

# 2012 Commercial Buildings Energy Consumption Survey (CBECS)

## Building Questionnaire – Form EIA-871A

### HOW TO USE THIS QUESTIONNAIRE

The 2012 Commercial Buildings Energy Consumption Survey (CBECS) will be conducted using a *computer-assisted interview* programmed using a software called Blaise. A professional interviewer will administer the questionnaire to the building respondent using a laptop computer. The purpose of this paper representation of the questionnaire is to document the question text, fills, and skip patterns within the 2012 CBECS questionnaire.

**PLEASE NOTE:** All the question fills and skip patterns were handled automatically by the software and will be transparent to the interviewer, so this document appears much more complex than the actual CBECS instrument.

Each question is formatted as follows:

<b>A1</b>	<b>Question name</b>	<i>SASVAR</i>
<b>ASK</b>		
<b>FILL</b>		
Question text		
<b>RANGE</b>		
<b>NEXT</b>		

The **black box** (A1 here) contains a question number, followed by the **Question name** and the *SAS variable* (if applicable) in the same row. If the *SAS variable* area says “*see below*,” the variables are found within the Question text box.

The **ASK** line describes what needs to be true for a question to be asked for a particular building.

There is one variable that is preloaded into each case and used for routing in some questions:

- Freestanding – a building that is not attached on any sides

The **FILL** line describes any question fills and the conditions under which each appears. If the fill appears as something such as “A6 [Square footage]” this means that the figure given in question A1 will be filled in.

The **Question text** box shows the question text, and any other elements for each question, such as Show Card indicators or instructions, and the answer choices for each question.

The **RANGE** line is only applicable to numeric questions. It shows the range of answers that will be accepted by Blaise.

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 (⇒).

## WORKSHEET AND RESPONDENT QUESTIONS

<b>R1</b>	<b>Consent</b>
<b>ASK</b>	All Buildings
	[F1]-Help  Some parts of this interview will be recorded for quality control purposes. I'd like to continue now unless you have any questions.  ◆ For FAQs, press [F1] - Help  1 Gives consent to record interview 2 Does <u>not</u> give consent to record interview
<b>NEXT</b>	IF First time case started OR Restart but not done with Section E → R2 [Worksheet 1] OTHERWISE → R4 [Respondent function]

<b>R2</b>	<b>Worksheet 1</b>	<i>R1WS1 – RXWS1</i>
<b>ASK</b>	All cases not yet done with Section E	
	Do you have Worksheet 1 with you and completed?  1 Yes 2 No	
<b>NEXT</b>	IF First time case started → R3 [Respondent function] IF Restart → R4 [Respondent function]	

<b>R3</b>	<b>Respondent function</b>	<i>R1JOB</i>
<b>ASK</b>	All cases on first start	
<p>□ SHOW CARD 1</p> <p>◆ Take out the Show Card booklet or make sure the respondent has access to them. It is <u>very important</u> to use these cards, as some of them contain more information than can be found on your CAPI screens</p> <p>Before we get started, we need to make sure that we have Show Cards available for some of the questions. Please turn to Show Card 1.</p> <p>Looking at this list, please tell me which of these best describes your job function.</p> <ol style="list-style-type: none"> <li>1 Operations, maintenance, or engineering</li> <li>2 Property management</li> <li>3 Store management</li> <li>4 Mall management</li> <li>5 Administration or company management</li> <li>6 Energy or environmental management</li> <li>7 Building owner</li> <li>8 Business owner</li> <li>9 Accounting, finances, or payroll</li> <li>10 Executive official</li> <li>11 School official</li> <li>12 Religious official</li> <li>13 Support staff</li> <li>14 Other</li> </ol>		
<b>NEXT</b>	IF Other → R5 [Other job function] Anything but Other → A1 [Building name]	

