*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other air conditioning equipment selected ⇨ D98 [Elec other cool equip specify] IF Heat pumps selected & **NOT** Heat pumps for any main or secondary heating equipment ⇨ D100 [Heat pumps are PTHPs] IF Residential-type split system air conditioners selected ⇨ D102 [VRF system] IF Individual room or portable air conditioners selected ⇨ D103 [Individual AC are PTHPs] OTHERWISE ⇨ CRT [Cooling routing] STEP 2

D98	**Elec other cool equip specify** {OthCoolSpecify_EL} *OTCLEQX_EL*
ASK	IF Other air conditioning equipment IN D97 [Elec cooling equipment]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of air conditioning equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Heat pumps IN D97 [Elec cooling equipment] & **NOT** Heat pumps for any main or secondary heating equipment ⇨ D100 [Heat pumps are PTHPs] IF Residential-type split system air conditioners IN D97 [Elec cooling equipment] ⇨ D102 [VRF system] IF Individual room or portable air conditioners IN D97 [Elec cooling equipment] ⇨ D103 [Individual AC are PTHPs] OTHERWISE ⇨ CRT [Cooling routing] STEP 2

D99	Question intentionally removed

D100	**Heat pumps are PTHPs** {CoolPump_PTHP} *PHCPTHP*
ASK	IF Heat pumps IN D97 [Elec cooling equipment] & **NOT** Heat pumps for any main or secondary heating equipment
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are the heat pumps “Packaged Terminal Heat Pumps”? These are also referred to as PTHPs.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		
3. Heat pumps are both PTHP and split system		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No; Heat pumps are both PTHP and split system; OR DK/Missing ⇨ D101 [Heat pump cooling type] OTHERWISE: IF Residential-type split system air conditioners IN D97 [Elec cooling equipment] ⇨ D102 [VRF system] IF Individual room or portable air conditioners IN D97 [Elec cooling equipment] ⇨ D103 [Individual AC are PTHPs] OTHERWISE ⇨ CRT [Cooling routing] STEP 2

D101	**Heat pump cooling type** {CoolPumpType} *see below*
ASK	IF D100 [Heat pumps are PTHPs] = No; Heat pumps are both PTHP and split system; OR DK/Missing
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D10
Question Text	Looking at the list on Show Card D10, which types of heat pumps are used in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these types of heat pumps are used in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Air source heat pump		*HPCAIR*
2. Ground source or ground water heat pump (geothermal)		*HPCGRD*
3. Combination air source and geothermal		*HPCDUAL*
4. Water loop heat pump		*HPCWATR*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D102 [VRF system]

D102	**VRF system** {VRFSystemCool} *ACVRF*
ASK	IF Residential-type split system air conditioners IN D97 [Elec cooling equipment] OR D100 [Heat pumps are PTHPs] = No; Heat pumps are both PTHP and split system; OR DK/Missing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the air conditioning system a variable refrigerant flow, or VRF, system?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Individual room or portable air conditioners IN D97 [Elec cooling equipment] ⇨ D103 [Individual AC are PTHPs] OTHERWISE ⇨ CRT [Cooling routing] STEP 2

D103	**Individual AC are PTHPs** {RoomAC_PTHP} *RMACPTHP*		
ASK	IF Individual room or portable air conditioners IN D97 [Elec cooling equipment]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Are the individual air conditioners “Packaged Terminal Heat Pumps”? These are also referred to as PTHPs.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
3. Individual air conditioners are both PTHP and other types			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ CRT [Cooling routing] STEP 2		

D104	**Nat gas cooling equipment** {CoolEquip_NG} *see below*
ASK	IF Natural gas IN D92 [Sources for cooling] OR D95 [Other source for cooling]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D12
Question Text	Looking at the list of air conditioning equipment types on Show Card D12, please tell me which types are fueled by natural gas in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these air conditioning equipment types are fueled by natural gas in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central chillers that chill water for air conditioning		*CHILLR_NG*
2. Other air conditioning equipment		*OTCLEQ_NG*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other air conditioning equipment selected ⇨ D105 [Nat gas other cool equip specify] OTHERWISE ⇨ CRT [Cooling routing] STEP 3

D105	**Nat gas other cool equip specify** {OthCoolSpecify_NG} *OTCLEQX_NG*
ASK	IF Other air conditioning equipment IN D104 [Nat gas cooling equipment]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of air conditioning equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing] STEP 3

D106	**Fuel oil cooling equipment** {CoolEquip_FK} *see below*
ASK	IF Fuel oil/Diesel/Kerosene IN D92 [Sources for cooling] OR D95 [Other source for cooling]
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D12
Question Text	Looking at the list of air conditioning equipment types on Show Card D12, please tell me which types are fueled by {FuelOilType} in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these air conditioning equipment types are fueled by {FuelOilType} in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central chillers that chill water for air conditioning		*CHILLR_FK*
2. Other air conditioning equipment		*OTCLEQ_FK*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other air conditioning equipment selected ⇨ D107 [Fuel oil other cool equip specify] OTHERWISE ⇨ CRT [Cooling routing] STEP 4

D107	**Fuel oil other cool equip specify** {OthCoolSpecify_FK} *OTCLEQX_FK*
ASK	IF Other air conditioning equipment IN D106 [Fuel oil cooling equipment]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of air conditioning equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing] STEP 4

D108	**Propane cooling equipment** {CoolEquip_PR} *see below*
ASK	IF Propane IN D92 [Sources for cooling] OR D95 [Other source for cooling]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D12
Question Text	Looking at the list of air conditioning equipment types on Show Card D12, please tell me which types are fueled by propane in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these air conditioning equipment types are fueled by propane in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central chillers that chill water for air conditioning		*CHILLR_PR*
2. Other air conditioning equipment		*OTCLEQ_PR*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other air conditioning equipment selected ⇨ D109 [Propane other cool equip specify] OTHERWISE ⇨ CRT [Cooling routing] STEP 5

D109	**Propane other cool equip specify** {OthCoolSpecify_PR} *OTCLEQX_PR*
ASK	IF Other air conditioning equipment IN D108 [Propane cooling equipment]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of air conditioning equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing] STEP 5

D110	**District steam cooling equipment** {CoolEquip_ST} *see below*
ASK	IF District steam IN D92 [Sources for cooling] OR D95 [Other source for cooling]
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D12
Question Text	Looking at the list of air conditioning equipment types on Show Card D12, please tell me which types are fueled by district steam in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these air conditioning equipment types are fueled by district steam in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central chillers that chill water for air conditioning		*CHILLR_ST*
2. Other air conditioning equipment		*OTCLEQ_ST*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other air conditioning equipment selected ⇨ D111 [Steam other cool equip specify] OTHERWISE ⇨ CRT [Cooling routing] STEP 6

D111	**Steam other cool equip specify** {OthCoolSpecify_DS} *OTCLEQX_ST*
ASK	IF Other air conditioning equipment IN D110 [District steam cooling equipment]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of air conditioning equipment	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing] STEP 6

D112	**Other source other cool equip specify** {OthCoolSpecify_OT} *OTCLEQX_OT*
ASK	IF Some other energy source IN D92 [Sources for cooling] OR D95 [Other source for cooling]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please describe the air conditioning equipment that is fueled by the other energy source.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ CRT [Cooling routing] STEP 7

D113	**Where does CW come from** {WhereCW} *CWLOCTN*
ASK	IF District chilled water IN D92 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the district chilled water come from a chiller in another building, from a utility, or from a chiller inside this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. From a chiller in another building		
2. From a district chilled water utility		
3. From a chiller inside this building		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D114 [Chilled water distribution]

D114	**Chilled water distribution** {CoolEquip_CW} *see below*
ASK	IF District chilled water IN D92 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling]
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D13
Question Text	Looking at the list of cooling distribution types on Show Card D13, please tell me which one (or ones) are used with the district chilled water in this {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of the following cooling distribution types are used with the district chilled water in the {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*CWAIR*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a cooling coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the cooling coil and circulate the air within a room.)*		*CWFNCL*
3. Chilled beam *(A chilled beam has pipes of chilled water that through a beam in or near the ceiling.)*		*CWBEAM*
4. Water loop heat pump		*CWWTLP*
5. Other cooling distribution		*CWOTD*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ BRT [Cooling follow-up routing]

BRT	Cooling follow-up routing
NEXT	IF Building interview & Chillers for any cooling equipment ⇨ D115 [Where is the chiller located] IF Mall OR Establishment interview & Chillers for any cooling equipment ⇨ D116 [Chiller distribution] IF Building OR Mall interview & More than one cooling equipment selected ⇨ D118 [Percent cooled by type] IF Building OR Mall interview & Only one selected cooling equipment & **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the Main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D120 [Main cooling replaced] IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D115	**Where is the chiller located** {WhereChiller} *CHLLOCTN*		
ASK	IF Building interview & Chillers for any cooling equipment		
FILL	**{ChillerNum}** IF Chillers reported for only one energy source = “Is the chiller” IF Chillers reported for more than one energy source = “Are the chillers”		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	{ChillerNum} located in this building or in another building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. In this building			
2. In another building			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ D116 [Chiller distribution]		

D116	**Chiller distribution** {ChillerDistrib} *see below*
ASK	IF Chillers for any cooling equipment
FILL	**{Chillers}** IF Chillers reported for only one energy source = “chiller” IF Chillers reported for more than one energy source = “chillers” **{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D13
Question Text	Looking at the list of cooling distribution types on Show Card D13, please tell me which one (or ones) are used with the {Chillers} in the {Structure}.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of the following cooling distribution types are used with the {Chillers} in the {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Central air handlers		*CHLAIR*
2. Fan coil or induction units *(Fan coil units, including unit ventilators, contain a cooling coil and fan to circulate air within a room. Induction units are typically connected directly to the air duct system and use nozzles to induce airflow across the cooling coil and circulate the air within a room.)*		*CHLFNCL*
3. Chilled beam *(A chilled beam has pipes of chilled water that through a beam in or near the ceiling.)*		*CHLBEAM*
4. Water loop heat pump		*CHLWTLP*
5. Other cooling distribution		*CHLOTD*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D115 [Where is the chiller located] = In another building THEN: IF More than one cooling equipment selected ⇨ D118 [Percent cooled by type] IF Only one selected cooling equipment & **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D120 [Main cooling replaced] IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation] OTHERWISE ⇨ D117 [Type of chiller]

D117	**Type of chiller** {TypeChiller} *see below*
ASK	IF Chillers for any cooling equipment & **NOT** D115 [Where is the chiller located] = In another building
FILL	**{ChillerIs}** IF Chillers reported for only one energy source = “chiller is” IF Chillers reported for more than one energy source = “chillers are” **{Absorption}** IF Chillers reported for only one energy source = “an absorption chiller” IF Chillers reported for more than one energy source = “absorption chillers” **{ChillerNum}** IF Chillers reported for only one energy source = “Is the chiller” IF Chillers reported for more than one energy source = “Are the chillers”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D14
Question Text	Please look at Show Card D14 and tell me whether the {ChillerIs} air-cooled, water-cooled, or {Absorption}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	{ChillerNum} air-cooled, water-cooled, or {Absorption}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Air-cooled *(Chiller that uses a vapor-compression refrigeration cycle and has an air-cooled condenser.)*		*CHLAIRCL*
2. Water-cooled *(Chiller that uses a vapor-compression refrigeration cycle and has a water-cooled condenser.)*		*CHLWTRCL*
3. Absorption *(Chiller that uses an absorption-refrigeration cycle. Heat is used to drive the refrigeration cycle.)*		*CHLABSRP*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building OR Mall interview & More than one cooling equipment selected ⇨ D118 [Percent cooled by type] IF Building OR Mall interview & Only one selected cooling equipment & **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D120 [Main cooling replaced] IF Mall OR Establishment interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation]

D118	**Percent cooled by type** {ClEqPct} *various*
ASK	IF Building OR Mall interview & More than one selected cooling source/equipment combination
FILL	**{Explanation}** IF D90 [Percent cooled] ≠ 100 = "We are talking only about the cooled portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of equipment can cool the same area, it is also possible for them to add up to more than 100." IF D90 [Percent cooled = 100 = "These percentages must add up to at least 100, but since more than one type of equipment can cool the same area, it is also possible for them to add up to more than 100." **{SourceEquipment}** Combination of selected cooling source and equipment, for example: "Electric chiller"
INTRO TEXT	All selected cooling source/equipment combinations are on one screen, with this introduction: The next questions are about the percentage of floorspace cooled by each type of equipment. Please keep in mind: {Explanation} What percentage of the cooled area in this building is served by each of the following equipment types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SourceEquipment}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
1 to 100	%	1 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF there are equal maximum percents OR Missing ⇨D119 [Main cooling equipment] IF Main cooling equipment **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D120 [Main cooling replaced] IF Mall interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D119	**Main cooling equipment** {MainCoolSelect} *MAINCLX*
ASK	IF D118 [Percent cooled by type] has equal maximum percents OR Missing
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{SourceEquipmentMaxList}** = List of all source/equipment combinations with equal maximum percents, for example: "the electric chiller or the heat pump" **{SourceEquipmentMax}** = Each source/equipment combination with an equal maximum percent, for example: "Electric chiller"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which do you consider to be the main cooling equipment for this {Structure}: {SourceEquipmentMaxList}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {SourceEquipmentMax1}		
2. {SourceEquipmentMax2}		
3. {Etc.}		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Main cooling equipment known & **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ⇨ D120 [Main cooling replaced] IF Mall interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D120	**Main cooling replaced** {ReplaceClEq} *NWMNCL*
ASK	IF Building OR Mall interview & Main cooling equipment known & **NOT** District chilled water & (Main cooling equipment **NOT** Packaged cooling if the Main heating equipment was Packaged heating) & (Main cooling equipment **NOT** Heat pump if the main heating equipment was Heat pump) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018)
FILL	**{MainSourceEquipment}** Combination of main cooling source and equipment, for example: "electric chiller"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Has the {MainSourceEquipment} been replaced since the year 2000?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Mall interview ⇨ D121 [Who has temperature control] OTHERWISE ⇨ D122 [Building automation system]

D121	**Who has temperature control** {TempControl} *ESTBTEMP*
ASK	IF (D1 [Heating] = Yes OR D4 [Cooling] = Yes) & (Establishment interview OR (Mall interview & **NOT** (D20 [Percent heated] = 0 & D90 [Percent cooled] = 0))
FILL	**{BusTen}** IF Interview = Mall = "Do individual tenants have direct control of the temperature in their space?" IF Interview = Establishment = "Does this business have direct control of the temperature in the space?"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{BusTen}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank

NEXT	IF (No & Mall interview) OR (Yes & Establishment interview)
	⇨ D122 [Building automation system]
	OTHERWISE:
	IF (**NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces) OR Cooling equipment known other than Individual room or portable air conditioners
	⇨ D127 [Airflow control]
	OTHERWISE ⇨ D130 [Regular HVAC maintenance]

D122	**Building automation system** {EMCS} *EMCS*
ASK	IF (D1 [Heating] = Yes & OR D4 [Cooling] = Yes) & **NOT** (D20 [Percent heated] = 0 & D90 [Percent cooled] = 0) & **NOT** (Mall interview & D121 [Who has temperature control] = Yes OR Missing) & **NOT** (Establishment interview & D121 [Who has temperature control] = No OR Missing)
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have a building automation system which may also be referred to as BAS, smart building controls, an energy management and control system, or EMCS?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ D123 [BAS system controls] IF No OR Missing ⇨ D124 [Smart thermostats]

D123	**BAS system controls** {SystemsBASControls} *see below*
ASK	IF D122 [Building automation system] = Yes
FILL	**{HeatingCooling}** IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 & D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 = "heating, cooling," IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 = "heating" IF D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 = "cooling" **{Heating}** IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 = "Heating" OTHERWISE = BLANK **{Cooling}** IF D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 = "Cooling" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does the building automation system control the {HeatingCooling} and/or lighting?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Heating}		*EMCSHT*
2. {Cooling}		*EMCSCL*
3. Lighting		*EMCSLT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (**NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces) OR Cooling equipment known other than Individual room or portable air conditioners ⇨ D127 [Airflow control] OTHERWISE ⇨ D130 [Regular HVAC maintenance]

D124	**Smart thermostats** {SmartTherm} *SMRTTHRM*
ASK	IF D122 [Building automation system] = No OR Missing
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} use any “smart” or internet-connected thermostats?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No OR Missing THEN: IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 ⇨ D125 [How reduce heating] IF D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 ⇨ D126 [How reduce cooling] IF Yes THEN: IF (**NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces) OR Cooling equipment known other than Individual room or portable air conditioners ➔ D127 [Airflow control] OTHERWISE ➔ D130 [Regular HVAC maintenance]

D125	**How reduce heating** {ReduceHeat} *HWRDHT*
ASK	IF (D124 [Smart thermostats] = No OR Missing) & D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D15
Question Text	Please look at Show Card D15. Which one of the methods, if any, is most often used to control the indoor temperature of the {Structure} during the heating season?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which one of the following methods, if any, is most often used to control the indoor temperature of the {Structure} during the heating season?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Setting a programmable thermostat to automatically change the temperature at certain times		
2. Manually adjusting the temperature setting		
3. Turning equipment on or off		
4. None of these methods		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 ⇨ D126 [How reduce cooling] IF **NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces ⇨ D127 [Airflow control] OTHERWISE ➔ D130 [Regular HVAC maintenance]

D126	**How reduce cooling** {ReduceCool} *HWRDCL*
ASK	IF (D124 [Smart thermostats] = No OR Missing) & D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0
FILL	**{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment" **{FirstQuest}** IF D125 [How reduce heating] asked = "Still looking at Show Card D15, which one" OTHERWISE = "Please look at Show Card D15. Which one"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D15
Question Text	{FirstQuest} of the methods, if any, is most often used to control the indoor temperature of the {Structure} during the cooling season?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which one of the following methods, if any, is most often used to control the indoor temperature of the {Structure} during the cooling season?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Setting a programmable thermostat to automatically change the temperature at certain times		
2. Manually adjusting the temperature setting		
3. Turning equipment on or off		
4. None of these methods		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (**NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces) OR Cooling equipment known other than Individual room or portable air conditioners ⇨ D127 [Airflow control] OTHERWISE ➔ D130 [Regular HVAC maintenance]

D127	**Airflow control** {AirflowControl} *see below*
ASK	IF (**NOT** D20 [Percent heated] = 0 & Heating equipment known other than Individual space heaters or Fireplaces) OR Cooling equipment known other than Individual room or portable air conditioners
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D16
Question Text	Please look at Show Card D16. Which of these types of systems, if any, are used to control the airflow in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these types of systems, if any, are used to control the airflow in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Variable air volume (VAV) system		*VAV*
2. Dedicated outside air system (DOAS)		*DOAS*
3. Demand controlled ventilation (DCV)		*DCV*
4. None of these types		*NOVENT*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Cooling equipment known other than Individual room or portable air conditioners ⇨ D128 [Economizer cycle] OTHERWISE ⇨ D130 [Regular HVAC maintenance]

D128	**Economizer cycle** {EconCyc} *ECN*
ASK	IF Cooling equipment known other than Individual room or portable air conditioners
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have any equipment that uses outside air for cooling, often called an "economizer cycle"?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building OR Mall interview & (Packaged air conditioning units OR Chillers OR Heat pumps IN D97 [Elec cooling equipment]) OR (Chillers IN D104 [Nat gas cooling equipment] OR D106 [Fuel oil cooling equipment] OR D108 [Propane cooling equipment] OR D110 [District steam cooling equipment]) ➔ D129 [Cooling tower] OTHERWISE ➔ D130 [Regular HVAC maintenance]

D129	**Cooling tower** {CoolingTower} *CTOWER*
ASK	IF Building OR Mall interview & (Packaged air conditioning units OR Chillers OR Heat pumps IN D97 [Elec cooling equipment]) OR (Chillers IN D104 [Nat gas cooling equipment] OR D106 [Fuel oil cooling equipment] OR D108 [Propane cooling equipment] OR D110 [District steam cooling equipment])
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this building have a cooling tower for the cooling equipment?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ D130 [Regular HVAC maintenance]

D130	**Regular HVAC maintenance** {Maint} *MAINT*
ASK	IF (D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0) OR (D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0)
FILL	**{HeatingCooling}** IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 & D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 = "heating and cooling" IF D1 [Heating] = Yes & **NOT** D20 [Percent heated] = 0 = "heating" IF D4 [Cooling] = Yes & **NOT** D90 [Percent cooled] = 0 = "cooling"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there any regularly scheduled maintenance and repair for the {HeatingCooling} system?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D7 [Water heating] = Yes ⇨ D131 [Sources for water heating] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D131	**Sources for water heating** {WaterSource} *see below*
ASK	IF D7 [Water heating] = Yes
FILL	**{WatrSourcesList}** = List of all energy sources used **{Electricity} – {Other}** = If a source is used, it appears **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which energy sources were used for water heating? (Was it {WatrSourcesList}?)
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which energy sources were used for water heating?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELWATR*
2. {Natural gas}		*NGWATR*
3. {FuelOilType}		*FKWATR*
4. {Propane}		*PRWATR*
5. {District steam}		*STWATR*
6. {District hot water}		*HWWATR*
7. {Wood}		*WOWATR*
8. {Coal}		*COWATR*
9. {Solar thermal}		*SOWATR*
10. {Other}		*OTWATR*
11. Some other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source ⇨ D132 [Other water heating source] OTHERWISE ⇨ D133 [Water heating equipment]