<b>R4</b>	<b>Respondent function</b>	<i>R2JOB – RXJOB</i>
<b>ASK</b>	All restarted cases	
	<p>◆ ASK if interview is with a new respondent</p> <p>◆ If interview is with same respondent as previous interview, ENTER "0"</p> <p>☐☐ SHOW CARD 1</p> <p>Before we get started, we need to make sure that we have Show Cards available for some of the questions. Please turn to Show Card 1.</p> <p>Looking at this list, please tell me which of these best describes your job function.</p> <ul style="list-style-type: none"> <li>0 Same respondent as previous interview</li> <li>1 Operations, maintenance, or engineering</li> <li>2 Property management</li> <li>3 Store management</li> <li>4 Mall management</li> <li>5 Administration or company management</li> <li>6 Energy or environmental management</li> <li>7 Building owner</li> <li>8 Business owner</li> <li>9 Accounting, finances, or payroll</li> <li>10 Executive official</li> <li>11 School official</li> <li>12 Religious official</li> <li>13 Support staff</li> <li>14 Other</li> </ul>	
<b>NEXT</b>	IF Other → R5 [Other job function] Anything but Other → A1 [Building name]	

<b>R5</b>	<b>Other job function</b>	<i>R1JOBX – RXJOBX</i>
<b>ASK</b>	IF R3 [Respondent function] = Other OR R4 [Respondent function] = Other	
	What is your job function?	
<b>NEXT</b>	→ R6 [Building boundaries]	

<b>R6</b>	<b>Building boundaries</b>
<b>ASK</b>	All Buildings
<p>The building that we're going to be talking about today is...</p> <ul style="list-style-type: none"><li>◆ EXP: [Describe the boundaries of the building as described in the header. The amount of detail necessary will vary by the situation.]</li><li>◆ ENTER "1" to continue</li></ul>	
<b>NEXT</b>	→ A1 [Building name]

**SECTION A: BUILDING SIZE AND AGE**

<b>A1</b>	<b>Building name</b>	<i>BLDGNAM</i>
<b>ASK</b>	All Buildings	
<p>By what name is this building most commonly referred?</p> <p>◆ EXP: [This may be the name of the building or the name of the largest business or organization within the building.]</p>		
<b>NEXT</b>	→ A2 [Street address]	

<b>A2</b>	<b>Street address</b>	<i>ADDRESS</i>
<b>ASK</b>	All Buildings	
<p>Please tell me the address of the building, beginning with the street address.</p>		
<b>NEXT</b>	→ A3 [City]	

<b>A3</b>	<b>City</b>	<i>CITY</i>
<b>ASK</b>	All Buildings	
<p>What is the city?</p>		
<b>NEXT</b>	→ A4 [State]	

<b>A4</b>	<b>State</b>	<i>STATE</i>
<b>ASK</b>	All Buildings	
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>		[F1]-HELP
<b>NEXT</b>	→ A5 [ZIP code]	

<b>A5</b>	<b>ZIP code</b>	<i>ZIP</i>
<b>ASK</b>	All Buildings	
And what is the ZIP code?		
<b>NEXT</b>	→ A6 [Square footage]	

<b>A6</b>	<b>Square footage</b>	<i>SQFT</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<b>{Worksheet1Intro}</b> IF R has Worksheet 1 = "Please refer to Worksheet 1 for some of these next questions on general characteristics." OTHERWISE = BLANK	
[F1]-HELP		
{Worksheet1Intro}  What is the gross or total square footage of all the space in this building both finished and unfinished, including basements, hallways, lobbies, stairways, elevator shafts, and indoor parking levels?  ◆ DEF: [Total square footage = Length of building multiplied by width of building multiplied by the number of floors.]  ◆ VERIFY number <u>digit by digit</u>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	IF DK/RF → A12 [Square footage category] IF 1,000 square feet or less → A13 [End of interview] OTHERWISE → A7 [Square footage includes parking]	

<b>A7</b>	<b>Square footage includes parking</b>	<i>SQFTRK</i>
<b>ASK</b>	IF A6 [Square footage] ≠ DK/RF	
Does this square footage include any parking areas?  1 Yes 2 No		
<b>NEXT</b>	IF Yes → A8 [Parking enclosed or open] IF No/DK/RF → A11 [Square footage includes common]	

<b>A8</b>	<b>Parking enclosed or open</b>	<i>PRKENCL</i>
<b>ASK</b>	IF A7 [Square footage includes parking] = Yes	
<p>Are these parking areas completely enclosed, such as underground parking levels, or are they open to the outside, with open spaces in the walls?</p> <p>1 Completely enclosed 2 Open to the outside</p>		
<b>NEXT</b>	IF Completely enclosed OR DK/RF → A9 [Parking separate or part of building] IF Open to the outside → A10 [Sq ft of open or separate parking]	

<b>A9</b>	<b>Parking separate or part of building</b>	<i>PRKSEP</i>
<b>ASK</b>	IF A8 [Parking enclosed or open] = Completely enclosed OR DK/RF	
<p>Are these parking areas in a completely separate structure, connected to the building only by a walkway or tunnel, or are they a part of the building itself?</p> <p>1 Completely separate 2 Connected by walkway or tunnel 3 Part of the building</p>		
<b>NEXT</b>	IF Completely separate, Connected by walkway or tunnel OR DK/RF → A10 [Sq ft of open or separate parking] IF Part of the building → A11 [Square footage includes common]	

<b>A10</b>	<b>Sq ft of open or separate parking</b>	<i>PRKSQFT</i>
<b>ASK</b>	IF A8 [Parking enclosed or open] = Open to the outside OR A9 [Parking separate or part of building] = Completely separate, Connected by walkway or tunnel OR DK/RF	
<p>What is the square footage of these parking areas (that you included in the total square footage of the building)?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ A11 [Square footage includes common]	



<b>A11</b>	<b>Square footage includes common</b>	<i>SQFTCOM</i>
<b>ASK</b>	IF A6 [Square footage] ≠ DK/RF	
<b>FILL</b>	{SqFt} = "A6 [Square footage]"	
<p>Does the building's {SqFt} square feet include all the common and unoccupied areas such as hallways, lobbies, stairways, and mechanical rooms?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ A14 [Wall construction material]	

<b>A12</b>	<b>Square footage category</b>	<i>SQFTC</i>
<b>ASK</b>	IF A6 [Square footage] = DK/RF	
<p style="text-align: right;">[F1]-HELP</p> <p>□ SHOW CARD A1</p> <p>I understand that it may be difficult to give an exact figure for square footage. However, the size of your building is very important in helping understand its use of energy.</p> <p>Please look at Show Card A1 and tell me which category best describes the total gross square footage in this building. There are examples provided to help you estimate.</p> <p>◆ If respondent gives the category code, VERIFY the response by reading the full answer</p> <p>1 1,000 square feet or less 2 1,001 to 5,000 square feet 3 5,001 to 10,000 square feet 4 10,001 to 25,000 square feet 5 25,001 to 50,000 square feet 6 50,001 to 100,000 square feet 7 100,001 to 200,000 square feet 8 200,001 to 500,000 square feet 9 500,001 to 1 million square feet 10 Over 1 million square feet</p>		
<b>NEXT</b>	IF 1,000 square feet or less → A13 [End of interview] IF Over 1,000 square feet OR DK/RF → A14 [Wall construction material]	

<b>A13</b>	<b>End of interview</b>
<b>ASK</b>	IF A6 [Square footage] ≤ 1000
<b>FILL</b>	<b>{CollectWorksheet}</b> IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."
<p>Thank you, that's all the questions that I have at this time, since we are only interviewing buildings that are larger than one thousand square feet. {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>A14</b>	<b>Wall construction material</b>	WLCNS
<b>ASK</b>	All Buildings	
<p>□ SHOW CARD A2</p> <p>Please look at Show Card A2 for a list of different types of construction materials. Which of these best describes the major type of exterior wall construction material used on this building?</p> <ol style="list-style-type: none"> <li>1 Brick, stone, or stucco</li> <li>2 Pre-cast concrete panels</li> <li>3 Concrete block or poured concrete (above grade)</li> <li>4 Aluminum, asbestos, plastic, or wood siding, shingles, tiles, or shakes</li> <li>5 Sheet metal panels</li> <li>6 Window or vision glass (glass that can be seen through)</li> <li>7 Decorative or construction glass</li> <li>8 IF VOLUNTEERED: No one major type</li> <li>9 IF VOLUNTEERED: Other</li> </ol>		[F1]-HELP
<b>NEXT</b>	→ A15 [Roof construction material]	