D132	**Other water heating source** {OtWaterSource} *see below*		
ASK	IF D131 [Sources for water heating] = Some other energy source		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the other energy source used for water heating?		
Interviewer Instructions	Read choices if necessary		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Electricity			*ELWATR*
2. Natural gas			*NGWATR*
3. Fuel Oil/Diesel/Kerosene			*FKWATR*
4. Propane			*PRWATR*
5. District steam			*STWATR*
6. District hot water			*HWWATR*
7. Wood			*WOWATR*
8. Coal			*COWATR*
9. Solar thermal			*SOWATR*
10. Some other energy source			*OTWATR*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ D133 [Water heating equipment]		

D133	**Water heating equipment** {WaterEquip} *WTHTEQ*
ASK	IF D7 [Water heating] = Yes
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have centralized water heaters, "point-of-use" water heaters, or both of these types? Point-of-use water heaters may also be referred to as “tankless” water heaters.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Centralized water heaters		
2. “Point-of-use” water heaters		
3. Both types		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Food service OR Inpatient health OR B15 [Service type] = Dry cleaner or Laundromat OR Car wash OR Establishment Activity = Food service OR Dry cleaner/Laundromat ⇨ D134 [Booster water heaters] IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D134	**Booster water heaters** {BoosterWaterHeater} *BOOSTWT*
ASK	IF D7 [Water heating] = Yes & (CBECS Activity = Food service OR Inpatient health OR B15 [Service type] = Dry cleaner or Laundromat OR Car wash OR Establishment Activity = Food service OR Dry cleaner/Laundromat)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have any "booster" water heaters, which are used to increase the water temperature up to 195 degrees, often for the purpose of sanitizing?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D10 [Cooking] = Yes ⇨ D135 [Sources for cooking] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D135	**Sources for cooking** {CookSource} *see below*
ASK	IF D10 [Cooking] = Yes
FILL	**{CookSourcesList}** = List of all energy sources used **{Electricity} – {Other}** = If a source is used, it appears **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which energy sources were used for cooking? (Was it {CookSourcesList}?)
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which energy sources were used for cooking?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELCOOK*
2. {Natural gas}		*NGCOOK*
3. {FuelOilType}		*FKCOOK*
4. {Propane}		*PRCOOK*
5. {District steam}		*STCOOK*
6. {District hot water}		*HWCOOK*
7. {Wood}		*WOCOOK*
8. {Coal}		*COCOOK*
9. {Other}		*OTCOOK*
10. Some other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source ⇨ D136 [Other cooking source] IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D136	**Other cooking source** {OtCookSource} *see below*		
ASK	IF D135 [Sources for cooking] = Some other energy source		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the other energy source used for cooking?		
Interviewer Instructions	Read choices if necessary		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Electricity			*ELCOOK*
2. Natural gas			*NGCOOK*
3. Fuel Oil/Diesel/Kerosene			*FKCOOK*
4. Propane			*PRCOOK*
5. District steam			*STCOOK*
6. District hot water			*HWCOOK*
7. Wood			*WOCOOK*
8. Coal			*COCOOK*
9. Some other energy source			*OTCOOK*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF D11 [Manufacturing] = Yes ⇨ D137 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]		

D137	**Sources for manufacturing** {ManuSource} *see below*
ASK	IF D11 [Manufacturing] = Yes
FILL	**{ManuSourcesList}** = List of all energy sources used **{Electricity} – {Other}** = If a source is used, it appears **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which energy sources were used for manufacturing? (Was it {ManuSourcesList}?)
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which energy sources were used for manufacturing?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELMANU*
2. {Natural gas}		*NGMANU*
3. {FuelOilType}		*FKMANU*
4. {Propane}		*PRMANU*
5. {District steam}		*STMANU*
6. {District hot water}		*HWMANU*
7. {Wood}		*WOMANU*
8. {Coal}		*COMANU*
9. {Other}		*OTMANU*
10. Some other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other energy source ⇨ D138 [Other manufacturing source] IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D138	**Other manufacturing source** {OtManuSource} *see below*
ASK	IF D137 [Sources for manufacturing] = Some other energy source
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the other energy source used for manufacturing?
Interviewer Instructions	Read choices if necessary
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		*ELMANU*
2. Natural gas		*NGMANU*
3. Fuel Oil/Diesel/Kerosene		*FKMANU*
4. Propane		*PRMANU*
5. District steam		*STMANU*
6. District hot water		*HWMANU*
7. Wood		*WOMANU*
8. Coal		*COMANU*
9. Some other energy source		*OTMANU*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D17 [Type of solar] = Solar panels ⇨ D142 [Generation technologies other than solar] OTHERWISE ⇨ D139 [Electricity generation capability]

D139	**Electricity generation capability** {AbleGen} *CAPGEN*
ASK	IF **NOT** D17 [Type of solar] = Solar panels
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have the ability to generate electricity on-site, such as from solar panels or a generator? Please include generation equipment even if it is used only for emergency backup purposes.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ D140 [Generation technologies] OTHERWISE: IF Missing OR No & D12 [Any energy] = Missing & D13 [Energy sources] = Missing ⇨ E83 [Window glass type] IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources]

D140	**Generation technologies** {GenerTech} *see below*
ASK	IF D139 [Electricity generation capability] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D17
Question Text	Looking at Show Card D17, which of the technologies on the list were used on-site for generating electricity?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these technologies were used on-site for generating electricity?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Solar panels used to generate electricity		*PVC*
2. Reciprocating engine generator		*ENGINE*
3. Fuel cells		*FUELCL*
4. Large turbines		*LRGTRB*
5. Microturbines		*MCROTB*
6. Wind turbines		*WINDTRB*
7. Some other technology		*OTGENTECH*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other technology ⇨ D141 [Other gener tech specify] IF Missing/DK OR (ONLY Solar panels OR Wind turbines) THEN: IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources] IF Building OR Mall interview ⇨ D144 [Cogeneration system] IF Establishment interview ⇨ D145 [Sources for electricity generation]

D141	**Other gener tech specify** {OthGenerTech} *OTHGEN1X*
ASK	IF Some other technology IN D140 [Generation technologies]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other technology used to generate electricity on-site	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building OR Mall interview ⇨ D144 [Cogeneration system] IF Establishment interview ⇨ D145 [Sources for electricity generation]

D142	**Generation technologies other than solar** {GenerTechMod} *see below*
ASK	IF D17 [Type of solar] = Solar panels
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D18
Question Text	Earlier you mentioned that solar panels were used to generate electricity for this {Structure}. Looking at Show Card D18, were any of the other technologies on the list used on-site for generating electricity?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Earlier you reported that solar panels were used to generate electricity for this {Structure}. Were any of these other technologies used on-site for generating electricity?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Reciprocating engine generator		*ENGINE*
2. Fuel cells		*FUELCL*
3. Large turbines		*LRGTRB*
4. Microturbines		*MCROTB*
5. Wind turbines		*WINDTRB*
6. Some other technology		*OTGENTECH*
7. No other electricity generation technologies used		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other technology ⇨ D143 [Other gener tech specify] IF Missing/DK OR (ONLY Wind turbines OR No other technologies) THEN: IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources] IF Building OR Mall interview ⇨ D144 [Cogeneration system] IF Establishment interview ⇨ D145 [Sources for electricity generation]

D143	**Other gener tech specify** {OthGenerTechMod} *OTHGEN2X*
ASK	IF Some other technology IN D142 [Generation technologies other than solar]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other technology used to generate electricity on-site	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building OR Mall interview ⇨ D144 [Cogeneration system] IF Establishment interview ⇨ D145 [Sources for electricity generation]

D144	**Cogeneration system** {Cogen} *COGEN*
ASK	IF Building OR Mall interview & (Any technology other than Solar panels OR Wind turbines IN D140 [Generation technologies] OR Any response other than Wind turbines OR No other technologies IN D142 [Generation technologies other than solar])
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the electric power generating system also a cogeneration system? That is, in addition to producing electric power, does the same system simultaneously produce heat that is used in this or another building for space heating, water heating, or industrial processes?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D145 [Sources for electricity generation]

D145	**Sources for electricity generation** {GenerSource} *see below*
ASK	IF Any technology other than Solar panels OR Wind turbines IN D140 [Generation technologies] OR Any response other than Wind turbines OR No other technologies IN D142 [Generation technologies other than solar]
FILL	**{GenrTechList}** = List of generation technologies used excluding Solar and Wind **{Other}** = Source specified in D14 [Other energy source]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which energy sources were used for the {GenerTechList}?
Interviewer Instructions	Read choices if necessary Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Natural gas		*NGGENR*
2. Fuel oil/Diesel/Kerosene		*FKGENR*
3. Propane		*PRGENR*
4. Wood		*WOGENR*
5. Coal		*COGENR*
6. {Other}		*OTGENR*
7. Some other energy source		*OTGENR*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D146 [Use of generated electricity]

D146	**Use of generated electricity** {GenerUse} *GENUSE*
ASK	IF Any technology other than Solar panels OR Wind turbines IN D140 [Generation technologies] OR Any response other than Wind turbines OR No other technologies IN D142 [Generation technologies other than solar]
FILL	**{GenrTechList}** = List of generation technologies used excluding Solar and Wind
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	During 2018, was the electricity generated by the {GenrTechList} used: primarily for emergency backup or testing, only during periods of high electricity demand, or whenever electricity was used?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Primarily for emergency backup or testing		
2. During periods of high electricity demand		
3. Whenever electricity was used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Primarily for emergency backup or testing OR During periods of high electricity demand ⇨ D147 [Energy for generation] OTHERWISE: IF A6 [Square footage] > 50,000 OR A7 [Square footage category] = 50,001 to 100,000 square feet; 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet ⇨ D148 [1MW generator capacity] IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources]

D147	**Energy for generation** {Gener} *GENR*
ASK	IF D146 [Use of generated electricity] = Primarily for emergency backup or testing OR During periods of high electricity demand
FILL	**{GenrTechList}** = List of generation technologies used excluding Solar and Wind
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Was any energy actually used by the {GenrTechList} for generating electricity during 2018, even if just a small amount was used for emergency backup or for testing generators?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF A6 [Square footage] > 50,000 OR A7 [Square footage category] = 50,001 to 100,000 square feet; 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet ⇨ D148 [1MW generator capacity] IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources]

D148	**1MW generator capacity** {Gener1MW} *GENGT1MW*
ASK	IF (Any technology other than Solar panels OR Wind turbines IN D140 [Generation technologies] OR Any response other than Wind turbines OR No other technologies IN D142 [Generation technologies other than solar]) & (A6 [Square footage] > 50,000 OR A7 [Square footage category] = 50,001 to 100,000 square feet; 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the capacity of all of the generators in this {Structure} greater than 1 megawatt?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building OR Mall interview & Electricity used ⇨ D149 [EV charging stations] IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources]

D149	**EV charging stations** {EVCharging} *EVCHARGE*		
ASK	IF Building OR Mall interview & Electricity used		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Are there any electric vehicle charging stations associated with this building, either inside or outside the building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used ⇨ D150 [Natural gas dryers] OTHERWISE ⇨ D151 [Any other sources]		

D150	**Natural gas dryers** {NatGasDryers} *NGDRY*
ASK	IF (B15 [Service type] = Dry cleaner or laundromat OR Establishment Activity = Dry cleaner/Laundromat) & Natural gas used
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are there any clothes dryers that use natural gas in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D151 [Any other sources]

D151	**Any other sources** {OthSource} *ANYOTSRC*
ASK	IF **NOT** (D12 [Any energy] = Missing & D13 [Energy sources] = Missing & D139 [Electricity generation capacity] = No OR Missing)
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment” **{SourcesList}** = List of all energy sources used
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	As a final check, were there any energy sources used in this {Structure} other than {SourcesList}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ D152 [Other sources] IF No OR Missing ⇨ MRT [Missing sources and uses routing] STEP 2

MRT	Missing sources and uses routing
STEP 1	IF Electricity IN D152 [Other sources] ⇨ D153 [Electricity use] IF Natural gas IN D152 [Other sources] ⇨ D154 [Natural gas use] IF Fuel oil/Diesel/Kerosene IN D152 [Other sources] ⇨ D155 [Fuel oil use] IF Propane IN D152 [Other sources] ⇨ D156 [Propane use] IF District steam IN D152 [Other sources] ⇨ D157 [District steam use] IF District hot water IN D152 [Other sources] ⇨ D158 [District hot water use] IF Wood IN D152 [Other sources] ⇨ D159 [Wood use] IF Coal IN D152 [Other sources] ⇨ D160 [Coal use] IF Other IN D152 [Other sources] ⇨ D161 [Other source use]
STEP 2	Check that every energy source given in D13 [Energy sources used] (other than electricity) was assigned an end use. THEN: IF Yes THEN: IF Propane used ⇨ D172 [Propane amount] IF Wood used ⇨ D174 [Amount wood burned] IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing] IF No THEN: IF Natural gas not assigned an end use ➔ D162 [Missed natural gas use] IF Fuel oil/kerosene/diesel not assigned an end use ➔ D163 [Missed fuel oil use] IF Propane not assigned an end use ➔ D164 [Missed propane use] IF District steam not assigned an end use ➔ D165 [Missed district steam use] IF District hot water not assigned an end use ➔ D166 [Missed district hot water use] IF District chilled water not assigned an end use ➔ D167 [Missed district chilled water use] IF Wood not assigned an end use ➔ D168 [Missed wood use] IF Coal not assigned an end use ➔ D169 [Missed coal use] IF Solar thermal not assigned an end use ➔ D170 [Missed solar use] IF {Other} not assigned an end use ➔ D171 [Missed other source use]
STEP 3	IF Building interview & Propane used ⇨ D172 [Propane amount] IF Building interview & Wood used ⇨ D174 [Amount wood burned] IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing]

NOTE ON USES OF ENERGY:
In addition to the end uses given in D1 [Heating], D4 [Cooling], D7 [Water heating], D10 [Cooking], and D11 [Manufacturing], end uses can be added in D153 – D171. For the rest of this questionnaire, end uses will just simply be stated, for example: “IF Cooking” would mean: IF D10 [Cooking] = Yes OR Cooking was added as an end use in D153 – D171.

D152	**Other sources** {WhatSource} *see below*
ASK	IF D151 [Any other sources] =Yes
FILL	**{Electricity} – {Coal}** = If a source has NOT been mentioned, it appears in this list; if it has, the line is blank
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What other sources were used?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. {Electricity}		*ELUSED*
2. {Natural gas}		*NGUSED*
3. {Fuel Oil/Diesel/Kerosene}		*FKUSED*
4. {Propane}		*PRUSED*
5. {District steam}		*STUSED*
6. {District hot water}		*HWUSED*
7. {District chilled water}		*CWUSED*
8. {Wood}		*WOUSED*
9. {Coal}		*COUSED*
10. Other		*OTUSED*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D153	**Electricity use** {ElUse} *see below*
ASK	IF Electricity IN D152 [Other sources]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the electricity used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*ELHT1/ ELHT2*
2. Cooling		*ELCOOL*
3. Water heating		*ELWATR*
4. Cooking		*ELCOOK*
5. Manufacturing		*ELMANU*
6. Some other use		*ELOTH*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D154	**Natural gas use** {NGUse} *see below*		
ASK	IF Natural gas IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the natural gas used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*NGHT1/ NGHT2*
2. Cooling			*NGCOOL*
3. Water heating			*NGWATR*
4. Cooking			*NGCOOK*
5. Manufacturing			*NGMANU*
6. Electricity generation			*NGGENR*
7. Some other use			*NGOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D155	**Fuel oil use** {FOUse} *see below*
ASK	IF Fuel oil/Diesel/Kerosene IN D152 [Other sources]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the fuel oil/diesel/kerosene used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*FKHT1/ FKHT2*
2. Cooling		*FKCOOL*
3. Water heating		*FKWATR*
4. Cooking		*FKCOOK*
5. Manufacturing		*FKMANU*
6. Electricity generation		*FKGENR*
7. Some other use		*FKOTH*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D156	**Propane use** {BotGasUse} *see below*
ASK	IF Propane IN D152 [Other sources]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What was the propane used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*PRHT1/ PRHT2*
2. Cooling		*PRCOOL*
3. Water heating		*PRWATR*
4. Cooking		*PRCOOK*
5. Manufacturing		*PRMANU*
6. Electricity generation		*PRGENR*
7. Some other use		*PROTH*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D157	**District steam use** {SteamUse} *see below*		
ASK	IF District steam IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the district steam used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*STHT1/STHT2*
2. Cooling			*STCOOL*
3. Water heating			*STWATR*
4. Cooking			*STCOOK*
5. Manufacturing			*STMANU*
6. Some other use			*STOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D158	**District hot water use** {HWUse} *see below*		
ASK	IF District hot water IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the district hot water used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*HWHT1/ HWHT2*
2. Water heating			*HWWATR*
3. Cooking			*HWCOOK*
4. Manufacturing			*HWMANU*
5. Some other use			*HWOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D159	**Wood use** {WoodUse} *see below*		
ASK	IF Wood IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the wood used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*WOHT1/ WOHT2*
2. Water heating			*WOWATR*
3. Cooking			*WOCOOK*
4. Manufacturing			*WOMANU*
5. Electricity generation			*WOGENR*
6. Some other use			*WOOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D160	**Coal use** {CoalUse} *see below*		
ASK	IF Coal IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the coal used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*COHT1/COHT2*
2. Water heating			*COWATR*
3. Cooking			*COCOOK*
4. Manufacturing			*COMANU*
5. Electricity generation			*COGENR*
6. Some other use			*COOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D161	**Other source use** {OtUse} *see below*		
ASK	IF Other IN D152 [Other sources]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the other energy source used for?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Heating			*OTHT1/OTHT2*
2. Cooling			*OTCOOL*
3. Water heating			*OTWATR*
4. Cooking			*OTCOOK*
5. Manufacturing			*OTMANU*
6. Electricity generation			*OTGENR*
7. Some other use			*OTOTH*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ MRT [Missing sources and uses routing]		

D162	**Missed natural gas use** {WhatNGUse} *see below*
ASK	IF Natural gas not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that natural gas was used in this {Structure} but not how it was used. What was the natural gas used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that natural gas was used in this {Structure} but not how it was used. What was the natural gas used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*NGHT1/ NGHT2*
2. Cooling		*NGCOOL*
3. Water heating		*NGWATR*
4. Cooking		*NGCOOK*
5. Manufacturing		*NGMANU*
6. Electricity generation		*NGGENR*
7. Some other use		*NGOTH*
8. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D163	**Missed fuel oil use** {WhatFOUse} *see below*
ASK	IF Fuel oil/Diesel/Kerosene not assigned an end use
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Structure}** IF Interview = Building OR Mall = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that {FuelOilType} was used in this {Structure} but not how it was used. What was the {FuelOilType} used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that {FuelOilType} was used in this {Structure} but not how it was used. What was the {FuelOilType} used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*FKHT1/ FKHT2*
2. Cooling		*FKCOOL*
3. Water heating		*FKWATR*
4. Cooking		*FKCOOK*
5. Manufacturing		*FKMANU*
6. Electricity generation		*FKGENR*
7. Some other use		*FKOTH*
8. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D164	**Missed propane use** {WhatBotGasUse} *see below*
ASK	IF Propane not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that propane was used in this {Structure} but not how it was used. What was the propane used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that propane was used in this {Structure} but not how it was used. What was the propane used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*PRHT1/ PRHT2*
2. Cooling		*PRCOOL*
3. Water heating		*PRWATR*
4. Cooking		*PRCOOK*
5. Manufacturing		*PRMANU*
6. Electricity generation		*PRGENR*
7. Some other use		*PROTH*
8. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D165	**Missed district steam use** {WhatStUse} *see below*
ASK	IF District steam not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that district steam was used in this {Structure} but not how it was used. What was the district steam used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that district steam was used in this {Structure} but not how it was used. What was the district steam used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*STHT1/STHT2*
2. Cooling		*STCOOL*
3. Water heating		*STWATR*
4. Cooking		*STCOOK*
5. Manufacturing		*STMANU*
6. Some other use		*STOTH*
7. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D166	**Missed district hot water use** {WhatHWUse} *see below*
ASK	IF District hot water not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that district hot water was used in this {Structure} but not how it was used. What was the district hot water used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that district hot water was used in this {Structure} but not how it was used. What was the district hot water used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*HWHT1/ HWHT2*
2. Water heating		*HWWATR*
3. Cooking		*HWCOOK*
4. Manufacturing		*HWMANU*
5. Some other use		*HWOTH*
6. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D167	**Missed district chilled water use** {WhatCWUse} *see below*
ASK	IF District chilled water not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that district chilled water was used in this {Structure} but not how it was used. What was the district chilled water used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that district chilled water was used in this {Structure} but not how it was used. What was the district chilled water used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Cooling		*CWCOOL*
2. Some other use		*CWOTH*
3. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D168	**Missed wood use** {WhatWdUse} *see below*
ASK	IF Wood not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that wood was used in this {Structure} but not how it was used. What was the wood used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that wood was used in this {Structure} but not how it was used. What was the wood used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*WOHT1/ WOHT2*
2. Water heating		*WOWATR*
3. Cooking		*WOCOOK*
4. Manufacturing		*WOMANU*
5. Electricity generation		*WOGENR*
6. Some other use		*WOOTH*
7. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D169	**Missed coal use** {WhatCoUse} *see below*
ASK	IF Coal not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that coal was used in this {Structure} but not how it was used. What was the coal used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that coal was used in this {Structure} but not how it was used. What was the coal used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*COHT1/COHT2*
2. Water heating		*COWATR*
3. Cooking		*COCOOK*
4. Manufacturing		*COMANU*
5. Electricity generation		*COGENR*
6. Some other use		*COOTH*
7. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D170	**Missed solar use** {WhatSoUse} *see below*
ASK	IF Solar thermal not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that solar thermal energy was used in this {Structure} but not how it was used. What was the solar thermal used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that solar thermal energy was used in this {Structure} but not how it was used. What was the solar thermal used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*SOHT1/SOHT2*
2. Water heating		*SOWATR*
3. Some other use		*SOOTH*
4. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D171	**Missed other source use** {WhatOtUse} *see below*
ASK	IF {Other} not assigned an end use
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	I recorded that another energy source was used in this {Structure} but not how it was used. What was the other energy source used for?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	You reported that another energy source was used in this {Structure} but not how it was used. What was the other energy source used for?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Heating		*OTHT1/OTHT2*
2. Cooling		*OTCOOL*
3. Water heating		*OTWATR*
4. Cooking		*OTCOOK*
5. Manufacturing		*OTMANU*
6. Electricity generation		*OTGENR*
7. Some other use		*OTOTH*
8. Incorrectly recorded—source not used		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ MRT [Missing sources and uses routing]