<b>A15</b>	<b>Roof construction material</b>	<i>RFCNS</i>
<b>ASK</b>	All Buildings	
<p><input type="checkbox"/> SHOW CARD A3</p> <p>Please look at Show Card A3 for a list of different types of roofing materials. Which of these best describes the building's predominant exterior roof surface?</p> <ol style="list-style-type: none"> <li>1 Built-up (tar, felts, or fiberglass and a ballast, such as stone)</li> <li>2 Slate or tile shingles</li> <li>3 Wood shingles, shakes, or other wooden materials</li> <li>4 Asphalt, fiberglass, or other shingles</li> <li>5 Metal surfacing</li> <li>6 Plastic, rubber, or synthetic sheeting (single or multiple ply)</li> <li>7 Concrete</li> <li>8 IF VOLUNTEERED: No one major type</li> <li>9 IF VOLUNTEERED: Other</li> </ol>		[F1]-HELP
<b>NEXT</b>	→ A16 [Cool roof materials]	

<b>A16</b>	<b>Cool roof materials</b>	<i>RFCOOL</i>
<b>ASK</b>	All Buildings	
<p>Is the roof of this building designed to reduce solar heat gain, also known as a "cool roof"?</p> <p>◆ EXP: [Roofs with a highly reflective surface, a ballasted roof system, a vegetated roof system, or any combination of these technologies should be considered a "cool roof".]</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	→ A17 [Roof tilt]	

<b>A17</b>	<b>Roof tilt</b>	<i>RFTILT</i>
<b>ASK</b>	All Buildings	
<p><input type="checkbox"/> SHOW CARD A4</p> <p>Looking at Show Card A4, please tell me which best describes the tilt or pitch of the roof of this building.</p> <ol style="list-style-type: none"> <li>1 Flat</li> <li>2 Shallow pitch</li> <li>3 Steeper pitch</li> </ol>		
<b>NEXT</b>	IF Freestanding → A18 [Building shape] OTHERWISE → A22 [Number of floors]	

<b>A18</b>	<b>Building shape</b>	<i>BLDSHP</i>
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<b>ASK</b>	IF Freestanding
<p>☐ SHOW CARD A5</p> <p>Looking at Show Card A5, which of these shapes most resembles the floorplan of this building at ground level? This is sometimes called the "footprint" of the building.</p> <ol style="list-style-type: none"> <li>1 Square</li> <li>2 Wide rectangle</li> <li>3 Narrow rectangle</li> <li>4 Rectangle or square with an interior courtyard</li> <li>5 "H" shaped</li> <li>6 "U" shaped</li> <li>7 "E" shaped</li> <li>8 "T" shaped</li> <li>9 "L" shaped</li> <li>10 "+" or cross shaped</li> <li>11 Other shape</li> </ol>	
<b>NEXT</b>	➔ A19 [Percent exterior glass]

<b>A19</b>	<b>Percent exterior glass</b>	<i>GLSSPC</i>
<b>ASK</b>	IF Freestanding	
<p>☐ SHOW CARD A6</p> <p>Which of the ranges on Show Card A6 best describes the percent of the exterior wall surface of this building that is covered with window glass or glass doors?</p> <ol style="list-style-type: none"> <li>1 1 percent or less</li> <li>2 2 to 10 percent</li> <li>3 11 to 25 percent</li> <li>4 26 to 50 percent</li> <li>5 51 to 75 percent</li> <li>6 76 to 100 percent</li> </ol>		
<b>NEXT</b>	➔ A20 [Equal glass on all sides]	

<b>A20</b>	<b>Equal glass on all sides</b>	<i>EQGLSS</i>
<b>ASK</b>	IF Freestanding	
<p>Is the amount of glass about the same for all sides of the building?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes ➔ A22 [Number of floors] IF No OR DK/RF ➔ A21 [Glass sides most sunlight]	

<b>A21</b>	<b>Glass sides most sunlight</b>	<i>SUNGLS</i>
<b>ASK</b>	IF Freestanding & A20 [Equal glass on all sides] = No OR DK/RF	
<p>Do the sides receiving direct sunlight have more or less glass area than the sides that do not receive direct sunlight?</p> <p>1 More glass area  2 Less glass area  3 IF VOLUNTEERED: About the same amount</p>		
<b>NEXT</b>	→ A22 [Number of floors]	

<b>A22</b>	<b>Number of floors</b>	<i>NFLOOR</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
<p>How many floors are in the tallest section of the building, including basements, parking levels, or any other floors below ground level, but excluding half-floors, mezzanines, balconies, and lofts?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Only one floor OR DK/RF → A24 [Floor-to-ceiling height] IF More than one floor → A23 [Number of underground floors]	

<b>A23</b>	<b>Number of underground floors</b>	<i>BASEMNT</i>
<b>ASK</b>	IF A22 [Number of floors] > 1	
<p>How many of these floors are below ground (or partially below ground)?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ A24 [Floor-to-ceiling height]	

<b>A24</b>	<b>Floor-to-ceiling height</b>	<i>FLCEILHT</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<b>{Floors}</b> IF A22 [Number of floors] = 1 = "in this building" ELSE IF A22 [Number of floors] = DK/RF = "of the floors in this building" OTHERWISE = "of these floors"	
<p>What is the typical floor-to-ceiling height {Floors}?</p> <ul style="list-style-type: none"> <li>◆ DEF: [Floor-to-ceiling height is the distance, in feet, from the floor to the ceiling surface.]</li> <li>◆ EXP: [If it varies by floor, ask for the height of the majority of floors.]</li> </ul>		
<b>RANGE</b>	5 to 500	
<b>NEXT</b>	→ A25 [Attic]	

<b>A25</b>	<b>Attic</b>	<i>ATTIC</i>
<b>ASK</b>	All Buildings	
<p>Does the building have an attic?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF A22 [Number of floors] = 1 → A30 [Year of construction] IF A22 [Number of floors] > 1 OR DK/RF → A26 [Elevators]	

<b>A26</b>	<b>Elevators</b>	<i>ELEVTR</i>
<b>ASK</b>	IF A22 [Number of floors] >1 OR DK/RF	
<p>Are there any elevators in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → A27 [Number of elevators] IF No OR DK/RF → A28 [Escalators]	

<b>A27</b>	<b>Number of elevators</b>	<i>NELVTR</i>
<b>ASK</b>	IF A26 [Elevators] = Yes	
<p>How many elevators are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	→ A28 [Escalators]	

<b>A28</b>	<b>Escalators</b>	<i>ESCLTR</i>
<b>ASK</b>	IF A22 [Number of floors] >1 OR DK/RF	
<p>Are there any escalators in this building?</p> <p>◆ EXP: ["Moving sidewalks" should be included as escalators.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → A29 [Number of escalators] IF No OR DK/RF → A30 [Year of construction]	

<b>A29</b>	<b>Number of escalators</b>	<i>NESLTR</i>
<b>ASK</b>	IF A28 [Escalators] = Yes	
<p>How many escalators are there? Count <u>each</u> one, for example, a pair of up and down escalators should be counted as two.</p> <p>◆ EXP: ["Moving sidewalks" should be counted as escalators.]</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 99	
<b>NEXT</b>	→ A30 [Year of construction]	

<b>A30</b>	<b>Year of construction</b>	YRCON
<b>ASK</b>	All Buildings	
		[F1]-HELP
	What year was this building constructed? If there have been major additions, give the year the <u>largest portion</u> of the building was completed.	
<b>RANGE</b>	1600 to 2013	
<b>NEXT</b>	IF DK/RF → A31 [Year of construction category] IF 2012 → A33 [Month ready for occupancy] IF 2013 → A32 [End of interview] IF 2007 or earlier → A34 [Renovations] IF 2008 or later → B1 [One activity in building]	