D172	**Propane amount** {BotGasAmt} *PRAMTC*
ASK	IF Building interview & Propane used
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D19
Question Text	I recorded that propane is used in this building. Looking at Show Card D19, which range best describes the amount of propane used in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You reported that propane is used in this building. Which range best describes the amount of propane used in 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

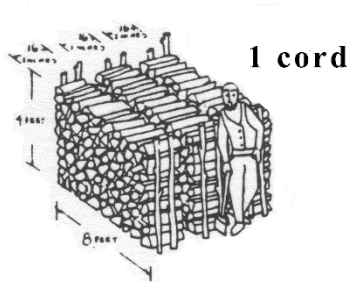
Response options	**Image**	**SAS Name**
1. Less than 100		
2. 100 to 499		
3. 500 to 999		
4. 1,000 or more		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D173 [Propane units]

D173	**Propane units** {BotGasUnits} *PRUNIT*
ASK	IF Building interview & Propane used
QUESTION TEXT – interviewer-administered	
Show Card	Verify if volunteered in previous question
Question Text	Is that in gallons or pounds?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Gallons		
2. Pounds		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Wood used ⇨ D174 [Amount wood burned] IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing]

D174	**Amount wood burned** {WoodAmt} *WOAMT*
ASK	IF Building interview & Wood used
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D20
Question Text	I recorded that wood is used in this building. Looking at Show Card D20, which range best describes how much wood was burned in this building in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You reported that wood is used in this building. Which range best describes how much wood was burned in this building in 2018? 
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Less than 1 cord		
2. 1 to 9 cords		
3. 10 or 20 cords		
4. More than 20 cords		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ D175 [How obtain wood]

D175	**How obtain wood** {WoodSource} *WOSRC*
ASK	IF Building interview & Wood used
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Was the wood purchased, obtained free of charge, or a combination of both methods?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Purchased all the wood		
2. Obtained it all free of charge		
3. Some purchased and some free		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Purchased all the wood OR Some purchased and some free ⇨ D176 [Expenditures for wood] IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing]

D176	**Expenditures for wood** {WoodExp} *WOEXP*		
ASK	IF D175 [How obtain wood] = Purchased all the wood OR Some purchased and some free		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What was the total amount spent for wood in 2018?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter dollar amount		None	1 to 99,999
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF DK/Missing ⇨ D177 [Wood expenditures category] IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing]		

D177	**Wood expenditures category** {WoodCat} *WOEXPC*
ASK	IF D176 [Expenditures for wood] = DK/Missing
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD D21
Question Text	Looking at Show Card D21, which range best describes the total amount spent for the wood used in 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Which range best describes the total amount spent for the wood used in 2018?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. $1 to $100		
2. $101 to $500		
3. $501 to $1,000		
4. $1,001 to $2,000		
5. Over $2,000		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Heating OR Cooling ➔ D178 [Energy management plan] OTHERWISE ➔ ERT [Section E Routing]

D178	**Energy management plan** {EnergyMgmtPlan} *ENRGYPLN*
ASK	IF Heating OR Cooling
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have a formal energy management plan in which energy targets are set and consistently monitored?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ ERT [Section E Routing]

Section E: Miscellaneous Equipment

ERT **Section E Routing**

IF Mall interview ⇨ L1 [Response effort]
IF (Cooking & (CBECS Activity OR Establishment Activity≠ Food service)
OR (Any energy used, even if Cooking = No &
CBECS Activity = Nursing OR (B12 [Education type] = Elementary OR Middle or junior high school OR High school OR Other multi-grade primary or secondary school &
B42 [On a multibuilding complex] = No) OR B41 [Food court] = Yes) ⇨ E1 [Type of food area]
IF Water heating ⇨ E7 [Large amounts of hot water]
IF Any energy used THEN:
IF CBECS Activity = Lodging OR Inpatient health care ➔ E8 [Laundry onsite]
IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR
B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care OR Establishment Activity = Medical/Dental ⇨ E11 [Medical equipment]
IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing OR Establishment Activity = Retail shop; Office/Financial; OR Other ⇨ E18 [Laboratory equipment]
IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment]
IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink]
IF CBECS Activity = Food sales; Food service; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves]

NOTE: IF D17 [Type of solar] = Solar panels used to generate electricity OR Solar panels used to generate electricity OR Wind turbines IN D140 [Generation technologies] OR IN D142 [Generation technologies other than solar] OR D146 [Use of generated energy] = Whenever electricity was used OR D147 [Energy for generation] = Yes, THEN case has "Electricity generated" for use in Section E skip logic.

IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration]
OTHERWISE ⇨ E83 [Window glass type]

E1	**Type of food area** {FoodPrepType} *FDRM*
ASK	IF (Cooking & (CBECS Activity OR Establishment Activity≠ Food service) OR (Any energy used, even if Cooking=No & CBECS Activity = Nursing OR (B12 [Education type] = Elementary OR Middle or junior high school OR Other multi-grade primary or secondary school & B42 [On a multibuilding complex] = No) OR B41 [Food court] = Yes)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{FoodCourtIntro}** IF B41 [Food court] = Yes = "In addition to the food court that was mentioned earlier, which" OTHERWISE = "Which"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E1
Question Text	The next questions are about uses of space and equipment in this {Structure}. Please look at Show Card E1. {FoodCourtIntro} of these types of food preparation or serving areas are found in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	The next questions are about uses of space and equipment in this {Structure}. {FoodCourtIntro} of these types of food preparation or serving areas are found in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Employee lounge, breakroom, vending area, or pantry *(Very limited cooking such as coffeepots and microwaves)*		*BREAKRM*
2. Small kitchen area *(Similar to a residential kitchen)*		*KITCHN*
3. Snack bar, concession stand, coffee shop, or breakfast service *(Some food preparation such as a grill or warming areas)*		*SNACK*
4. Fast or small restaurant *(Smaller than ~3,000 square feet; includes area for food preparation and customer seating)*		*FASTFD*
5. Cafeteria or large restaurant *(Larger than ~3,000 square feet; includes area for food preparation and customer seating)*		*CAF*
6. Large kitchen, commercial kitchen, or other large food preparation area *(Area for high-volume food preparation such as in a pastry shop or bakery, catering service, culinary school, or nursing home; usually no customer seating)*		*FDPREP*

7. Other type of food preparation or serving area			*OTFDRM*
8. None of these			*NOFDRM*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other type of food preparation or serving area selected ➔ E2 [Other food area] IF Building interview & Snack bar, concession stand, coffee shop, or breakfast service selected ➔ E3 [Snack bar square footage] IF Building interview & Fast food or small restaurant selected ➔ E4 [Fast food square footage] IF Building interview & Cafeteria or large restaurant selected ➔ E5 [Cafeteria square footage] IF Building interview & Large kitchen, commercial kitchen, or other large food preparation area selected ➔ E6 [Commercial kitchen square footage] IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care OR Establishment Activity = Medical/Dental ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing OR Establishment Activity = Retail shop; Office/Financial; OR Other ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]		

E2	**Other food area** {OtherFoodPrep} *OTFDRMX*
ASK	IF Other type of food preparation or serving area IN E1 [Type of food area]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of food preparation or serving area	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building interview & Snack bar, concession stand, coffee shop, or breakfast service IN E1 [Type of food area] ➔ E3 [Snack bar square footage] IF Building interview & Fast food or small restaurant IN E1 [Type of food area] ➔ E4 [Fast food square footage] IF Building interview & Cafeteria or large restaurant IN E1 [Type of food area] ➔ E5 [Cafeteria square footage] IF Building interview & Large kitchen, commercial kitchen, or other large food preparation area IN E1 [Type of food area] ➔ E6 [Commercial kitchen square footage] IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care OR Establishment Activity = Medical/Dental ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service; OR Missing OR Establishment Activity = Retail shop; Office/Financial; OR Other ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E3	**Snack bar square footage** {SnackBarSqft} *SNACKSF*
ASK	IF Building interview & Snack bar, concession stand, coffee shop, or breakfast service IN E1 [Type of food area]
INTRO TEXT	E3 – E6 (as applicable, if the type was selected) are on one screen, with this introduction: What is the total square footage of the following food preparation or serving areas? Include seating areas, if any. If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Snack bar, concession stand, coffee shop, or breakfast service areas
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	10 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Fast food or small restaurant IN E1 [Type of food area] ➔ E4 [Fast food square footage] IF Cafeteria or large restaurant IN E1 [Type of food area] ➔ E5 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area IN E1 [Type of food area] ➔ E6 [Commercial kitchen square footage] IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E4	**Fast food square footage** {FastFoodSqft} *FASTFDSF*
ASK	IF Building interview & Fast food or small restaurant IN E1 [Type of food area]
INTRO TEXT	E3 – E6 (as applicable, if the type was selected) are on one screen, with this introduction: What is the total square footage of the following food preparation or serving areas? Include seating areas, if any. If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Fast food or small restaurant areas
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	10 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Cafeteria or large restaurant IN E1 [Type of food area] ➔ E5 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area IN E1 [Type of food area] ➔ E6 [Commercial kitchen square footage] IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E5	**Cafeteria square footage** {CafeteriaSqft} *CAFSF*
ASK	IF Building interview & Cafeteria or large restaurant IN E1 [Type of food area]
INTRO TEXT	E3 – E6 (as applicable, if the type was selected) are on one screen, with this introduction: What is the total square footage of the following food preparation or serving areas? Include seating areas, if any. If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Cafeteria or large restaurant areas
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	10 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Large kitchen, commercial kitchen, or other large food preparation area IN E1 [Type of food area] ➔ E6 [Commercial kitchen square footage] IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E6	**Commercial kitchen square footage** {PrepAreaSqft} *FDPREPSF*
ASK	IF Building interview & Large kitchen, commercial kitchen, or other large food preparation area IN E1 [Type of food area]
INTRO TEXT	E3 – E6 (as applicable, if the type was selected) are on one screen, with this introduction: What is the total square footage of the following food preparation or serving areas? Include seating areas, if any. If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Large kitchen, commercial kitchen, or other large food preparation areas
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	10 to 99,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Water heating ⇨ E7 [Large amounts of hot water] IF Any energy used THEN: IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E7	**Large amounts of hot water** {HotWatRoom} *HWTRM*
ASK	IF Water heating
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Introduction}** IF E1 [Type of food area] was **NOT** asked = "The next questions are about uses of space and equipment in this {Structure}." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Introduction} Is any space in this {Structure} used for any activities requiring large amounts of hot water, such as a commercial dishwasher, laundry room, heated pool, steam room, whirlpool, or showers?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Lodging; Inpatient health care; OR Nursing ➔ E8 [Laundry onsite] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care OR Establishment Activity = Medical/Dental ⇨ E11 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; Service; OR Missing OR Establishment Activity = Retail shop; Office/Financial; OR Other ⇨ E18 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇨ E19 [Machine equipment] IF CBECS Activity = Enclosed mall ⇨ E23 [Indoor ice rink] IF CBECS Activity = Food sales; Food service; Public order and safety; OR Religious worship ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E8	**Laundry onsite** {LaundryOnsite} *LAUNDR*
ASK	IF Any energy used & CBECS Activity = Lodging; Inpatient health care; OR Nursing
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are linens, such as sheets, towels, and tablecloths, primarily laundered in this building, in another building on-site, or by an off-site laundry service?
Interviewer Instructions	N/A
QUESTION TEXT – Web/respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. In this building		
2. In another building on-site		
3. By an off-site laundry service		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF B14 [Health care type] = Inpatient rehabilitation center ⇨ E11 [Medical equipment] IF CBECS Activity = Inpatient health care ⇨ E12 [Number of X-ray machines] IF (B19 [Lodging type] = Hotel or resort OR Motel, inn, or bed and breakfast) OR (B21 [Residential type] = Hotel or resort OR Motel, inn, or bed and breakfast) ⇨ E9 [Conference or event space] IF CBECS Activity = Lodging ⇨ E20 [Indoor pool] IF CBECS Activity = Nursing ⇨ E24 [Sterilizers or autoclaves]

E9	**Conference or event space** {LodgingSpace} *CONFSP*
ASK	IF Any energy used & (B19 [Lodging type] = Hotel or resort OR Motel, inn, or bed and breakfast OR B21 [Residential type] = Hotel or resort OR Motel, inn, or bed and breakfast)
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there any space in this building used for conferences or social events?
Interviewer Instructions	N/A
QUESTION TEXT – Web/respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E10 [Percent conference or event space] IF No OR Missing ⇨ E20 [Indoor pool]

E10	**Percent conference or event space** {PctLodgingSpace} *CONFSPP*
ASK	IF E9 [Conference or event space] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	About what percentage of the total floorspace in the building is used for these events? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
1 to 100	%	1 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ E20 [Indoor pool]

E11	**Medical equipment** {MedEquip} *MEDEQP*
ASK	IF Any energy used & (B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B14 [Health care type] = Doctor's or dentist's office OR Inpatient rehabilitation center OR CBECS Activity = Outpatient health care OR Establishment Activity = Medical/Dental)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have any equipment for medical diagnosis or treatment, such as X-ray, CT scan, MRI, linear accelerator, dialysis, or ultrasound machines?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ⇨ E12 [Number of X-ray machines] OTHERWISE: IF CBECS Activity = Outpatient health care ⇨ E17 [Outpatient surgery] OTHERWISE ⇨ E18 [Laboratory equipment]

E12	**Number of X-ray machines** {NumXray} *XRAYN*
ASK	IF E11 [Medical equipment] = Yes OR (CBECS Activity = Inpatient health care & **NOT** E11 [Medical equipment] = No OR Missing)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many of the following types of medical equipment are used in this {Structure}? X-ray machines
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	0 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ E13 [Number of CT scan machines]

E13	**Number of CT scan machines** {NumCTScan} *CTSCANN*		
ASK	IF E11 [Medical equipment] = Yes OR (CBECS Activity = Inpatient health care & **NOT** E11 [Medical equipment] = No OR Missing)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	CT scan machines		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		none	0 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ E14 [Number of MRI machines]		

E14	**Number of MRI machines** {NumMRI} *MRIN*		
ASK	IF E11 [Medical equipment] = Yes OR (CBECS Activity = Inpatient health care & **NOT** E11 [Medical equipment] = No OR Missing)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	MRI machines		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		none	0 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ E15 [Number of linear accelerators]		

E15	**Number of linear accelerators** {NumLinAcc} *LINACCN*
ASK	IF E11 [Medical equipment] = Yes OR (CBECS Activity = Inpatient health care & **NOT** E11 [Medical equipment] = No OR Missing)
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Linear accelerators (used for external beam radiation treatments for patients with cancer)
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	0 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Inpatient health care ⇨ E16 [Percent outpatient space] IF CBECS Activity = Outpatient health care ⇨ E17 [Outpatient surgery] IF Establishment Activity = Medical/Dental ⇨ E18 [Laboratory equipment]

E16	**Percent outpatient space** {PctHospOut} *OUTHOSPP*
ASK	IF Any energy used & CBECS Activity = Inpatient health care
FILL	**{SqFt}** IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/Missing = "square footage"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What percentage of the {SqFt} in this building is used for outpatient care?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ E18 [Laboratory equipment]

E17	**Outpatient surgery** {OutPatSurgery} *OUTSURG*		
ASK	IF Any energy used & CBECS Activity = Outpatient health care		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Are there any operating rooms used for outpatient surgery in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ E18 [Laboratory equipment]		

E18	**Laboratory equipment** {LabEquip} *LABEQP*
ASK	IF Any energy used & (CBECS Activity = Education; Inpatient health care; Laboratory; Office; Outpatient health care; Public assembly; Retail; Service; OR Missing OR Establishment Activity = Retail shop; Office/Financial; Medical/Dental; OR Other)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have any specialized laboratory equipment that requires extra energy consumption? Some examples are fume hoods, gas chromatographs, centrifuges, spectrometers, and analysis equipment.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Education; Laboratory; Retail; Service; OR Missing OR Establishment Activity = Retail shop OR Other ⇨ E19 [Machine equipment] IF CBECS Activity = Public Assembly OR B14 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center ⇨ E20 [Indoor pool] IF CBECS Activity = Inpatient health care; Office; OR Outpatient health care ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E19	**Machine equipment** {MachineEquip} *MCHEQP*
ASK	IF Any energy used & (CBECS Activity = Education; Laboratory; Nonrefrigerated warehouse; Refrigerated warehouse; Retail; Service; OR Missing OR Establishment Activity = Retail shop OR Other)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this {Structure} have any machine or shop equipment such as woodworking tools, metalworking tools, arc welders, or any other types of power tools?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Education ⇨ E20 [Indoor pool] IF CBECS Activity = Laboratory ⇨ E24 [Sterilizers or autoclaves] IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E20	**Indoor Pool** {IndoorPool} *POOL*
ASK	IF Any energy used & (CBECS Activity = Education; Lodging; OR Public assembly OR B14 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center)
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there an indoor swimming pool in this building?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E21 [Heated pool] IF No OR Missing: IF CBECS Activity = Education; Lodging; OR Public assembly ⇨ E23 [Indoor ice rink] OTHERWISE ➔ E24 [Sterilizers or autoclaves]

E21	**Heated pool** {HeatedPool} *HTPOOL*
ASK	IF E20 [Indoor pool] =Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is it a heated pool?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E22 [Pool energy source] IF No OR Missing: IF CBECS Activity = Education; Lodging; OR Public assembly ⇨ E23 [Indoor ice rink] OTHERWISE ➔ E24 [Sterilizers or autoclaves]

E22	**Pool energy source** {PoolFuel} *POOLSRC*
ASK	IF E21 [Heated pool] =Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What energy source is used to heat the pool?
Interviewer Instructions	Read choices if necessary
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Electricity		
2. Natural gas		
3. Fuel oil/Diesel/Kerosene		
4. Propane		
5. Solar		
6. Some other energy source		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Education; Lodging; OR Public assembly ⇨ E23 [Indoor ice rink] OTHERWISE ➔ E24 [Sterilizers or autoclaves]

E23	**Indoor ice rink** {IceRink} *RINK*
ASK	IF Any energy used & CBECS Activity = Education; Lodging; Enclosed mall OR Public assembly
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Does this building contain an indoor ice skating rink?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Enclosed mall THEN: IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type] OTHERWISE ⇨ E24 [Sterilizers or autoclaves]

E24	**Sterilizers or autoclaves** {Sterilizers} *STRLZR*
ASK	IF Any energy used & CBECS Activity = Education; Food sales; Food service; Inpatient health care; Laboratory; Lodging; Nursing; Office; Outpatient health care; Public assembly; Public order and safety; OR Religious worship
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are any sterilizers or autoclaves used in this building?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Electricity used OR Electricity generated ⇨ E25 [Refrigeration] OTHERWISE ⇨ E83 [Window glass type]

E25	**Refrigeration** {RefrEquip} *RFGEQP*
ASK	IF Electricity used OR Electricity generated
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there any refrigeration or freezer equipment used in this {Structure}, including vending machines?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date

RESPONSE OPTIONS		
Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E26 [Refrigeration types] IF No OR Missing THEN: IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E26	**Refrigeration types** {RefrTypes} *see below*
ASK	IF E25 [Refrigeration] = Yes
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E2
Question Text	Looking at Show Card E2, please tell me which types of refrigeration or freezer equipment are found in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which types of refrigeration or freezer equipment are found in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Full-size residential-type refrigerators/freezers		*RFGRES*
2. Half-size or compact refrigerators		*RFGCOMP*
3. Walk-in refrigeration/freezer units		*RFGWI*
4. Open refrigerated/freezer cases or cabinets *(Units with no covers, flexible covers, or plastic strips, such as produce, dairy, and deli cases; salad bars, and sandwich preparation units)*		*RFGOP*
5. Closed refrigerated/freezer cases or cabinets *(Units with doors that shut, such as beverage display coolers, grocery coolers or freezers, dessert displays, under-counter coolers, and floral display coolers)*		*RFGCL*
6. Refrigerated vending machines *(Examples: soda, juice, water, or frozen dessert machines)*		*RFGVEN*
7. Commercial ice makers		*RFGICE*
8. Large cold storage areas *(Such as within a refrigerated warehouse)*		*RFGSTO*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Residential-type selected ➔ E27 [Number residential refrigerators] IF Compact size selected ➔ E28 [Number compact size refrigerators] IF Walk-in units selected ➔ E29 [Number walk-in units] IF Open cases or cabinets selected ➔ E30 [Number open cases] IF Closed cases or cabinets selected ➔ E31 [Number closed cases] IF Refrigerated vending machines selected ➔ E32 [Number vending] IF Commercial ice makers selected ➔ E33 [Number ice makers] IF Large cold storage areas selected ➔ E34 [Percent cold storage] IF Missing: IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E27	**Number residential refrigerators** {NumResidRefr} *RFGRSN*
ASK	IF Residential-type IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you’re not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Residential-type refrigerators or freezers
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Compact size IN E26 [Refrigeration types] ➔ E28 [Number compact size refrigerators] IF Walk-in units IN E26 [Refrigeration types] ➔ E29 [Number walk-in units] IF Open cases or cabinets IN E26 [Refrigeration types] ➔ E30 [Number open cases] IF Closed cases or cabinets IN E26 [Refrigeration types] ➔ E31 [Number closed cases] IF Refrigerated vending machines IN E26 [Refrigeration types] ➔ E32 [Number vending] IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E28	**Number compact refrigerators** {NumCompactFridge} *RFGCOMPN*
ASK	IF Compact size IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you’re not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Half-size or compact refrigerators
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Numeric		
Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Walk-in units IN E26 [Refrigeration types] ➔ E29 [Number walk-in units] IF Open cases or cabinets IN E26 [Refrigeration types] ➔ E30 [Number open cases] IF Closed cases or cabinets IN E26 [Refrigeration types] ➔ E31 [Number closed cases] IF Refrigerated vending machines IN E26 [Refrigeration types] ➔ E32 [Number vending] IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E29	**Number walk-in units** {NumWalkIn} *RFGWIN*
ASK	IF Walk-in units IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you’re not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Walk-in refrigeration or freezer units
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date

Numeric		
Watermark	**Label**	**Range**
Enter a number	none	1 to 999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank	
NEXT	IF Open cases or cabinets IN E26 [Refrigeration types] ➔ E30 [Number open cases] IF Closed cases or cabinets IN E26 [Refrigeration types] ➔ E31 [Number closed cases] IF Refrigerated vending machines IN E26 [Refrigeration types] ➔ E32 [Number vending] IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]	

E30	**Number open cases** {NumOpenCase} *RFGOPN*
ASK	IF Open cases or cabinets IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Open refrigerated or freezer cases or cabinets
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Closed cases or cabinets IN E26 [Refrigeration types] ➔ E31 [Number closed cases] IF Refrigerated vending machines IN E26 [Refrigeration types] ➔ E32 [Number vending] IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E31	**Number closed cases** {NumClosedCase} *RFGCLN*
ASK	IF Closed cases or cabinets IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Closed refrigerated or freezer cases or cabinets
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Refrigerated vending machines IN E26 [Refrigeration types] ➔ E32 [Number vending] IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E32	**Number vending** {NumVending} *RFGVNN*
ASK	IF Refrigerated vending machines IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Refrigerated vending machines
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Commercial ice makers IN E26 [Refrigeration types] ➔ E33 [Number ice makers] IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E33	**Number ice makers** {NumIceMakers} *RFGICN*
ASK	IF Commercial ice makers IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E27 – E33 (as applicable, if the refrigeration type was selected) are on one screen, with this introduction: How many of the following types of refrigeration or freezer equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Commercial ice makers
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Large cold storage areas IN E26 [Refrigeration types] ➔ E34 [Percent cold storage] IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF Establishment interview OR (Building interview & **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0)) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E34	**Percent cold storage** {PctColdStorage} *RFGSTP*
ASK	IF Large cold storage areas IN E26 [Refrigeration types]
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	About what percentage of the total floorspace in the {Structure} is used for cold storage? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date

RESPONSE OPTIONS		
Watermark	**Label**	**Range**
1 to 100	%	1 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)) ➔ E35 [Waste heat recovery] IF Establishment Activity = Vacant ➔ E61 [Vacant estab lit] IF **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) ➔ E38 [Computing equipment] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E35	**Waste heat recovery** {WasteHeatRecovery} *WHRECOV*
ASK	IF E25 [Refrigeration] = Yes & ((CBECS Activity = Food sales OR Food service OR Establishment Activity = Food sales OR Food service) OR ((B19 [Lodging type] = Hotel or resort OR B21 [Residential type] = Hotel or resort) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet)))
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Refrigeration equipment gives off excess heat that can be used to supplement other equipment in the {Structure}. Is there such a waste heat recovery system associated with the refrigeration equipment?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E36 [Waste heat use] IF No OR Missing ➔ E38 [Computing equipment]

E36	**Waste heat use** {WasteHeatUse} *see below*		
ASK	IF E35 [Waste heat recovery] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the waste heat used for: space heating, water heating, or some other use?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Space heating			*WHHT2*
2. Water heating			*WHWT*
3. Some other use			*WHOT*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Some other use ➔ E37 [Other waste heat use] OTHERWISE ➔ E38 [Computing equipment]		

E37	**Other waste heat use** {WasteHeatOtherUse} *WHOTX*
ASK	IF Some other use IN E36 [Waste heat use]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe how the waste heat is used	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ E38 [Computing equipment]

E38	**Computing equipment** {ComputingEquip} *see below*
ASK	IF (Electricity used OR Electricity generated) & **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) & **NOT** Establishment Activity = Vacant
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{RetailFill}** IF CBECS Activity = Retail OR Establishment Activity = Retail store = "Include demonstration or floor models if they are turned on." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E3
Question Text	Please look at Show Card E3. Which of these types of computing equipment are used in this {Structure}? {RetailFill}
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which of these types of computing equipment are used in this {Structure}? {RetailFill}
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Desktop computers		*PCTERM*
2. Laptop computers		*LPTP*
3. Tablets		*TABLET*
4. Servers		*SERVER*
5. None of these types		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Desktop computers selected ➔ E39 [Number of computers] IF Laptop computers selected ➔ E41 [Number of laptops] IF Tablets selected ➔ E45 [Tablets charged in building] IF Servers selected ➔ E47 [Server units] OTHERWISE ➔ E54 [Other equipment types]

E39	**Number of computers** {NumPCs} *PCTERMN*
ASK	IF Desktop computers IN E38 [Computing equipment]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{RetailFill}** IF CBECS Activity = Retail OR Establishment Activity = Retail store = "(Include demonstration or floor models if they are turned on.)" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many desktop computers are used in this {Structure}? {RetailFill}
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
Numeric	

Watermark	**Label**	**Range**
Enter a number	desktop computers	1 to 9,999,999

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E40 [Computers category] OTHERWISE: IF Laptop computers IN E38 [Computing equipment] ➔ E41 [Number of laptops] OTHERWISE ➔ E43 [Multiple monitors]

E40	**Computers category** {PCCat} *PCTRMC*
ASK	IF E39 [Number of computers] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E4
Question Text	Please look at Show Card E4. Which category best describes the number of desktop computers used in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	Which category best describes the number of desktop computers used in this {Structure}?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 4		
2. 5 to 9		
3. 10 to 19		
4. 20 to 49		
5. 50 to 99		
6. 100 to 249		
7. 250 to 499		
8. 500 to 999		
9. 1,000 to 2,499		
10. 2,500 to 4,999		
11. 5,000 or more		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Laptop computers IN E38 [Computing equipment] ➔ E41 [Number of laptops] OTHERWISE ➔ E43 [Multiple monitors]

E41	**Number of laptops** {NumLaptops} *LAPTPN*
ASK	IF Laptop computers IN E38 [Computing equipment]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{RetailFill}** IF CBECS Activity = Retail OR Establishment Activity = Retail store = "(Include demonstration or floor models if they are turned on.)" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many laptop computers are used in this {Structure}? {RetailFill}
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	laptops	1 to 9,999,999

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E42 [Laptops category] OTHERWISE ➔ E43 [Multiple monitors]

E42	**Laptops category** {LaptopCat} *LAPTPC*
ASK	IF E41 [Number of laptops] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E4
Question Text	Please look at Show Card E4. Which category best describes the number of laptop computers used in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	Which category best describes the number of laptop computers used in this {Structure}?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 4		
2. 5 to 9		
3. 10 to 19		
4. 20 to 49		
5. 50 to 99		
6. 100 to 249		
7. 250 to 499		
8. 500 to 999		
9. 1,000 to 2,499		
10. 2,500 to 4,999		
11. 5,000 or more		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ E43 [Multiple monitors]

E43	**Multiple monitors** {MultipleMonitors} *MLTMON*
ASK	IF Desktop computers OR Laptop computers IN E38 [Computing equipment]
FILL	**{Computers}** IF (E39 [Number of computers] = 1 & **NOT** Laptop computers IN E38 [Computing equipment]) OR (E41 [Number of laptops] = 1 & **NOT** Desktop computers IN E38 [Computing equipment]) = "Does the computer" OTHERWISE = "Do any of the computers"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Computers} use more than one monitor?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes & **NOT** ((E39 [Number of computers] = 1 & **NOT** Laptop computers IN E38 [Computing equipment]) OR (E41 [Number of laptops] = 1 & **NOT** Desktop computers IN E38 [Computing equipment])) ➔ E44 [Multiple monitor category] OTHERWISE: IF Tablets IN E38 [Computing equipment] ➔ E45 [Tablets charged in building] IF Servers IN E38 [Computing equipment] ➔ E47 [Server units] IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E44	**Multiple monitor category** {MultiMonitorCat} *MLTMNC*
ASK	IF E43 [Multiple monitors] = Yes & **NOT** ((E39 [Number of computers] = 1 & NOT Laptop computers IN E38 [Computing equipment]) OR (E41 [Number of laptops] = 1 & **NOT** Desktop computers IN E38 [Computing equipment]))
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are multiple monitors used with all of the computers, most of them, some of them, or just a few?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. All		
2. Most		
3. Some		
4. A few		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Tablets IN E38 [Computing equipment] ➔ E45 [Tablets charged in building] IF Servers IN E38 [Computing equipment] ➔ E47 [Server units] IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E45	**Tablets charged in building** {ChargeTabs} *TABCHRG*
ASK	IF Tablets IN E38 [Computing equipment]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are any of the tablets charged in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ E46 [Number of tablets] OTHERWISE: IF Servers IN E38 [Computing equipment] ➔ E47 [Server units] IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E46	**Number of tablets** {NumTabs} *TABLETN*
ASK	IF E45 [Tablets charged in building] = Yes
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	About how many tablets are charged in this {Structure}? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	tablets charged in building	1 to 9,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Servers IN E38 [Computing equipment] ➔ E47 [Server units] IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E47	**Server units** {ServerUnit} *SRVUNIT*
ASK	IF Servers IN E38 [Computing equipment]
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The next question is about how many servers are used in this {Structure}. Would you prefer to provide the number of servers or the number of server racks?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Servers		
2. Server racks		

NONRESPONSE	• Explicit DK **X** Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF RF THEN: IF CBECS Activity = Data center ➔ E54 [Other equipment types] OTHERWISE ➔ E51 [Computer areas] IF Missing ➔ E49 [Servers category] OTHERWISE ➔ E48 [Number of servers or racks]

E48	**Number of servers or racks** {NumServers} *SERVERN*
ASK	IF E47 [Server units] given
FILL	**{ServerUnits}** = "E47 [Server units]" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many {ServerUnits} are there in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	servers or racks	1 to 9,999,999

NONRESPONSE	**X** Explicit DK **X** Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E49 [Servers category] IF RF & CBECS Activity = Data center ➔ E54 [Other equipment types] OTHERWISE: IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E49	**Servers category** {ServerCat} *SERVERC*
ASK	IF E47 [Server units] = Missing OR E48 [Number of servers or racks] = DK/Missing
FILL	**{ServerUnits}** IF E47 [Server units] given = "E47 [Server units]" OTHERWISE = "servers" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E5
Question Text	Please look at Show Card E5. Which category best describes the number of {ServerUnits} in this {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	Which category best describes the number of {ServerUnits} in this {Structure}?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 4		
2. 5 to 24		
3. 25 to 499		
4. 500 or more		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CBECS Activity = Data center ➔ E50 [Power usage effectiveness] OTHERWISE ➔ E51 [Computer areas]

E50	**Power usage effectiveness** {PUE} *PUE*
ASK	IF CBECS Activity = Data center
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the power usage effectiveness or PUE of this data center?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
1.00 to 9.99	PUE	1.00 to 9.99

NONRESPONSE	**X** Explicit DK **X** Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ E54 [Other equipment types]

E51	**Computer areas** {ComputerAreas} *see below*
ASK	IF (Desktop computers OR Laptop computers OR Servers IN E38 [Computing equipment]) & **NOT** CBECS Activity = Data center
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E6
Question Text	Please look at Show Card E6. Which of these types of computer areas are found in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which of these types of computer areas are found in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Server closet		*SRVRCLST*
2. Data center		*DATACNTR*
3. Computer-based training room *(Room used for hands-on computer training, where every person or every two people have their own computer)*		*TRNGRM*
4. Student or public computer center *(Such as at a school, library, hotel, or community center)*		*STDNRM*
5. Trading floor *(Large, open area with computers and electronic equipment that is used for trading stocks or other securities in financial markets)*		*TRDFLR*
6. None of these types		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Data center selected ➔ E52 [Data center square footage] OTHERWISE ➔ E54 [Other equipment types]

E52	**Data center square footage** {DataCenterSqft} *DCNTRSF*
ASK	IF Data center IN E51 [Computer areas]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the square footage of the data center? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	10 to 999,999,999

NONRESPONSE	• Explicit DK **X** Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ E53 [Data center characteristics]

E53	**Data center characteristics** {DataCenterChars} *see below*		
ASK	IF Data center IN E51 [Computer areas]		
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD E7		
Question Text	Please look at Show Card E7. Which of these characteristics describe the data center space in this {Structure}?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – respondent-administered			
Question Text	Which of these characteristics describe the data center space in this {Structure}?		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Raised floor			*DCRSDFLR*
2. Separate cooling system			*DCSEPCL*
3. Humidity control			*DCHMCNTL*
4. Uninterruptible power supply (UPS)			*DCUPS*
5. Controlled access			*DCCNTLAC*
6. None of these			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ E54 [Other equipment types]		

E54	**Other equipment types** {OfficeEquipment} *see below*
ASK	IF (Electricity used OR Electricity generated) & **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) & **NOT** Establishment Activity = Vacant
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E8
Question Text	Please look at Show Card E8. Which of these equipment types are used in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which of these equipment types are used in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Large floor-standing office devices (any combination of printer/copier/scanner/FAX machine)		*LGOFFDEV*
2. Smaller desktop office devices (any combination of printer/copier/scanner/FAX machine)		*SMOFFDEV*
3. Interactive whiteboards		*WBOARDS*
4. Televisions or video displays		*TVVIDEO*
5. Point-of-sales devices or cash registers		*RGSTR*
6. None of these types		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Large floor-standing office devices selected ➔ E55 [Number of large office devices] IF Smaller desktop office devices selected ➔ E56 [Number of small office devices] IF Interactive whiteboards selected ➔ E57 [Number of interactive whiteboards] IF Televisions or video displays selected ➔ E58 [Number of TV or video displays] IF Point-of-sales devices or cash registers selected ➔ E59 [Number of cash registers] OTHERWISE: IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E55	**Number of large office devices** {NumLrgOffDev} *LGOFFDEVN*
ASK	IF Large floor-standing office devices IN E54 [Other equipment types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E55 – E59 (as applicable, if the type was selected) are on one screen, with this introduction: About how many of the following types of equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Large floor-standing office devices (any combination of printers, copiers, scanners, or FAX machines)
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Smaller desktop office devices IN E54 [Other equipment types] ➔ E56 [Number of small office devices] IF Interactive whiteboards IN E54 [Other equipment types] ➔ E57 [Number of interactive whiteboards] IF Televisions or video displays IN E54 [Other equipment types] ➔ E58 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E54 [Other equipment types] ➔ E59 [Number of cash registers] IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E56	**Number of small office devices** {NumSmlOffDev} *SMOFFDEVN*
ASK	IF Smaller desktop office devices IN E54 [Other equipment types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E55 – E59 (as applicable, if the type was selected) are on one screen, with this introduction: About how many of the following types of equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Small desktop office devices (any combination of printers, copiers, scanners, or FAX machines)
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Interactive whiteboards IN E54 [Other equipment types] ➔ E57 [Number of interactive whiteboards] IF Televisions or video displays IN E54 [Other equipment types] ➔ E58 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E54 [Other equipment types] ➔ E59 [Number of cash registers] IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E57	**Number of interactive whiteboards** {NumIntWhiteBoards} *WBOARDSN*
ASK	IF Interactive whiteboards IN E54 [Other equipment types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E55 – E59 (as applicable, if the type was selected) are on one screen, with this introduction: About how many of the following types of equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Interactive whiteboards
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Televisions or video displays IN E54 [Other equipment types] ➔ E58 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E54 [Other equipment types] ➔ E59 [Number of cash registers] IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E58	**Number of TV or video displays** {NumTVVideoDisplays} *TVVIDEON*
ASK	IF Televisions or video displays IN E54 [Other equipment types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{RetailFill}** IF CBECS Activity = Retail OR Establishment Activity = Retail store = "(include demonstration or floor models if they are turned on)" OTHERWISE = BLANK
INTRO TEXT	E55 – E59 (as applicable, if the type was selected) are on one screen, with this introduction: About how many of the following types of equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Televisions or video displays {RetailFill}
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Point-of-sales devices or cash registers IN E54 [Other equipment types] ➔ E59 [Number of cash registers] IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E59	**Number of cash registers** {NumRegister} *RGSTRN*
ASK	IF Point-of-sales devices or cash registers IN E54 [Other equipment types]
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E55 – E59 (as applicable, if the type was selected) are on one screen, with this introduction: About how many of the following types of equipment are used in this {Structure}? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Point-of-sales devices or cash registers
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	none	1 to 9,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution ➔ E60 [Number of ATMs] IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E60	**Number of ATMs** {NumATM} *ATMN*
ASK	IF (Electricity used OR Electricity generated) & **NOT** (B25 [Completely vacant] = Yes & C18 [Months in use] = 0) & (B5 [Office type] OR B11 [Retail type] OR B15 [Service type] = Bank or other financial institution)
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many ATMs does this bank building have?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	ATMs	0 to 99

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 ➔ E62 [Percent lit no hours] OTHERWISE ➔ E64 [Percent lit when open]

E61	**Vacant estab lit** {VacantEstabLit} *VCTLIT*		
ASK	IF (Electricity used OR Electricity generated) & Establishment Activity = Vacant		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Does this vacant establishment use any lighting at all? Do not consider outside lighting in this response.		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ E62 [Percent lit no hours] OTHERWISE ➔ E83 [Window glass type]		

E62	**Percent lit no hours** {PctLitNoHours} *LTZHRP*
ASK	IF (Electricity used OR Electricity generated) & ((C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0) OR E61 [Vacant estab lit] = Yes)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{LightingIntro}** IF E61 [Vacant estab lit] was **NOT** asked = "The next questions are about lighting inside the {Structure}." OTHERWISE = BLANK **{SqFt}** IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{LightingIntro} What percentage of the {SqFt} is usually lit?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E63 [Lit no hours category] IF 1 to 100 ➔ E69 [Lighting types] IF 0 THEN: IF Building interview ➔ E79 [Percent of exterior lighted] IF Establishment interview ➔ E83 [Window glass type]

E63	**Lit no hours category** {PctLitNoHoursCat} *LZHRPC*
ASK	IF E62 [Percent lit no hours] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E9
Question Text	Looking at Show Card E9, what is your best estimate of the percentage of the {Structure} that is usually lit?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is your best estimate of the percentage of the {Structure} that is usually lit?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 25 percent		
2. 26 to 50 percent		
3. 51 to 75 percent		
4. 76 to 100 percent		
5. Not lit at all		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Not lit THEN: IF Building interview ➔ E79 [Percent of exterior lighted] IF Establishment interview ➔ E83 [Window glass type] OTHERWISE ➔ E69 [Lighting types]

E64	**Percent lit when open** {PctLitOpen} *LTOHRP*
ASK	IF (Electricity used OR Electricity generated) & **NOT** Establishment activity = Vacant & **NOT** C31 [No operating hours] = Correct, no operating hours & **NOT** C32 [Total hours open per week] = 0
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{SqFt}** IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The next questions are about the lighting inside the {Structure}. What percentage of the {SqFt} in this {Structure} is lit when it is normally open?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	Label	Range
0 to 100	%	0 to 100

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E65 [Lit when open category] IF Percent given & (C28 [Open 24 hours a day] = Yes OR C32 [Total hours open per week] = 168 OR C33 [Weekly hours category] = 168) ➔ E66 [Lights off during 24 hours] OTHERWISE ➔ E67 [Percent lit off hours]

E65	**Lit when open category** {PctLitOpCat} *LOHRPC*
ASK	IF E64 [Percent lit when open] = DK/Missing
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E9
Question Text	Looking at Show Card E9, what is your best estimate of the percentage of the square feet in this {Structure} that is lit when it is normally open?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is your best estimate of the percentage of the square feet in this {Structure} that is lit when it is normally open?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 25 percent		
2. 26 to 50 percent		
3. 51 to 75 percent		
4. 76 to 100 percent		
5. Not lit at all when it is normally open		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview & (C28 [Open 24 hours a day] = Yes OR C32 [Total hours open per week] = 168 OR C33 [Weekly hours category]) = 168 ➔ E66 [Lights off during 24 hours] OTHERWISE ➔ E67 [Percent lit off hours]

E66	**Lights off during 24 hours** {ReduceLight24Hrs} *LTNR24*		
ASK	IF (Electricity used OR Electricity generated) & (C28 [Open 24 hours a day] = Yes OR C32 [Total hours open per week] = 168 OR C33 [Weekly hours category] = 168)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Are there any periods during a normal 24-hour day when some of the lights are turned off?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ E67 [Percent lit off hours] IF No OR Missing: IF E64 [Percent lit when open] > 0 OR E65 [Lit when open category] ≠ Not lit ➔ E69 [Lighting types] OTHERWISE ➔ E79 [Percent of exterior lighted]		

E67	**Percent lit off hours** {PctLitClosed} *LTNHRP*
ASK	IF (Electricity used OR Electricity generated) & & (E66 [Lights off during 24 hours] = Yes OR (**NOT** (C28 [Open 24 hours a day] = Yes OR C31 [No operating hours] = Correct, no operating hours OR C32 [Total hours open per week] = 0 OR 168 OR C33 [Weekly hours category] =168 OR Establishment Activity = Vacant)))
FILL	**{SqFt}** IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{OffHours}** IF C28 [Open 24 hours a day] = Yes OR C32 [Total hours open per week] OR C33 [Weekly hours category] = 168 = "the time during a 24-hour period when some lights are turned off" OTHERWISE = "the hours when the {Structure} is not normally open"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What percentage of the {SqFt} is lit during off hours, that is {OffHours}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	**X** Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF DK/Missing ➔ E68 [Lit off hours category] IF 1 – 100 ➔ E69 [Lighting types] IF 0 & (E64 [Percent lit when open] > 0 OR E65 [Lit when open category] ≠ Not lit) ➔ E69 [Lighting types] OTHERWISE: IF Building interview ➔ E79 [Percent of exterior lighted] IF Establishment interview ➔ E83 [Window glass type]

E68	**Lit off hours category** {PctLitClCat} *LNHRPC*
ASK	IF E67 [Percent lit off hours] = DK/Missing
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E9
Question Text	Looking at Show Card E9, what is your best estimate of the percentage lit during off hours?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is your best estimate of the percentage lit during off hours?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. 1 to 25 percent		
2. 26 to 50 percent		
3. 51 to 75 percent		
4. 76 to 100 percent		
5. Not lit at all during off hours		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Any response except Not lit OR (Not lit & (E64 [Percent lit when open] > 0 OR E65 [Lit when open category] ≠ Not lit)) ➔ E69 [Lighting types] OTHERWISE: IF Building interview ➔ E79 [Percent of exterior lighted] IF Establishment interview ➔ E83 [Window glass type]

E69	**Lighting types** {BulbTypes} *see below*
ASK	IF E62 [Percent lit no hours} > 0 OR E63 [Lit no hours category] ≠ Not lit OR E64 [Percent lit when open] > 0 OR E65 [Lit when open category] ≠ Not lit OR E67 [Percent lit off hours] > 0 OR E68 [Lit off hours category] ≠ Not lit
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E10
Question Text	Looking at Show Card E10, what types of lighting were used to light any of the space in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	What types of lighting were used to light any of the space in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Fluorescent lighting other than compact fluorescent bulbs		*FLUOR*
2. Compact fluorescent (CFL) bulbs		*CFLR*
3. Incandescent light bulbs, other than halogen bulbs		*BULB*
4. Halogen bulbs		*HALO*
5. High intensity discharge (HID) lights such as high pressure sodium, metal halide, or mercury vapor		*HID*
6. Light-emitting diode (LED) lights		*LED*
7. Other type of lighting		*OTLT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other type of lighting selected ➔ E70 [Other bulb type] IF More than one type selected THEN: IF Fluorescent lighting selected ➔ E71 [Percent lit by fluorescent] IF CFL bulbs selected ➔ E72 [Percent lit by compact fluorescent] IF Incandescent light bulbs selected ➔ E73 [Percent lit by incandescent] IF Halogen bulbs selected ➔ E74 [Percent lit by halogen] IF HID lights selected ➔ E75 [Percent lit by HID] OTHERWISE ➔ E78 [Lighting controls]

E70	**Other bulb type** {BulbSpec} *OTLTX*
ASK	IF Other type of lighting IN E69 [Lighting types]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of lighting	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Fluorescent lighting IN E69 [Lighting types] ➔ E71 [Percent lit by fluorescent] IF CFL bulbs IN E69 [Lighting types] ➔ E72 [Percent lit by compact fluorescent] IF Incandescent light bulbs IN E69 [Lighting types] ➔ E73 [Percent lit by incandescent] IF Halogen bulbs IN E69 [Lighting types] ➔ E74 [Percent lit by halogen] IF HID lights IN E69 [Lighting types] ➔ E75 [Percent lit by HID] IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] OTHERWISE ➔ E78 [Lighting controls]

E71	**Percent lit by fluorescent** {FluorPct} *FLUORP*
ASK	IF More than one type & Fluorescent lighting IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Fluorescent lighting
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF CFL bulbs IN E69 [Lighting types] ➔ E72 [Percent lit by compact fluorescent] IF Incandescent light bulbs IN E69 [Lighting types] ➔ E73 [Percent lit by incandescent] IF Halogen bulbs IN E69 [Lighting types] ➔ E74 [Percent lit by halogen] IF HID lights IN E69 [Lighting types] ➔ E75 [Percent lit by HID] IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E72	**Percent lit by compact fluorescent** {CFlrPct} *CFLRP*
ASK	IF More than one type & CFL bulbs IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Compact fluorescent (CFL) bulbs
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Incandescent light bulbs IN E69 [Lighting types] ➔ E73 [Percent lit by incandescent] IF Halogen bulbs IN E69 [Lighting types] ➔ E74 [Percent lit by halogen] IF HID lights IN E69 [Lighting types] ➔ E75 [Percent lit by HID] IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E73	**Percent lit by incandescent** {IncPct} *BULBP*
ASK	IF More than one type & Incandescent light bulbs IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Incandescent light bulbs
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Halogen bulbs IN E69 [Lighting types] ➔ E74 [Percent lit by halogen] IF HID lights IN E69 [Lighting types] ➔ E75 [Percent lit by HID] IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E74	**Percent lit by halogen** {HaloPct} *HALOP*
ASK	IF More than one type & Halogen bulbs IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Halogen bulbs
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF HID lights IN E69 [Lighting types] ➔ E75 [Percent lit by HID] IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E75	**Percent lit by HID** {HIDPct} *HIDP*
ASK	IF More than one type & HID lights IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	High intensity discharge (HID) lights
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF LED lights IN E69 [Lighting types] ➔ E76 [Percent lit by LED] IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E76	**Percent lit by LED** {LEDPct} *LEDP*
ASK	IF More than one type & LED lights IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	LED lights
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other type of lighting IN E69 [Lighting types] ➔ E77 [Percent lit by other lighting] OTHERWISE ➔ E78 [Lighting controls]

E77	**Percent lit by other lighting** {OthPct} *OTLTP*
ASK	IF More than one type & Other type of lighting IN E69 [Lighting types]
FILL	**{Explanation}** IF E64 [Percent lit when open] ≠ 100 = "We are talking only about the lighted portion of the floorspace, so these percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." IF E64 [Percent lit when open] = 100 = "These percentages must add up to at least 100, but since more than one type of bulb can light the same area, it is also possible for them to add up to more than 100." **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
INTRO TEXT	E71 – E77 (as applicable, if the lighting type was selected) are on one screen, with this introduction: The next questions are about the percentage of floorspace lit by each type of lighting. Please keep in mind: {Explanation} What percentage of the lighted area in this {Structure} is lit by each of the following bulb types? If you're not sure, please provide your best estimate.
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Other lighting type
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ E78 [Lighting controls]

E78	**Lighting controls** {LightingControls} *see below*
ASK	IF E62 [Percent lit no hours} > 0 OR E63 [Lit no hours category] ≠ Not lit OR E64 [Percent lit when open] > 0 OR E65 [Lit when open category] ≠ Not lit OR E67 [Percent lit off hours] > 0 OR E68 [Lit off hours category] ≠ Not lit
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E11
Question Text	Please look at Show Card E11. Which of these lighting controls or lighting control strategies, if any, are used in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which of these lighting controls or lighting control strategies, if any, are used in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Scheduling *(Lights are automatically dimmed or turned off at certain times of the day.)*		*SCHED*
2. Occupancy sensors that reduce lighting when rooms are unoccupied *(Sensors that automatically turn off or dim lights when a person leaves a room or space.)*		*OCSN*
3. Multi-level lighting or dimming *(Control devices that adjust lighting power by continuous dimming, stepped dimming, or stepped switching.)*		*DIM*
4. Daylight harvesting *(A lighting control and shade system that automatically dims light fixtures when natural light is available, and/or adjusts shades so that the combination of natural light and artificial light combine to provide the desired level of lighting.)*		*DAYHARV*
5. High-end trimming or light-level tuning *(High-end trimming sets the maximum level of lighting to less than 100%. Light-level tuning sets the level even lower if a room or space needs less light.)*		*TRIM*
6. Plug-load control *(Device that automatically turns off wall plugs and lights when a person leaves a room or space.)*		*PLGCTRL*
7. Demand responsive lighting *(Reduces lighting at times of peak electricity pricing.)*		*DRLGHT*
8. None of these		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview ➔ E79 [Percent of exterior lighted] IF Establishment interview ➔ E83 [Window glass type]

E79	**Percent of exterior lighted** {PctExteriorLighted} *LTEXPC*		
ASK	IF (Electricity used OR Electricity generated) & Building interview		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What percentage of all the exterior building wall surfaces is lit? Is it less than 10 percent, 10 to 25, 25 to 50, or more than 50 percent of the total building façade that is lit?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	What percentage of all the exterior building wall surfaces is lit?		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Less than 10 percent			
2. 10 to 25 percent			
3. 25 to 50 percent			
4. More than 50 percent			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ E80 [Lighted parking area]		

E80	**Lighted parking area** {LightedParking} *PKLT*		
ASK	IF (Electricity used OR Electricity generated) & Building interview		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is there an indoor or outdoor parking area associated with the building that is lit with fixtures powered through the building's electrical service?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ E81 [Indoor or outdoor lighted parking] IF No OR Missing ➔ E83 [Window glass type]		

E81	**Indoor or outdoor lighted parking** {ParkingInOrOut} *PKLTINOUT*
ASK	IF E80 [Lighted parking area] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is this lighted parking area part of the building, such as an indoor parking level, is it separate, such as an outdoor parking lot or parking garage, or does this building have both of these types of lighted parking areas?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Part of the building (indoor)		
2. Outdoor parking (lot or garage)		
3. Both indoor and outdoor parking		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Answer given ➔ E82 [Vehicle parking capacity] IF Missing ➔ E83 [Window glass type]

E82	**Vehicle parking capacity** {VehicleCapacity} *PKLTN*		
ASK	IF E81 [Indoor or outdoor lighted parking] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many parking spaces are in this lighted parking area?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		parking spaces	1 to 999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ E83 [Window glass type]		

E83	**Window glass type** {WindowPanes} *WINTYP*
ASK	IF Building OR Establishment interview
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do the exterior windows in this {Structure} contain single-layer glass, multi-layer glass, or a combination of both of these types?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Single-layer glass		
2. Multi-layer glass		
3. Combination of both		
4. No windows		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Single-layer, Multi-layer, OR Combination ➔ E84 [Daylighting features] IF No windows OR Missing ➔ FRT [Section F Routing]

E84	**Daylighting features** {DaylightFeatures} *see below*
ASK	IF E83 [Window glass type] = Single-layer, Multi-layer, OR Combination
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD E12
Question Text	Please look at the list on Show Card E12. Which of these daylighting or conservation features, if any, are present in this {Structure}?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – respondent-administered	
Question Text	Which of these daylighting or conservation features, if any, are present in this {Structure}?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Tinted window glass		*TINT*
2. Reflective window glass		*REFL*
3. External overhangs or awnings		*AWN*
4. Skylights or atriums designed to provide light		*SKYLT*
5. None of these		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ E85 [Percent daylight]

E85	**Percent daylight** {Daylight} *DAYLTN*
ASK	IF E83 [Window glass type] = Single-layer, Multi-layer, OR Combination
FILL	**{Structure}** IF Interview = Building = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What percentage of the {Structure} receives enough outside light so that the interior lights do not need to be turned on? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
0 to 100	%	0 to 100

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ FRT [Section F Routing]

Section F: Electricity

FRT	Section F Routing
IF Electricity used➔ F1 [Provide electricity figures] OTHERWISE ➔ GRT [Section G Routing]	

F1	**Provide electricity figures** {ProvideElFigs} *ELFIGS*	
ASK	IF Electricity used	
FILL	**{Structure}** IF interview = Building = "building" IF interview = Establishment = "establishment"	
QUESTION TEXT – interviewer-administered		
Show Card	N/A	
Question Text	The next questions are about electricity usage in this {Structure} during calendar year 2018. Are you able to provide the <u>total annual</u> electricity usage for this {Structure} for 2018?	
Interviewer Instructions	N/A	
QUESTION TEXT – web		
Question Text	No changes required	
Respondent Instructions	No changes required	
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date	
RESPONSE OPTIONS		
Enumerated		
Response options	**Image**	**SAS Name**
1. Yes		
2. No		
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank	
NEXT	IF Yes & (D17 [Type of solar] = Solar panels used to generate electricity OR (Solar panels used to generate electricity OR Wind turbines IN D140 [Generation technologies]) OR (Wind turbines IN D142 [Generation technologies other than solar]) OR D146 [Use of generated electricity] = Whenever electricity was used) ➔ F3 [Report generated electricity] IF No OR Missing: IF Establishment interview ➔ F2 [Electricity included in rent] IF Building interview ➔ F23 [Number electricity suppliers] OTHERWISE ➔ F4 [Electricity consumption]	

F2	**Electricity included in rent** {ElInRent} *ELNRENT*		
ASK	IF Establishment interview & F1 [Provide electricity figures] = No OR Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the cost of the electricity used in this establishment included in the rent?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ F24 [Electricity suppliers] IF No/Missing ➔ F23 [Number electricity suppliers]		

F3	**Report generated electricity** {GenElIncl} *ELGENREP*
ASK	IF F1 [Provide electricity figures] = Yes & (D17 [Type of solar] = Solar panels used to generate electricity OR (Solar panels used to generate electricity OR Wind turbines IN D140 [Generation technologies]) OR (Wind turbines IN D142 [Generation technologies other than solar]) OR D146 [Use of generated electricity] = Whenever electricity was used)
FILL	**{Structure}** IF interview = Building = "building" IF interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Earlier you reported that this {Structure} has on-site electricity generation. If possible, we would like to collect the combined purchased and generated electricity usage for this {Structure}. Are you able to report the combined purchased and generated electricity usage, or are you able to report only the purchased electricity usage?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Earlier in the survey, you reported that this {Structure} has on-site electricity generation. If possible, please report the combined purchased and generated electricity for this {Structure}. Are you able to report the combined purchased and generated electricity usage, or are you able to report only the purchased electricity usage?
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Can report combined purchased and generated electricity usage		
2. Can report only purchased electricity usage		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Can report combined purchased and generated OR Missing ➔ F4 [Electricity consumption] IF Can report only purchased ➔ F6 [Purchased electricity consumption]

F4	**Electricity consumption** {ElCons} *ELCNS*
ASK	IF F1 [Provide electricity figures] = Yes & **NOT** F3 [Reported generated electricity] = Can report only purchased
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total kilowatthours of electricity used in calendar year 2018.
Interviewer Instructions	Kilowatthours may be referred to as kWh
QUESTION TEXT – web	
Question Text	How many total kilowatthours (kWh) of electricity were used in calendar year 2018?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	kWh	1-99,999,999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Missing ➔ F23 [Number electricity suppliers] IF F3 [Report generated electricity] = Can report combined purchased and generated ➔ F5 [Able to report purchased electricity] OTHERWISE ➔ F7 [Electricity expenditures]

F5	**Able to report purchased electricity** {ReportPurchEl} *REPSUP*
ASK	IF F3 [Report generated electricity] = Can report combined purchased and generated & F4 [Electricity consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are you able to report how much of this total electricity was purchased from a supplier, not including what was generated on-site?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ F6 [Purchased electricity consumption] IF No OR Missing ➔ F7 [Electricity expenditures]

F6	**Purchased electricity consumption** {ElConsFromSupplier} *ELCNSSUP*		
ASK	IF F3 [Report generated electricity] = Can report only purchased OR F5 [Able to report purchased electricity] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Please give me the total kilowatthours of electricity purchased in 2018.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	How many total kilowatthours of electricity were purchased in 2018?		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		kWh	1-99,999,999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Missing & F3 [Report generated electricity] = Can report only purchased ➔ F23 [Number electricity suppliers] OTHERWISE ➔ F7 [Electricity expenditures]		

F7	**Electricity expenditures** {ElExp} *ELEXP*
ASK	IF F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total dollars spent on electricity in 2018. This should include state and local taxes and all charges such as: fuel adjustment, system, distribution, and demand.
Interviewer Instructions	Do <u>not</u> enter cents
QUESTION TEXT – web	
Question Text	How much was spent on electricity in 2018? This should include state and local taxes and all charges such as: fuel adjustment, system, distribution, and demand.
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter dollar amount	None	0-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ F8 [Starting date for electricity figures]

F8	**Starting date for electricity figures** {ElStartDate} *ELSTDAT*		
ASK	IF F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the starting date for these electricity usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ F9 [Ending date for electricity figures]		

F9	**Ending date for electricity figures** {ElEndDate} *ELENDAT*
ASK	IF F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the ending date for these electricity usage figures?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date
RESPONSE OPTIONS	
Date	

Watermark		
mm/dd/yyyy		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One) THEN: IF CBECS Activity ≠ Enclosed mall ➔ F10 [All occupants electricity included] IF CBECS Activity = Enclosed mall ➔ F12 [Electricity covers whole mall] OTHERWISE ➔ F16 [Other bldgs electricity included]

F10	**All occupants electricity included** {AllOccEl1} *ELALL*
ASK	IF Building interview & (F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity ≠ Enclosed mall
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include the electricity for all of the businesses or organizations in this building?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No ➔ F11 [Sq ft not included] OTHERWISE ➔ F16 [Other bldgs electricity included]

F11	**Sq ft not included** {NonElSqFt1} *ELNISF*
ASK	IF F10 [All occupants electricity included] = No
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ F18 [Include other major electricity]

F12	**Electricity covers whole mall** {ElMallInclude} *ELMALLINC*
ASK	IF (F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity = Enclosed mall
FILL	**{FoodCourt}** IF B41 [Food court] = Yes = "food court," OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include the energy for the entire mall building, including the anchor stores, {FoodCourt} common areas, and individual stores?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No ➔ F13 [Not included in mall electricity] OTHERWISE ➔ F16 [Other bldgs electricity included]

F13	**Not included in mall electricity** {WhatElMallExclude} *see below*
ASK	IF F12 [Electricity covers whole mall] = No
FILL	**{FoodCourt}** IF B41 [Food court] = Yes = "Food court" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which areas are <u>not</u> included?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Anchor stores		*ELMLLANC*
2. {FoodCourt}		*ELMLLFC*
3. Common areas		*ELMLLCOM*
4. Individual stores		*ELMLLST*
5. Other		*ELMLLOT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ F14 [Other not included in mall electricity] OTHERWISE ➔ F15 [Mall sq ft not included]

F14	**Other not included in mall electricity** {OtherElMallExclude} *ELMLLOTX*
ASK	If Other IN F13 [Not included in mall electricity]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of area that is not included	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ F15 [Mall sq ft not included]

F15	**Mall sq ft not included** {NonElMallSqFt1} *ELNMLLSF*		
ASK	IF F12 [Electricity covers whole mall] = No		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		square feet	1-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ F18 [Include other major electricity]		

F16	**Other bldgs electricity included** {OthElBldgs1} *ELOTBD*		
ASK	IF (F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given & **NOT** (F10 [All occupants electricity included] = No OR F12 [Electricity covers whole mall] = No)		
FILL	**{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is any consumption from other {Structures} included in these figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ F17 [Sq ft of other included] OTHERWISE ➔ F18 [Include other major electricity]		

F17	**Sq ft of other included** {OthElSqFt1} *ELOTSF*
ASK	IF F16 [Other bldgs electricity included] = Yes
FILL	**{Structures}** IF interview = Building = “buildings” IF interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} that are included in these figures? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ F18 [Include other major electricity]

F18	**Include other major electricity** {OthElUse1} *ELOTUS*
ASK	IF F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include charges for any <u>other</u> major electricity usage outside the {Structure}, such as electric vehicle charging stations, parking lot lights, exterior lights, signs or billboards, large pumps, or swimming pools?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ F19 [Outside uses included in electricity] IF No OR DK/Missing THEN: IF Building interview ➔ F21 [Anything unusual about electricity use] IF Establishment interview ➔ F23 [Number electricity suppliers]

F19	**Outside uses included in electricity** {WhatElUse1} *see below*		
ASK	IF F18 [Include other major electricity] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	SHOW CARD F1		
Question Text	Looking at the list on Show Card F1, please tell me which of these outside uses is included in the electricity figures.		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	Which of these outside uses is included in the electricity figures?		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Electric vehicle charging stations			*ELOUTVELV*
2. Parking lot lights			*ELOUTPRK*
3. Exterior lights			*ELOUTLTS*
4. Signs or billboards			*ELOUTSGN*
5. Large pumps			*ELOUTPMP*
6. Swimming pools			*ELOUTSWM*
7. Other			*ELOUTOT*
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Other selected ➔ F20 [Other type of outside electricity use] OTHERWISE: IF Building interview ➔ F21 [Anything unusual about electricity use] IF Establishment interview ➔ F23 [Number electricity suppliers]		

F20	**Other type of outside electricity use** {OtherElUse1} *ELOUTOTX*
ASK	If Other IN F19 [Outside uses included in electricity]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe this other type of outside electricity use	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Building interview ➔ F21 [Anything unusual about electricity use] IF Establishment interview ➔ F23 [Number electricity suppliers]

F21	**Anything unusual about electricity use** {AnythingUnusualElUse} *ELUNUSUAL*		
ASK	IF Building interview & (F4 [Electricity consumption] given OR F6 [Purchased electricity consumption] given)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is there anything about this building that would make the electricity consumption higher or lower than average?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ F22 [What is unusual about electricity use] OTHERWISE ➔ F23 [Number electricity suppliers]		

F22	**What is unusual about electricity use** {WhatUnusualElUse} *ELUNUSUALX*
ASK	IF F21 [Anything unusual about electricity use] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Describe what is unusual about the building.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ F23 [Number electricity suppliers]

F23	**Number electricity suppliers** {NumElSupplier} *ELNUMSP*
ASK	IF (Building interview & Electricity used) OR (Establishment interview & (F1 [Provide electricity figures] = Yes OR F2 [Electricity included in rent] = No/Missing))
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{SuppliersIntro}** IF F1 [Provide electricity figures] = No OR Missing OR F4 [Electricity consumption] = Missing OR F6 [Purchased electricity consumption] = Missing = "It may be possible to obtain this information directly from your electricity supplier." OTHERWISE = "The next questions are about your electricity supplier or suppliers."
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} How many different companies supplied electricity to this {Structure} during calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	Suppliers	1-4

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 4 ➔ F24 [Electricity suppliers] IF Missing ➔ F26 [Electricity bill available]

F24	**Electricity suppliers** {ElSupplier} *EL1LKP-EL4LKP*
ASK	IF F23 [Number electricity suppliers] = 1 to 4 OR F2 [Electricity included in rent] = Yes
FILL	**{SuppliersIntro}** IF F2 [Electricity included in rent] = Yes = "It may be possible to obtain this Information directly from your electricity supplier." OTHERWISE = BLANK **{FirstNext}** IF Only one supplier OR F2 [Electricity included in rent] = Yes = BLANK IF First supplier given = "first" OTHERWISE = "next"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} What is the name of the {FirstNext} supplier that provided electricity in 2018?
Interviewer Instructions	Start by typing a few letters of the supplier name in the search line. If you find a match in the list, select that line. If you don't find a match, select the "Other" box, then type in the supplier name.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
Look-up table of electricity suppliers		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other box selected ➔ F25 [Supplier name] IF Supplier selected & F2 [Electricity included in rent] = Yes ➔ GRT [Section G Routing] IF Missing ➔ F33 [Electricity bill available] OTHERWISE ➔ F27 [Number electricity accounts]

F25	**Supplier name** {NewElSup} *EL1NEW-EL4NEW*
ASK	IF Other box selected in F24 [Electricity suppliers]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter the name of the supplier	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Name given & F2 [Electricity included in rent] = Yes ➔ GRT [Section G Routing] IF Missing ➔ F33 [Electricity bill available] OTHERWISE ➔ F27 [Number electricity accounts]

F26	**Electricity bill available** {ElBillAvailDKNumSup} *ELBILLDK1*		
ASK	IF F23 [Number electricity suppliers] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one electricity bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ GRT [Section G Routing]		

F27	**Number electricity accounts** {NumElAccts} *EL1NAC-EL4NAC*		
ASK	IF (Supplier found in F24 [Electricity suppliers] look-up table OR F25 [Supplier name] given) & **NOT** F2 [Electricity included in rent] = Yes		
FILL	**{Structure}** IF interview = Building = "building" IF interview = Establishment = "establishment" **{Supplier}** = Supplier name from F24 [Electricity suppliers] look-up table OR F25 [Supplier name]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	How many different electricity accounts does this {Structure} have with {Supplier}?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		electricity accounts	1-999
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF 1 to 10 ➔ F28 [Electricity account number] IF More than 10 OR DK/Missing ➔ F32 [Electricity bill available]		

F28	**Electricity account number** {ElAcctNums} *EL1AC1-EL4AC10*
ASK	IF F27 [Number electricity accounts] = 1 to10
FILL	**{Number}** IF Only one account = “number” OTHERWISE = “numbers” **{Supplier}** = Supplier name from F24 [Electricity suppliers] look-up table OR F25 [Supplier name] **{IsAre]** IF Only one account = “is” OTHERWISE = “are”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the electricity account {Number} for {Supplier}.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What {IsAre} the electricity account {Number} for {Supplier}?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter electricity account number	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF F1 [Provide electricity figures] = No OR Missing) OR F4 [Electricity consumption] = Missing OR F6 [Purchased electricity consumption] = Missing ➔ F29 [Bills cover only building] OTHERWISE ➔ F32 [Electricity bill available]

F29	**Bills cover only building** {OthElBldgs3} *EL1OTB-EL4OTB*
ASK	IF F27 [Number electricity accounts] = 1 to 10 & ((F1 [Provide electricity figures] = No OR Missing) OR F4 [Electricity consumption] = Missing OR F6 [Purchased electricity consumption] = Missing
FILL	**{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{Supplier}** = Supplier name from F24 [Electricity suppliers] look-up table OR F25 [Supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments" **{Structure(s)}** IF Interview = Building = "building(s)" IF Interview = Establishment = "establishment(s)"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} from {Supplier} cover just this {Structure} or are other {Structures} covered as well?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Just this {Structure}		
2. Other {Structure(s)}		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other {Structure(s)} ➔ F30 [Sq ft of others included] IF Just this {Structure} OR Missing ➔ F31 [Include other major electricity]

F30	**Sq ft of others included** {OthElSqFt3} *EL1OTS-EL4OTS*
ASK	IF F29 [Bills cover only building] = Other {Structure(s)}
FILL	**{Bills}** IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements” **{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} included on the {Bills}? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔F31 [Include other major electricity]

F31	**Include other major electricity** {OthElUse3} *EL1OTU-EL4OTU*
ASK	IF F27 [Number electricity accounts] = 1 to 10 & ((F1 [Provide electricity figures] = No OR Missing) OR F4 [Electricity consumption] = Missing OR F6 [Purchased electricity consumption] = Missing
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} include charges for any <u>other</u> major electricity usage outside the {Structure}, such as electric vehicle charging stations, parking lot lights, exterior lights, signs or billboards, large pumps or swimming pools?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ F32 [Electricity bill available]

F32	**Electricity bill available** {ElBillsAvailable} *EL1BILL-EL4BILL*
ASK	IF F23 [Number electricity suppliers] = 1 to 4
FILL	**{Supplier}** IF F24 [Electricity suppliers] given = "F24 [Electricity suppliers]" IF F25 [Supplier name] given = "F25 [Supplier name]" IF F25 [Supplier name] = Missing = "this supplier"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Can you provide a copy of one electricity bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes, bill available		
2. No, will not be able to provide bill		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF More suppliers left to answer for ➔ Back to F24 [Electricity suppliers] for next supplier OTHERWISE ➔ GRT [Section G Routing]

F33	**Electricity bill available** {ElBillAvailDKSupName} *ELBILLDK2*		
ASK	IF F24 [Electricity suppliers] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one electricity bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ GRT [Section G Routing]		

Section G: Natural Gas

GRT	Section G Routing
IF Natural gas used➔ G1 [Provide natural gas figures] OTHERWISE ➔ HRT [Section H Routing]	

G1	**Provide natural gas figures** {ProvideNGFigs} *NGFIGS*		
ASK	IF Natural gas used		
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	The next questions are about natural gas usage in this {Structure} during calendar year 2018. Are you able to provide the total annual natural gas usage for this {Structure} for 2018?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ G3 [Units for natural gas] IF No OR Missing: IF Establishment interview ➔ G2 [Natural gas included in rent] IF Building interview ➔ G23 [Number natural gas suppliers]		

G2	**Natural gas included in rent** {NGInRent} *NGNRENT*		
ASK	IF Establishment interview & G1 [Provide natural gas figures] = No OR Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is the cost of the natural gas used in this establishment included in the rent?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ G24 [Natural gas suppliers] IF No/Missing ➔ G23 [Number natural gas suppliers]		

G3	**Units for natural gas** {NGUnits} *NGUNIT*
ASK	IF G1 [Provide natural gas figures] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD G1
Question Text	Please look at Show Card G1 and tell me the units in which your natural gas is measured.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	In which of the following units is your natural gas measured?
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Hundred cubic feet (Ccf)		
2. Therms		
3. Thousand cubic feet (Mcf)		
4. Dekatherms		
5. Cubic feet (cf)		
6. Million Btu (MMBtu)		
7. Some other units		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other units ➔ G4 [Other natural gas units] OTHERWISE ➔ G5 [Natural gas consumption]

G4	**Other natural gas units** {NGOthUnits} *NGUNITX*
ASK	IF G3 [Units for natural gas] = Some other units
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter other units	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ G5 [Natural gas consumption]

G5	**Natural gas consumption** {NGCons} *NGCNS*		
ASK	IF G1 [Provide natural gas figures] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Please give me the total amount of natural gas used in calendar year 2018.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	What was the total amount of natural gas used in calendar year 2018?		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		units of natural gas	1-99,999,999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Missing ➔ G23 [Number natural gas suppliers] OTHERWISE ➔ G6 [Natural gas expenditures]		

G6	**Natural gas expenditures** {NGExp} *NGEXP*
ASK	IF G5 [Natural gas consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total dollars spent on natural gas in 2018. This should include state and local taxes and all charges such as: fuel adjustment, system, demand, and distribution.
Interviewer Instructions	Do <u>not</u> enter cents
QUESTION TEXT – web	
Question Text	How much was spent on natural gas in 2018? This should include state and local taxes and all charges such as: fuel adjustment, system, demand, and distribution.
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter dollar amount	None	0-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ G7 [Starting date for natural gas figures]

G7	**Starting date for natural gas figures** {NGStartDate} *NGSTDAT*		
ASK	IF G5 [Natural gas consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the starting date for these natural gas usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ G8 [Ending date for natural gas figures]		

G8	**Ending date for natural gas figures** {NGEndDate} *NGENDAT*		
ASK	IF G5 [Natural gas consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the ending date for these natural gas usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Building interview & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One) THEN: IF CBECS Activity ≠ Enclosed mall ➔ G9 [All occupants natural gas included] IF CBECS Activity = Enclosed mall ➔ G11 [Natural gas covers whole mall] OTHERWISE ➔ G15 [Other bldgs natural gas included]		

G9	**All occupants natural gas included** {AllOccNG1} *NGALL*		
ASK	IF Building interview & G5 [Natural gas consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity ≠ Enclosed mall		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Do these figures include the natural gas for all of the businesses or organizations in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF No ➔ G10 [Sq ft not included] OTHERWISE ➔ G15 [Other bldgs natural gas included]		

G10	**Sq ft not included** {NonNGSqFt1} *NGNISF*
ASK	IF G9 [All occupants natural gas included] = No
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ G18 [Include other major natural gas]

G11	**Natural gas covers whole mall** {NGMallInclude} *NGMLLINC*
ASK	IF G5 [Natural gas consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity = Enclosed mall
FILL	**{FoodCourt}** IF B41 [Food court] = Yes = "food court," OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include the natural gas for the entire mall building, including the anchor stores, {FoodCourt} common areas, and individual stores?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No ➔ G12 [Not included in mall natural gas] OTHERWISE ➔ G15 [Other bldgs natural gas included]

G12	**Not included in mall natural gas** {WhatNGMallExclude} *see below*
ASK	IF G11 [Natural gas covers whole mall] = No
FILL	**{FoodCourt}** IF B41 [Food court] = Yes = "Food court" OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which areas are <u>not</u> included?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Anchor stores		*NGMLLANC*
2. {FoodCcourt}		*NGMLLFC*
3. Common areas		*NGMLLCOM*
4. Individual stores		*NGMLLST*
5. Other		*NGMLLOT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ G13 [Other not included in mall natural gas] OTHERWISE ➔ G14 [Mall sq ft not included]

G13	**Other not included in mall natural gas** {OtherNGMallExclude} *NGMLLOTX*
ASK	If Other IN G12 [Not included in mall natural gas]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe the other type of area that is not included	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ G14 [Mall sq ft not included]

G14	**Mall sq ft not included** {NonNGMallSqFt1} *NGNMLLSF*		
ASK	IF G11 [Natural gas covers whole mall] = No		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		square feet	1-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ G18 [Include other major natural gas]		

G15	**Other bldgs natural gas included** {OthNGBldgs1} *NGOTBD*
ASK	IF (Establishment interview & G5 [Natural gas consumption] given) OR (Building interview & G5 [Natural gas consumption] given & G9 [All occupants natural gas included] ≠ No & G11 [Natural gas covers whole mall] ≠ No)
FILL	**{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any consumption from other {Structures} included in these figures?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ G16 [Sq ft of other included] IF No OR Missing: IF B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ➔ G17 [Central plant natural gas included] OTHERWISE ⇨ G18 [Include other major natural gas]

G16	**Sq ft of other included** {OthNGSqFt1} *NGOTSF*		
ASK	IF G15 [Other bldgs natural gas included] = Yes		
FILL	**{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the approximate square footage of the <u>other</u> {Structures} that are included in these figures? If you’re not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		square feet	1-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building ➔ G17 [Central plant natural gas included] OTHERWISE ⇨ G18 [Include other major natural gas]		

G17	**Central plant natural gas included** {PlantNGIncl} *PLTNGINC*
ASK	IF G5 [Natural gas consumption] given & G9 [All occupants natural gas included] ≠ No & G11 [Natural gas covers whole mall] ≠ No & B50 [Central physical plant] = Yes & B55 [Central plant in building] = In another building
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Earlier you reported that there is a central plant on this campus. Do these figures include any natural gas that was used in the central plant?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	⇨ G18 [Include other major natural gas]

G18	**Include other major natural gas** {OthNGUse1} *NGOTUS*
ASK	IF G5 [Natural gas consumption] given
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include charges for any <u>other</u> major natural gas usage outside the {Structure}, such as kilns, gas space heaters, exterior or decorative lighting, compressed natural gas vehicles, or pumps not used in the {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes & Building interview ➔ G19 [Outside uses included in natural gas] IF No OR Missing/DK & Building interview ➔ G21 [Anything unusual about natural gas use] IF Establishment interview ➔ G23 [Number natural gas suppliers]

G19	**Outside uses included in natural gas** {WhatNGUse} *see below*
ASK	IF G18 [Include other major natural gas] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD G2
Question Text	Looking at the list on Show Card G2, please tell me which of these outside uses is included in the natural gas figures.
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	Which of these outside uses is included in the natural gas figures?
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Kilns		*NGOUTKLN*
2. Gas space heaters		*NGOUTHTR*
3. Exterior decorative lights		*NGOUTLTS*
4. Compressed natural gas vehicles		*NGOUTVEH*
5. Pumps not used in the building		*NGOUTPMP*
6. Other		*NGOUTOT*

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other selected ➔ G20 [Other type of outside natural gas use] OTHERWISE ➔ G21 [Anything unusual about natural gas use]

G20	**Other type of outside natural gas use** {OtherNGUse1} *NGOUTOTX*
ASK	If Other IN G19 [Outside uses included in natural gas]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Briefly describe this other type of outside natural gas use	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ G21 [Anything unusual about natural gas use]

G21	**Anything unusual about natural gas use** {AnythingUnusualNGUse} *NGUNUSUAL*
ASK	IF Building interview & G5 [Natural gas consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is there anything about this building that would make the natural gas consumption higher or lower than average?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date

RESPONSE OPTIONS		
Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ G22 [What is unusual about natural gas use] OTHERWISE ➔ G23 [Number natural gas suppliers]

G22	**What is unusual about natural gas use** {WhatUnusualNGUse} *NGUNUSUALX*
ASK	IF G21 [Anything unusual about natural gas use] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Describe what is unusual about the building.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ G23 [Number natural gas suppliers]

G23	**Number natural gas suppliers** {NumNGSupplier} *NGNUMSP*
ASK	IF (Building interview & Natural gas used) OR (Establishment interview & (G1 [Provide natural gas figures] = Yes OR G2 [Natural gas included in rent] = No/Missing)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{SuppliersIntro}** IF G1 [Provide natural gas figures] = No OR Missing OR G5 [Natural gas consumption] = Missing = "It may be possible to obtain this information directly from your natural gas supplier." OTHERWISE = "The next questions are about your natural gas supplier or suppliers."
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} How many different companies supplied natural gas to this {Structure} during calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	Label	Range
Enter a number	suppliers	1-4

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 4 ➔ G24 [Natural gas suppliers] IF Missing ➔ G26 [Natural gas bill available]

G24	**Natural gas suppliers** {NGSupplier} *NG1LKP-NG4LKP*
ASK	IF G23 [Number natural gas suppliers] = 1 to 4 OR (Establishment interview & G2 [Natural gas included in rent] = Yes)
FILL	**{FirstNext}** IF Only one supplier OR (Establishment interview & G2 [Natural gas included in rent] = Yes) = BLANK IF First supplier given = "first" OTHERWISE = "next" **{SuppliersIntro}** IF Establishment interview & G2 [Natural gas included in rent] = Yes = "It may be possible to obtain this information directly from your natural gas supplier." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the name of the {FirstNext} supplier that provided natural gas during 2018?
Interviewer Instructions	Start by typing a few letters of the supplier name in the search line. If you find a match in the list, select that line. If you don't find a match, select the "Other" box, then type in the supplier name.
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
Look-up table of natural gas suppliers		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other box selected ➔ G25 [Supplier name] IF Supplier selected & G2 [Natural gas included in rent] = Yes ➔ HRT [Section H Routing] IF Missing ➔ G33 [Natural gas bill available] OTHERWISE ➔ G27 [Number natural gas accounts]

G25	**Supplier name** {NewNGSup} *NG1NEW-NG4NEW*
ASK	IF Other box selected in G24 [Natural gas suppliers]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter the name of the supplier	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Name given & G2 [Natural gas included in rent] = Yes ➔ HRT [Section H Routing] IF Missing ➔ G32 [Natural gas bill available] OTHERWISE ➔ G27 [Number natural gas accounts]

G26	**Natural gas bill available** {NGBillAvailDKNumSup} *NGBILLDK1*		
ASK	IF G23 [Number natural gas suppliers] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one natural gas bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ HRT [Section H Routing]		

G27	**Number natural gas accounts** {NumNGAccts} *NG1NAC-NG4NAC*
ASK	IF Supplier found in G24 [Natural gas suppliers] look-up table OR G25 [Supplier name] given & G2 [Natural gas included in rent] ≠ Yes
FILL	**{Supplier}** = Supplier name from G24 [Natural gas suppliers] look-up table OR G25 [Supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many different natural gas accounts does this {Structure} have with {Supplier}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	natural gas accounts	1-999

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 10 accounts ➔ G28 [Natural gas account number] IF More than 10 accounts OR DK/Missing ➔ G32 [Natural gas bill available]

G28	**Natural gas account number** {NGAcctNums} *NG1AC1-NG4AC10*
ASK	IF G27 [Number natural gas accounts] = 1 to 10
FILL	**{Number}** IF Only one account = “number” OTHERWISE = “numbers” **{Supplier}** = Supplier name from G24 [Natural gas suppliers] look-up table OR G25 [Supplier name] **{IsAre]** IF Only one account = “is” OTHERWISE = “are”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the natural gas account {Number} for {Supplier}.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	What {IsAre} the natural gas account {Number} for {Supplier}?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter natural gas account number	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF G1 [Provide natural gas figures] = No OR Missing OR G5 [Natural gas consumption] = Missing ➔ G29 [Bills cover only building] OTHERWISE ➔ G32 [Natural gas bill available]

G29	**Bills cover only building** {OthNGBldgs3} *NG1OTB-NG4OTB*
ASK	IF G27 [Number natural gas accounts] = 1 to 10 & ((G1 [Provide natural gas figures] = No OR Missing) OR G5 [Natural gas consumption] = Missing)
FILL	**{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{Supplier}** = Supplier name from G24 [Natural gas suppliers] look-up table OR G25 [Supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments" **{Structure(s)}** IF Interview = Building = "building(s)" IF Interview = Establishment = "establishment(s)"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} from {Supplier} cover just this {Structure} or are other {Structures} covered as well?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Just this {Structure}		
2. Other {Structure(s)}		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other {Structure(s)} ➔ G30 [Sq ft of others included] IF Just this {Structure} OR Missing ➔ G31 [Include other major natural gas]

G30	**Sq ft of others included** {OthNGSqFt3} *NG1OTS-NG4OTS*
ASK	IF G29 [Bills cover only building] = Other {Structure(s)}
FILL	**{Bills}** IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements” **{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} included on the {Bills}? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔G31 [Include other major natural gas]

G31	**Include other major natural gas** {OthNGUse3} *NG1OTU-NG4OTU*
ASK	IF G27 [Number natural gas accounts] = 1 to 10 & ((G1 [Provide natural gas figures] = No OR Missing) OR G5 [Natural gas consumption] = Missing)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} include charges for any <u>other</u> major natural gas usage outside the {Structure}, such as for kilns, gas space heaters, exterior or decorative lighting, compressed natural gas vehicles, or pumps not used in the {Structure}?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔G32 [Natural gas bill available]

G32	**Natural gas bill available** {NGBillAvailable} *NG1BILL-NG4BILL*		
ASK	IF G23 [Number natural gas suppliers] = 1 to 4		
FILL	**{Supplier}** IF G24 [Natural gas suppliers] given = "G24 [Natural gas suppliers]" IF G25 [Supplier name] given = "G25 [Supplier name]" IF G25 [Supplier name] = Missing = "this supplier"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one natural gas bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF More suppliers left to answer for ➔ Back to G24 [Natural gas suppliers] for next supplier OTHERWISE ➔ HRT [Section H Routing]		

G33	**Natural gas bill available** {NGBillAvailDKSupName} *NGBILLDK2*		
ASK	IF G24 [Natural gas suppliers] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one natural gas bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ HRT [Section H Routing]		

Section H: Fuel Oil/Diesel/Kerosene

HRT	Section H Routing
IF Fuel oil used➔ H1 [Provide fuel oil figures] OTHERWISE ➔ IRT [Section I Routing]	

Note: In ASK and NEXT instructions in this section, "Fuel oil" refers to fuel oil, diesel, or kerosene.

H1	**Provide fuel oil figures** {ProvideFOFigs} *FKFIGS*		
ASK	IF Fuel oil used		
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	The next questions are about {FuelOilType} purchases for this {Structure} during calendar year 2018. Are you able to report how much {FuelOilType} was purchased for this {Structure} during 2018?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ H2 [Fuel oil purchases] IF No OR Missing: IF Fuel oil IN D22 [Source for main heating] OR D23 [Other source for main heating] OR D131 [Sources for water heating] OR D132 [Other water heating source] OR (D145 [Sources for electricity generation] = Fuel oil & D146 [Use of generated electricity] = Whenever electricity was used) ➔ H14 [Number fuel oil suppliers] OTHERWISE ➔ IRT [Section I Routing]		

H2	**Fuel oil purchases** {FOCons} *FKCNS*
ASK	IF H1 [Provide fuel oil figures] = Yes
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total number of gallons of {FuelOilType} purchased in calendar year 2018.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What was the total number of gallons of {FuelOilType} purchased in calendar year 2018?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	gallons	0-99,999,999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ H3 [Fuel oil expenditures]

H3	**Fuel oil expenditures** {FOExp} *FKEXP*		
ASK	IF H1 [Provide fuel oil figures] = Yes		
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Please give me the total dollars spent on {FuelOilType} in 2018, including state and local taxes.		
Interviewer Instructions	Do <u>not</u> enter cents		
QUESTION TEXT – respondent-administered			
Question Text	How much was spent on {FuelOilType} in 2018, including state and local taxes?		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter dollar amount		None	0-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF (H2 [Fuel oil purchases] = 0 OR Missing) & (H3 [Fuel oil expenditures] = 0 OR Missing) ➔ H4 [Purchased before 2018] OTHERWISE ➔ H5 [Starting date for fuel oil figures]		

H4	**Purchased before 2018** {FOPurchPast} *FKSTORD*
ASK	IF (H2 [Fuel oil purchases] = 0 OR Missing) & (H3 [Fuel oil expenditures] = 0 OR Missing)
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Was any of the {FuelOilType} that was used in 2018 purchased or delivered in 2017 or before?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ IRT [Section I Routing]

H5	**Starting date for fuel oil figures** {FOStartDate} *FKSTDAT*
ASK	IF H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the first delivery date for these {FuelOilType} purchases?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date
RESPONSE OPTIONS	
Date	

Watermark		
mm/dd/yyyy		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ H6 [Ending date for fuel oil figures]

H6	**Ending date for fuel oil figures** {FOEndDate} *FKENDAT*
ASK	IF H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the last delivery date for these {FuelOilType} purchases?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date
RESPONSE OPTIONS	
Date	

Watermark		
mm/dd/yyyy		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) ➔ H7 [All occupants fuel oil included] OTHERWISE ➔ H9 [Other bldgs fuel oil included]

H7	**All occupants fuel oil included** {AllOccFO1} *FKALL*
ASK	IF Building interview & (H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0) & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One)
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include the {FuelOilType} for all of the businesses or organizations in this building?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF No ➔ H8 [Sq ft not included] OTHERWISE ➔ H9 [Other bldgs fuel oil included]

H8	**Sq ft not included** {NonFOSqFt1} *FKNISF*
ASK	IF H7 [All occupants fuel oil included] = No
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ H11 [Include other major fuel oil]

H9	**Other bldgs fuel oil included** {OthFOBldgs1} *FKOTBD*
ASK	IF (H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0) & (Establishment interview OR Building interview & NOT H7 [All occupants fuel oil included] = No)
FILL	**{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any consumption from other {Structures} included in these figures?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ H10 [Sq ft of other included] OTHERWISE ➔ H11 [Include other major fuel oil]

H10	**Sq ft of other included** {OthFOSqFt1} *FKOTSF*		
ASK	IF H9 [Other bldgs fuel oil included] = Yes		
FILL	**{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the approximate square footage of the <u>other</u> {Structures} that are included in these figures? If you’re not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		square feet	1-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	⇨ H11 [Include other major fuel oil]		

H11	**Include other major fuel oil** {OthFOUse1} *FKOTUS*
ASK	IF H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Do these figures include charges for any <u>other</u> major {FuelOilType} usage outside the {Structure}, such as kilns, welding, pumps or motors?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview ➔ H12 [Anything unusual about fuel oil use] IF Establishment interview & (Fuel oil IN D22 [Source for main heating] OR D23 [Other source for main heating] OR D131 [Sources for water heating] OR D132 [Other water heating source] OR (D145 [Sources for electricity generation] = Fuel oil & D146 [Use of generated electricity] = Whenever electricity was used) ➔ H14 [Number fuel oil suppliers] OTHERWISE ➔ IRT [Section I Routing]

H12	**Anything unusual about fuel oil use** {FOUnusual} *FKUNUSUAL*		
ASK	IF Building interview & (H2 [Fuel oil purchases] > 0 OR H3 [Fuel oil expenditures] > 0)		
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Is there anything about this building that would make the {FuelOilType} consumption higher or lower than average?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ H13 [What is unusual about fuel oil use] OTHERWISE: IF Fuel oil IN D22 [Source for main heating] OR D23 [Other source for main heating] OR D131 [Sources for water heating] OR D132 [Other water heating source] OR (D145 [Sources for electricity generation] = Fuel oil & D146 [Use of generated electricity] = Whenever electricity was used) ➔ H14 [Number fuel oil suppliers] OTHERWISE ➔ IRT [Section I Routing]		

H13	**What is unusual about fuel oil use** {WhatUnusualFOUse} *FKUNUSUALX*
ASK	IF H12 [Anything unusual about fuel oil use] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Describe what is unusual about the building.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	IF Fuel oil IN D22 [Source for main heating] OR D23 [Other source for main heating] OR D131 [Sources for water heating] OR D132 [Other water heating source] OR (D145 [Sources for electricity generation] = Fuel oil & D146 [Use of generated electricity] = Whenever electricity was used) ➔ H14 [Number fuel oil suppliers] OTHERWISE ➔ IRT [Section I Routing]

H14	**Number fuel oil suppliers** {NumFOSupplier} *FKNUMSP*
ASK	IF Fuel oil IN D22 [Source for main heating] OR D23 [Other source for main heating] OR D131 [Sources for water heating] OR D132 [Other water heating source] OR (D145 [Sources for electricity generation] = Fuel oil & D146 [Use of generated electricity] = Whenever electricity was used) & NOT ((H2 [Fuel oil purchases] = 0 OR Missing) & (H3 [Fuel oil expenditures] = 0 OR Missing))
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{SuppliersIntro}** IF H1 [Provide fuel oil figures] = No OR Missing = "It may be possible to obtain this information directly from your supplier." OTHERWISE = "The next questions are about your supplier or suppliers." **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} How many different companies supplied {FuelOilType} to this {Structure} during calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	suppliers	1-4

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 4 ➔ H15 [Fuel oil supplier name] IF Missing ➔ H16 [Fuel oil bill available]

H15	**Fuel oil supplier name** {FOSupName} *FK1SUP-FK4SUP*
ASK	IF H14 [Number fuel oil suppliers] = 1 to 4
FILL	**{FirstNext}** IF Only one supplier = BLANK IF First supplier given = "first" OTHERWISE = "next" **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the name of the {FirstNext} supplier that provided {FuelOilType} during 2018?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter the name of the supplier	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Name given ➔ H17 [Street address] IF Missing ➔ H28 [Fuel oil bill available]

H16	**Fuel oil bill available** {FOBillAvailDKNumSup} *FKBILL*
ASK	IF H14 [Number fuel oil suppliers] = Missing
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]
DISPLAY INSTRUCTIONS	N/A
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Can you provide a copy of one {FuelOilType} bill? There is information on some utility bills that may help energy researchers who use these data.
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes, bill available		
2. No, will not be able to provide bill		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ IRT [Section I Routing]

H17	**Street address** {FOSupAddr1} *FK1AD1-FK4AD1*
ASK	IF Name given in H15 [Fuel oil supplier name]
FILL	**{Supplier}** = H15 [Fuel oil supplier name]
DISPLAY	H17-H21 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the address for {Supplier}, beginning with the street address? Street address:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is the address for {Supplier}? Street address:
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ H18 [P.O. Box or Suite]

H18	**P.O. Box or Suite** {FOSupAddr2} *FK1AD2-FK4AD2*
ASK	IF Name given in H15 [Fuel oil supplier name]
FILL	N/A
DISPLAY	H17-H21 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	P.O. Box or suite number:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ H19 [City]

H19	**City** {FOSupCity} *FK1CTY-FK4CTY*
ASK	IF Name given in H15 [Fuel oil supplier name]
FILL	N/A
DISPLAY	H17-H21 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	City:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ H20 [State abbreviation]

H20	**State abbreviation** {FOSupState} *FK1STA-FK4STA*		
ASK	IF Name given in H15 [Fuel oil supplier name]		
DISPLAY	H17-H21 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	State:		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
State drop-down list with “Select a state” as watermark. Alphabetic order by state name, beginning with state abbreviation. Example : AL - ALABAMA			
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank		
NEXT	⇨ H21 [ZIP code]		

H21	**ZIP code** {FOSupZip} *FK1ZIP-FK4ZIP*		
ASK	IF Name given in H15 [Fuel oil supplier name]		
DISPLAY	H17-H21 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	ZIP code:		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
None		None	00000-99999
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank		
NEXT	⇨ H22 [Number fuel oil accounts]		

H22	**Number fuel oil accounts** {NumFOAccts} *FK1NAC-FK4NAC*
ASK	IF Name given in H15 [Fuel oil supplier name]
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Supplier}** = "H15 [Fuel oil supplier name]" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many different {FuelOilType} accounts does this {Structure} have with {Supplier}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	accounts	1-999

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 10 accounts ➔ H23 [Fuel oil account number] IF More than 10 accounts OR DK/Missing ➔ H27 [Fuel oil bill available]

H23	**Fuel oil account number** {FOAcctNums} *FK1AC1-FK4AC10*
ASK	IF H22 [Number of fuel oil accounts] = 1 to 10
FILL	**{Number}** IF Only one account = "number" OTHERWISE = "numbers" **{Supplier}** = Supplier name from H15 [Fuel oil supplier name] **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{IsAre]** IF Only one account = "is" OTHERWISE = "are"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the {FuelOilType} account {Number} for {Supplier}.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What {IsAre} the {FuelOilType} account {Number} for {Supplier}?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter account number	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF H1 [Provide fuel oil figures] = No OR Missing ➔ H24 [Bills cover only building] OTHERWISE ➔ H27 [Fuel oil bill available]

H24	**Bills cover only building** {OthFOBldgs3} *FK1OTB-FK4OTB*
ASK	IF H22 [Number fuel oil accounts] = 1 to 10 & (H1 [Provide fuel oil figures] = No OR Missing)
FILL	**{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{Supplier}** = H15 [Fuel oil supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments" **{Structure(s)}** IF Interview = Building = "building(s)" IF Interview = Establishment = "establishment(s)"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} from {Supplier} cover just this {Structure} or are other {Structures} covered as well?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Just this {Structure}		
2. Other {Structure(s)}		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other {Structure(s)} ➔ H25 [Sq ft of others included] IF Just this {Structure} OR Missing ➔ H26 [Include other major fuel oil]

H25	**Sq ft of others included** {OthFOSqFt3} *FK1OTS-FK4OTS*
ASK	IF H24 [Bills cover only building] = Other {Structure(s)}
FILL	**{Bills}** IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements” **{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} included on the {Bills}? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔H26 [Include other major fuel oil]

H26	**Include other major fuel oil** {OthFOUse3} *FK1OTU-FK4OTU*		
ASK	IF H22 [Number fuel oil accounts] = 1 to 10 & (H1 [Provide fuel oil figures] = No OR Missing)		
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene]		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	{Bills} include charges for any <u>other</u> major {FuelOilType} usage outside the {Structure}, such as for kilns, welding, pumps, or motors?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔H27 [Fuel oil bill available]		

H27	**Fuel oil bill available** {FOBillAvailable} *FK1BILL-FK4BILL*
ASK	IF H14 [Number fuel oil suppliers] = 1 to 4 & NOT H15 [Fuel oil supplier name] = Missing
FILL	**{FuelOilType}** = Type or types specified in D16 [Fuel oil, diesel, or kerosene] **{Supplier}** = "H15 [Fuel oil supplier name]"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Can you provide a copy of one {FuelOilType} bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.
QUESTION TEXT – respondent-administered	
Question Text	No changes required.
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes, bill available		
2. No, will not be able to provide bill		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF More suppliers left to answer for ➔ Back to H15 [Fuel oil supplier name] for next supplier OTHERWISE ➔ IRT [Section I Routing]

H28	**Fuel oil bill available** {FkBillAvailDKSupName} *FKBILLDK2*		
ASK	IF H15 [Fuel oil suppliers] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one natural gas bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ IRT [Section I Routing]		

Section I: District Steam

IRT	Section I Routing
IF District steam used & NOT (D27 [Where does steam come from] = From a boiler inside this building OR D64 [Where does steam come from] = From a boiler inside this building) ➔ I1 [Provide district steam figures] OTHERWISE ➔ JRT [Section J Routing]	

I1	**Provide district steam figures** {ProvideStFigs} *STFIGS*
ASK	IF District steam used & NOT (D27 [Where does steam come from] = From a boiler inside this building OR D64 [Where does steam come from] = From a boiler inside this building)
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	The next questions are about district steam usage in this {Structure} during calendar year 2018. Are you able to report how much district steam was used in this {Structure} during 2018?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	Image	SAS Name
1. Yes		
2. No		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ I2 [Units for district steam] IF No OR Missing: IF D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility ➔ I12 [District steam supplier name] OTHERWISE ➔ JRT [Section J Routing]

I2	**Units for district steam** {StUnits} *STUNIT*
ASK	IF I1 [Provide district steam figures] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	SHOW CARD I1
Question Text	Please look at Show Card I1 and tell me the units in which your district steam is measured.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	In which of the following units is your district steam is measured?
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Thousand pounds		
2. Pounds		
3. Million Btu (MMBtu)		
4. Some other units		

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Some other units ➔ I3 [Other district steam units] OTHERWISE ➔ I4 [District steam consumption]

I3	**Other district steam units** {StOthUnits} *STUNITX*
ASK	IF I2 [Units for district steam] = Some other units
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	N/A – other specify box – see watermark
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter other units	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ I4 [District steam consumption]

I4	**District steam consumption** {StCons} *STCNS*		
ASK	IF I1 [Provide district steam figures] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Please give me the total amount of district steam used in calendar year 2018.		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	What was the total amount of district steam used in calendar year 2018?		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		units of steam	1-99,999,999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Missing THEN: IF D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility ➔ I12 [District steam supplier name] OTHERWISE ➔ JRT [Section J Routing] OTHERWISE ➔ I5 [District steam expenditures]		

I5	**District steam expenditures** {StExp} *STEXP*
ASK	IF I4 [District steam consumption] given
FILL	N/A
DISPLAY INSTRUCTIONS	N/A
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total dollars spent on district steam in 2018, including state and local taxes.
Interviewer Instructions	Do not enter cents
QUESTION TEXT – respondent-administered	
Question Text	How much was spent on district steam in 2018, including state and local taxes?
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter dollar amount	None	0-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ I6 [Starting date for district steam figures]

I6	**Starting date for district steam figures** {StStartDate} *STSTDAT*		
ASK	IF I4 [District steam consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the starting date for these district steam usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ I7 [Ending date for district steam figures]		

I7	**Ending date for district steam figures** {StEndDate} *STENDAT*
ASK	IF I4 [District steam consumption] given
FILL	N/A
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the ending date for these district steam usage figures?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date
RESPONSE OPTIONS	
Date	
Watermark	
mm/dd/yyyy	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Building interview & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One) ➔ I8 [All occupants steam included] OTHERWISE ➔ I10 [Other bldgs steam included]

I8	**All occupants steam included** {AllOccSt1} *STALL*		
ASK	IF Building interview & I4 [District steam consumption] given & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Do these figures include the district steam for all of the businesses or organizations in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF No ➔ I9 [Sq ft not included] OTHERWISE ➔ I10 [Other bldgs steam included]		

I9	**Sq ft not included** {NonStSqFt1} *STNISF*
ASK	IF I8 [All occupants steam included] = No
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility ➔ I12 [District steam supplier name] OTHERWISE ➔ JRT [Section J Routing]

I10	**Other bldgs steam included** {OthStBldgs1} *STOTBD*
ASK	IF I4 [District steam consumption] given & (Establishment interview OR (Building interview & NOT I8 [All occupants steam included] = No))
FILL	**{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any consumption from other {Structures} included in these figures?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ I11 [Sq ft of other included] OTHERWISE: IF D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility ➔ I12 [District steam supplier name] OTHERWISE ➔ JRT [Section J Routing]

I11	**Sq ft of other included** {OthStSqFt1} *STOTSF*
ASK	IF I10 [Other bldgs steam included] = Yes
FILL	**{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} that are included in these figures? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility ➔ I12 [District steam supplier name] OTHERWISE ➔ JRT [Section J Routing]

I12	**District steam supplier name** {StSupName} *STSUP*
ASK	IF (Establishment interview & District steam used) OR (Building interview & District steam used & (D18 [From central plant] ≠ Yes OR D27 [Where does steam come from] = From a district steam utility OR D64 [Where does steam come from] = From a district steam utility))
FILL	**{SuppliersIntro}** IF (I1 [Provide district steam figures] = No OR Missing) OR I4 [District steam consumption] = Missing = "It may be possible to obtain this information directly from your district steam supplier." OTHERWISE = "The next questions are about your district steam supplier."
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} What is the name of the supplier that provided district steam in calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter the name of the supplier	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Name given ➔ I14 [Street address] IF Missing ➔ I13 [District steam bill available]

I13	**District steam bill available** {StBillAvailableDKSupName} *STBILLDK*		
ASK	IF I12 [District steam supplier name] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one district steam bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	OTHERWISE ➔ JRT [Section J Routing]		

I14	**Street address** {StSupAddr1} *STAD1*
ASK	IF I12 [District steam supplier name] given
FILL	**{Supplier}** = I12 [District steam supplier name]
DISPLAY	I14-I18 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the address for {Supplier}, beginning with the street address? Street address:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is the address for {Supplier}? Street address:
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ I15 [P.O. Box or Suite]

I15	**P.O. Box or Suite** {StSupAddr2} *STAD2*
ASK	IF I12 [District steam supplier name] given
DISPLAY	I14-I18 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	P.O. Box or suite number:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ I16 [City]

I16	**City** {StSupCity} *STCTY*
ASK	IF I12 [District steam supplier name] given
DISPLAY	I14-I18 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	City:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ I17 [State abbreviation]

I17	**State abbreviation** {StSupState} *STSTA*		
ASK	IF I12 [District steam supplier name] given		
DISPLAY	I14-I18 are all on the same screen		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	State:		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
State drop-down list with “Select a state” as watermark. Alphabetic order by state name, beginning with state abbreviation. Example : AL - ALABAMA			
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank		
NEXT	⇨ I18 [ZIP code]		

I18	**ZIP code** {StSupZip} *STZIP*
ASK	IF I12 [District steam supplier name] given
DISPLAY	I14-I18 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	ZIP code:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	
Numeric	

Watermark	**Label**	**Range**
None	None	00000-99999

NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ I19 [Number district steam accounts]

I19	**Number district steam accounts** {NumStAccts} *STNAC*
ASK	IF I12 [District steam supplier name] given
FILL	**{Supplier}** = "I12 [District steam supplier name]" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many different district steam accounts does this {Structure} have with {Supplier}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	district steam accounts	1-999

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 10 accounts ➔ I20 [District steam account number] IF More than 10 accounts OR DK/Missing ➔ I23 [District steam bill available]

I20	**District steam account number** {StAcctNums} *STAC1-STAC10*
ASK	IF I19 [Number district steam accounts] = 1 to 10
FILL	**{Number}** IF Only one account = “number” OTHERWISE = “numbers” **{Supplier}** = Supplier name from I12 [District steam supplier name] **{IsAre]** IF Only one account = “is” OTHERWISE = “are”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the district steam account {Number} for {Supplier}.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What {IsAre} the district steam account {Number} for {Supplier}?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter district steam account number	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (I1 [Provide district steam figures] = No OR Missing) OR I4 [District steam consumption] = Missing ➔ I21 [Bills cover only building] OTHERWISE ➔ I23 [District steam bill available]

I21	**Bills cover only building** {OthStBldgs3} *STOTB*
ASK	IF I19 [Number district steam accounts] = 1 to 10 & ((I1 [Provide district steam figures] = No OR Missing) OR I4 [District steam consumption] = Missing)
FILL	**{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{Supplier}** = I12 [District steam supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments" **{Structure(s)}** IF Interview = Building = "building(s)" IF Interview = Establishment = "establishment(s)"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} from {Supplier} cover just this {Structure} or are other {Structures} covered as well?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Just this {Structure}		
2. Other {Structure(s)}		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other {Structure(s)} ➔ I22 [Sq ft of others included] IF Just this {Structure} OR Missing ➔ I23 [District steam bill available]

I22	**Sq ft of others included** {OthStSqFt3} *STOTS*
ASK	IF I21 [Bills cover only building] = Other {Structure(s)}
FILL	**{Bills}** IF Only one account = "bill or statement" IF 2 to 10 accounts = "bills or statements" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} included on the {Bills}? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔I23 [District steam bill available]

I23	**District steam bill available** {StBillAvailable} *STBILL*		
ASK	IF I12 [District steam supplier name] given		
FILL	**{Supplier}** = "I12 [District steam supplier name]"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one district steam bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	OTHERWISE ➔ JRT [Section J Routing]		

Section J: District Hot Water

JRT	Section J Routing
IF District hot water used & NOT (D29 [Where does hot water come from] = From a boiler inside this building OR D67 [Where does hot water come from] = From a boiler inside this building) ➔ J1 [Provide district hot water figures] OTHERWISE ➔ KRT [Section K Routing]	

J1	**Provide district hot water figures** {ProvideHWFigs} *HWFIGS*		
ASK	IF District hot water used & NOT (D29 [Where does hot water come from] = From a boiler inside this building OR D67 [Where does hot water come from] = From a boiler inside this building)		
FILL	**{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	The next questions are about district hot water usage in this {Structure} during calendar year 2018. Are you able to report how much district hot water was used in this {Structure} during 2018?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Yes ➔ J2 [District hot water consumption] IF No OR Missing: IF D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility ➔ J10 [District hot water supplier name] OTHERWISE ➔ KRT [Section K Routing]		

J2	**District hot water consumption** {HWCons} *HWCNS*
ASK	IF J1 [Provide district hot water figures] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total amount, in million Btu, of district hot water used in calendar year 2018.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What was the total amount, in million Btu, of district hot water used in calendar year 2018?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	MMBtu	1-99,999,999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Missing THEN: IF D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility ➔ J10 [District hot water supplier name] OTHERWISE ➔ KRT [Section K Routing] OTHERWISE ➔ J3 [District hot water expenditures]

J3	**District hot water expenditures** {HWExp} *HWEXP*
ASK	IF J2 [District hot water consumption] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the total dollars spent on district hot water in 2018, including state and local taxes.
Interviewer Instructions	Do <u>not</u> enter cents
QUESTION TEXT – respondent-administered	
Question Text	How much was spent on district hot water in 2018, including state and local taxes?
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter dollar amount	None	0-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ J4 [Starting date for district hot water figures]

J4	**Starting date for district hot water figures** {HWStartDate} *HWSTDAT*		
ASK	IF J2 [District hot water consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the starting date for these district hot water usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ J5 [Ending date for district hot water figures]		

J5	**Ending date for district hot water figures** {HWEndDate} *HWENDAT*		
ASK	IF J2 [District hot water consumption] given		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the ending date for these district hot water usage figures?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated • Numeric • String Text **X** Date		
RESPONSE OPTIONS			
Date			
Watermark			
mm/dd/yyyy			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Building interview & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) ➔ J6 [All occupants hot water included] OTHERWISE ➔ J8 [Other bldgs hot water included]		

J6	**All occupants hot water included** {AllOccHW1} *HWALL*		
ASK	IF Building interview & J2 [District hot water consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One)		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Do these figures include the district hot water for all of the businesses or organizations in this building?		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes			
2. No			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF No ➔ J7 [Sq ft not included] OTHERWISE ➔ J8 [Other bldgs hot water included]		

J7	**Sq ft not included** {NonHWSqFt1} *HWNISF*
ASK	IF J6 [All occupants hot water included] = No
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the space in the building that is <u>not</u> included in these figures? If you're not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1 to 999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility ➔ J10 [District hot water supplier name] OTHERWISE ➔ KRT [Section K Routing]

J8	**Other bldgs hot water included** {OthHWBldgs1} *HWOTBD*
ASK	IF J2 [District hot water consumption] given & (Establishment interview OR (Building interview & NOT J6 [All occupants hot water included] = No))
FILL	**{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is any consumption from other {Structures} included in these figures?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ J9 [Sq ft of other included] OTHERWISE: IF D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility ➔ J10 [District hot water supplier name] OTHERWISE ➔ KRT [Section K Routing]

J9	**Sq ft of other included** {OthHWSqFt1} *HWOTSF*		
ASK	IF J8 [Other bldgs hot water included] = Yes		
FILL	**{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	What is the approximate square footage of the <u>other</u> {Structures} that are included in these figures? If you’re not sure, please provide your best estimate.		
Interviewer Instructions	N/A		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		square feet	1-999,999,999
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility ➔ J10 [District hot water supplier name] OTHERWISE ➔ KRT [Section K Routing]		

J10	**District hot water supplier name** {HWSupName} *HWSUP*
ASK	IF (Establishment interview & District hot water used) OR (Building interview & District hot water used & (D18 [From central plant] ≠ Yes OR D29 [Where does hot water come from] = From a district hot water utility OR D67 [Where does hot water come from] = From a district hot water utility))
FILL	**{SuppliersIntro}** IF (J1 [Provide district hot water figures] = No OR Missing) OR J2 [District hot water consumption] = Missing = "It may be possible to obtain this information directly from your district hot water supplier." OTHERWISE = "The next questions are about your district hot water supplier."
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{SuppliersIntro} What is the name of the supplier that provided district hot water in calendar year 2018?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter the name of the supplier	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Name given ➔ J12 [Street address] IF Missing ➔ J11 [District hot water bill available]

J11	**District hot water bill available** {HWBillAvailableDKSupName} *HWBILLDK*		
ASK	IF J10 [District hot water supplier name] = Missing		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one district hot water bill? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	➔ KRT [Section K Routing]		

J12	**Street address** {HWSupAddr1} *HWAD1*
ASK	IF J10 [District hot water supplier name] given
FILL	**{Supplier}** = J10 [District hot water supplier name]
DISPLAY	J12-J16 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the address for {Supplier}, beginning with the street address? Street address:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What is the address for {Supplier}? Street address:
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ J13 [P.O. Box or Suite]

J13	**P.O. Box or Suite** {HWSupAddr2} *HWAD2*
ASK	IF J10 [District hot water supplier name] given
FILL	N/A
DISPLAY	J12-J16 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	P.O. Box or suite number:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ J14 [City]

J14	**City** {HWSupCity} *HWCTY*
ASK	IF J10 [District hot water supplier name] given
DISPLAY	J12-J16 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	City:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ J15 [State abbreviation]

J15	**State abbreviation** {HWSupState} *HWSTA*
ASK	IF J10 [District hot water supplier name] given
DISPLAY	J12-J16 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	State:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
State drop-down list with “Select a state” as watermark. Alphabetic order by state name, beginning with state abbreviation. Example : AL - ALABAMA		

NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ J16 [ZIP code]

J16	**ZIP code** {HWSupZip} *HWZIP*
ASK	IF J10 [District hot water supplier name] given
FILL	N/A
DISPLAY	J12-J16 are all on the same screen
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	ZIP code:
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
None	None	00000-99999

NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	⇨ J17 [Number district hot water accounts]

J17	**Number district hot water accounts** {NumHWAccts} *HWNAC*
ASK	IF J10 [District hot water supplier name] given
FILL	**{Supplier}** = "J10 [District hot water supplier name]" **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	How many different district hot water accounts does this {Structure} have with {Supplier}?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	Label	Range
Enter a number	district hot water accounts	1-999

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF 1 to 10 accounts ➔ J18 [District hot water account number] IF More than 10 accounts OR DK/Missing ➔ J21 [District hot water bill available]

J18	**District hot water account number** {HWAcctNums} *HWAC1-HWAC10*
ASK	IF J17 [Number district hot water accounts] = 1 to 10
FILL	**{Number}** IF Only one account = “number” OTHERWISE = “numbers” **{Supplier}** = Supplier name from J10 [District hot water supplier name] **{IsAre]** IF Only one account = “is” OTHERWISE = “are”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Please give me the district hot water account {Number} for {Supplier}.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	What {IsAre} the district hot water account {Number} for {Supplier}?
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter district hot water account number	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF (J1 [Provide district hot water figures] = No OR Missing) OR J2 [District hot water consumption] = Missing ➔ J19 [Bills cover only building] OTHERWISE ➔ J21 [District hot water bill available]

J19	**Bills cover only building** {OthHWBldgs3} *HWOTB*
ASK	IF J17 [Number district hot water accounts] = 1 to 10 & ((J1 [Provide district hot water figures] = No OR Missing) OR J2 [District hot water consumption] = Missing)
FILL	**{Bills}** IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" **{Supplier}** = J10 [District hot water supplier name] **{Structure}** IF Interview = Building = "building" IF Interview = Establishment = "establishment" **{Structures}** IF Interview = Building = "buildings" IF Interview = Establishment = "establishments" **{Structure(s)}** IF Interview = Building = "building(s)" IF Interview = Establishment = "establishment(s)"
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	{Bills} from {Supplier} cover just this {Structure} or are other {Structures} covered as well?
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Just this {Structure}		
2. Other {Structure(s)}		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Other {Structure(s)} ➔ J20 [Sq ft of others included] IF Just this {Structure} OR Missing ➔ J21 [District hot water bill available]

J20	**Sq ft of others included** {OthHWSqFt3} *HWOTS*
ASK	IF J19 [Bills cover only building] = Other {Structure(s)}
FILL	**{Bills}** IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements” **{Structures}** IF Interview = Building = “buildings” IF Interview = Establishment = “establishments”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the approximate square footage of the <u>other</u> {Structures} included on the {Bills}? If you’re not sure, please provide your best estimate.
Interviewer Instructions	N/A
QUESTION TEXT – respondent-administered	
Question Text	No changes required
Respondent Instructions	No changes required
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date
RESPONSE OPTIONS	
Numeric	

Watermark	**Label**	**Range**
Enter a number	square feet	1-999,999,999

NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ J21 [District hot water bill available]

J21	**District hot water bill available** {HWBillAvailable} *HWBILL*		
ASK	IF J10 [District hot water supplier name] given		
FILL	**{Supplier}** = "J10 [District hot water supplier name]"		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Can you provide a copy of one district hot water bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.		
Interviewer Instructions	If available, directions for scanning or uploading the bill will be provided at the end of the interview.		
QUESTION TEXT – respondent-administered			
Question Text	No changes required		
Respondent Instructions	No changes required		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Yes, bill available			
2. No, will not be able to provide bill			
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	OTHERWISE ➔ KRT [Section K Routing]		

Section K: Tenant Billing and Metering

KRT	Section K Routing
IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet;100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Electricity used ➔ K1 [Electricity billing arrangement] OTHERWISE ➔ L1 [Response effort]	

K1	**Electricity billing arrangement** {ElecBillArrange} *ELBLARR*
ASK	IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet;100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Electricity used
FILL	**{Heating}** IF Electricity used for heating = "space heating, " OTHERWISE = BLANK **{WaterHeating}** IF Electricity used for water heating = "water heating, " OTHERWISE = BLANK **{Cooling}** IF Electricity used for cooling = "cooling, " OTHERWISE = BLANK **{Data Center}** IF Data center IN E51 [Computer areas] = "data center, " OTHERWISE = BLANK **{OfficeExp}** IF CBECS Activity = Office = "Please remember to include tenants such as food service and retail that lease space in the building." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	We are almost finished. I just have a few questions about energy billing and metering in this building. Thinking about all of the electricity used by the tenants in this building, including any for lighting, plug load, {Heating}{WaterHeating}{Cooling}{DataCenter} or other uses, how are the costs for this electricity billed? Is the cost for electricity included in the rent, are tenants separately billed for electricity by the landlord or utility, or is it a combination of these arrangements? {OfficeExp}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	You are almost finished. There are just a few final questions about energy billing and metering in this building. Thinking about all of the electricity used by the tenants in this building, including any for lighting, plug load, {Heating}{WaterHeating}{Cooling}{DataCenter} or other uses, how are the costs for this electricity billed? {OfficeExp}
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Included in tenants' rent		
2. Tenants separately billed for electricity (either by the landlord or the		

utility)			
3. Combination of these arrangements			
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Missing/DK ➔ K5 [Elec tenant info job title] OTHERWISE ➔ K2 [Electricity tenant metering]		

K2	**Electricity tenant metering** {ElecTenantMetering} *ELTNMET*
ASK	IF K1 [Electricity billing arrangement] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are there meters dedicated to tracking some or all of the electricity used within individual tenant spaces? These meters may be installed by the utility, the building's management, the tenant, or someone else.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ K3 [Which electricity uses metered] IF Missing/DK ➔ K5 [Elec tenant info job title] IF No THEN: IF Natural gas used ➔ K6 [Natural gas billing arrangement] OTHERWISE ➔ L1 [Response effort]

K3	**Which electricity uses metered** {ElecUsesMetered} *see below*
ASK	IF K2 [Electricity tenant metering] = Yes
FILL	**{Heating}** IF Electricity used for heating = “Space heating” OTHERWISE = BLANK **{WaterHeating}** IF Electricity used for water heating = “Water heating” OTHERWISE = BLANK **{Cooling}** IF Electricity used for cooling = “Cooling” OTHERWISE = BLANK **{Data Center}** IF Data center IN E51 [Computer areas] = “Data center” OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Which electricity uses are metered within individual tenant spaces?
Interviewer Instructions	Read choices if necessary Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Lighting		*ELMTLT*
2. Plug load		*ELMTPL*
3. {Heating}		*ELMTHT*
4. {WaterHeating}		*ELMTWH*
5. {Cooling}		*ELMTCL*
6. {DataCenter}		*ELMTDC*
7. Other		*ELMTOT*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ K4 [Metered electricity data access]

K4	**Metered electricity data access** {MeteredElecAccess} *see below*
ASK	IF K2 [Electricity tenant metering] = Yes
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Who has access to the metered electricity data for the tenant spaces: the tenants, the landlord, and/or someone else?
Interviewer Instructions	Enter all that apply
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	Please select all that apply.
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Tenant		*ELMTACSTN*
2. Landlord		*ELMTACSLL*
3. Someone else		*ELMTACSOT*

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Missing/DK ➔ K5 [Elec tenant info job title] OTHERWISE: IF Natural gas used ➔ K6 [Natural gas billing arrangement] OTHERWISE ➔ L1 [Response effort]

K5	**Elec tenant info job title** {ElecTenantContact} *ELTNJOB*
ASK	IF K1 [Electricity billing arrangement] = Missing/DK OR K2 [Electricity tenant metering] = Missing/DK OR K4 [Metered electricity data access] = Missing/DK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the job title of the person who has this information?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter job title	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Natural gas used ➔ K6 [Natural gas billing arrangement] OTHERWISE ➔ L1 [Response effort]

K6	**Natural gas billing arrangement** {NatGasBillArrange} *NGBLARR*
ASK	IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet;100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Electricity used & Natural gas used
FILL	**{OfficeExp}** IF CBECS Activity = Office = "Please remember to include tenants such as food service and retail that lease space in the building." OTHERWISE = BLANK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Is the cost for natural gas included in the rent, are tenants separately billed for natural gas by the landlord or utility, or is it a combination of these arrangements? {OfficeExp}
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Thinking about all of the natural gas used by the tenants in this building, how are the costs billed? {OfficeExp}
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Included in tenants' rent		
2. Tenants separately billed for natural gas (either by the landlord or the utility)		
3. Combination of these arrangements		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Missing/DK ➔ K9 [Nat gas tenant info job title] OTHERWISE ➔ K7 [Natural gas tenant metering]

K7	**Natural gas tenant metering** {NatGasTenantMetering} *NGTNMET*
ASK	IF K6 [Natural gas billing arrangement] given
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Are there meters dedicated to tracking some or all of the natural gas used within individual tenant spaces?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date
RESPONSE OPTIONS	
Enumerated	

Response options	**Image**	**SAS Name**
1. Yes		
2. No		

NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	IF Yes ➔ K8 [Metered natural gas data access] IF Missing/DK ➔ K9 [Nat gas tenant info job title] IF No ➔ L1 [Response effort]

K8	**Metered natural gas data access** {MeteredNatGasAccess} *see below*		
ASK	IF K7 [Natural gas tenant metering] = Yes		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Who has access to the metered natural gas data for the tenant spaces: the tenants, the landlord, and/or someone else?		
Interviewer Instructions	Enter all that apply		
QUESTION TEXT – web			
Question Text	No changes required		
Respondent Instructions	Please select all that apply.		
ITEM TYPE	**X** Enumerated • Numeric • String Text • Date		
RESPONSE OPTIONS			
Enumerated			
Response options		**Image**	**SAS Name**
1. Tenant			*NGMTACSTN*
2. Landlord			*NGMTACSLL*
3. Someone else			*NGMTACSOT*
NONRESPONSE	**X** Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank		
NEXT	IF Missing/DK ➔ K9 [Nat gas tenant info job title] OTHERWISE ➔ L1 [Response effort]		

K9	**Nat gas tenant info job title** {NatGasTenantContact} *NGTNJOB*
ASK	IF K6 [Natural gas billing arrangement] = Missing/DK OR K7 [Natural gas tenant metering] = Missing/DK OR K8 [Metered natural gas data access] = Missing/DK
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	What is the job title of the person who has this information?
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	No changes required
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
Enter job title	
NONRESPONSE	• Explicit DK • Explicit RF **X** Missing Item Prompt Box • Allow Blank
NEXT	➔ L1 [Response effort]

Section L: Summary Questions

L1	**Response effort** {ResponseEffort} *REFFORT*		
ASK	All structures		
QUESTION TEXT – interviewer-administered			
Show Card	N/A		
Question Text	Including yourself, please tell me how many people were needed to compile the information for this interview.		
Interviewer Instructions	N/A		
QUESTION TEXT – web			
Question Text	Including yourself, how many people were needed to compile the information for this questionnaire?		
Respondent Instructions	N/A		
ITEM TYPE	• Enumerated **X** Numeric • String Text • Date		
RESPONSE OPTIONS			
Numeric			
Watermark		**Label**	**Range**
Enter a number		None	1 to 99
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank		
NEXT	➔ L2 [Final comments]		

L2	**Final comments** {FinalComments} *FINLCMTS*
ASK	All structures
FILL	**{Structure}** IF Interview = Building OR Mall = “building” IF Interview = Establishment = “establishment”
QUESTION TEXT – interviewer-administered	
Show Card	N/A
Question Text	Thank you for helping us learn about energy use in buildings. If you have any additional information about this {Structure} or thoughts about the survey, please share them now.
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	Thank you for helping us learn about energy use in buildings. If you have any additional information about this {Structure} or thoughts about the survey, please enter them here.
Respondent Instructions	N/A
ITEM TYPE	• Enumerated • Numeric **X** String Text • Date
RESPONSE OPTIONS	
String Text	
Watermark	
None	
NONRESPONSE	• Explicit DK • Explicit RF • Missing Item Prompt Box **X** Allow Blank
NEXT	➔ L3 [Finish survey]

L3	**Finish survey** {FinishSurvey}
ASK	All structures
QUESTION TEXT – interviewer-administered	
Show Card	To complete the survey, please select the “Finish” button below.
Question Text	N/A
Interviewer Instructions	N/A
QUESTION TEXT – web	
Question Text	To complete the survey, please select the “Finish” button below.
Respondent Instructions	N/A
ITEM TYPE	No space for answer, just Finish button.
NONRESPONSE	N/A
NEXT	TERMINATE