<b>A31</b>	<b>Year of construction category</b>	YRCONC
<b>ASK</b>	IF A30 [Year of construction] = DK/RF	
		[F1]-HELP
	<input type="checkbox"/> SHOW CARD A7  Please look at Show Card A7 and tell me which range best describes when this building was constructed.	
	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 2003 9 2004 to 2007 10 2008 to 2012 12 IF VOLUNTEERED: 2013	
<b>NEXT</b>	IF 2013 → A32 [End of interview] IF Any category (OR DK/RF) except 2008 to 2012 → A34 [Renovations] IF 2008 to 2012 → B1 [One activity in building]	



<b>A32</b>	<b>End of interview</b>
<b>ASK</b>	IF A30 [Year of construction] OR A31 [Year of construction category] = 2013
<b>FILL</b>	<b>{CollectWorksheet}</b> IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."
<p>Thank you, that's all the questions that I have at this time, since we are only interviewing structures that were ready for occupancy before January 1, 2013. {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>A33</b>	<b>Month ready for occupancy</b>	<i>MONCON</i>
<b>ASK</b>	IF A30 [Year of construction] = 2012	
<p>In what month of 2012 was this building first ready for occupancy?</p> <ol style="list-style-type: none"> <li>1 January</li> <li>2 February</li> <li>3 March</li> <li>4 April</li> <li>5 May</li> <li>6 June</li> <li>7 July</li> <li>8 August</li> <li>9 September</li> <li>10 October</li> <li>11 November</li> <li>12 December</li> </ol>		[F1]-HELP
<b>NEXT</b>	→ B1 [One activity in building]	

<b>A34</b>	<b>Renovations</b>	<i>RENOV</i>
<b>ASK</b>	IF A30 [Year of construction] = 2007 or earlier OR A31 [Year of construction category] = Any category (OR DK/RF) except 2008 to 2012	
<b>FILL</b>	<b>{Since1990orConstructed}</b> IF A30 [Year of construction] = 1990 or later OR A31 [Year of construction category] = 1990 to 1999, 2000 to 2003, OR 2004 to 2007 = "since it was constructed" OTHERWISE = "since 1990"	
<p>Has any portion of this building undergone renovations {Since1990orConstructed}?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → A35 [What renovations] IF No OR DK/RF → B1 [One activity in building]	

<b>A35</b>	<b>What renovations</b>	<i>see below</i>																																													
<b>ASK</b>	IF A34 [Renovations] = Yes																																														
<b>FILL</b>	<b>{Since1990orConstructed}</b> IF A30 [Year of construction] = 1990 or later OR A31 [Year of construction category] = 1990 to 1999, 2000 to 2003, OR 2004 to 2007 = "since it was constructed" OTHERWISE = "since 1990"																																														
<p><input type="checkbox"/> SHOW CARD A8</p> <p>Please look at Show Card A8 and tell me which types of renovations have been done {Since1990orConstructed}.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; vertical-align: top;">1</td> <td style="width: 70%;">Addition or annex</td> <td style="width: 20%; text-align: right;"><i>RENADD</i></td> </tr> <tr> <td>2</td> <td>Reduction of enclosed floorspace</td> <td style="text-align: right;"><i>RENRDC</i></td> </tr> <tr> <td>3</td> <td>Interior or exterior cosmetic improvements</td> <td style="text-align: right;"><i>RENCOS</i></td> </tr> <tr> <td>4</td> <td>Interior wall re-configuration</td> <td style="text-align: right;"><i>RENINT</i></td> </tr> <tr> <td>5</td> <td>Roof replacement</td> <td style="text-align: right;"><i>RENFFF</i></td> </tr> <tr> <td>6</td> <td>Exterior wall replacement</td> <td style="text-align: right;"><i>RENWLL</i></td> </tr> <tr> <td>7</td> <td>Window replacement</td> <td style="text-align: right;"><i>RENWIN</i></td> </tr> <tr> <td>8</td> <td>HVAC equipment upgrade</td> <td style="text-align: right;"><i>RENHVC</i></td> </tr> <tr> <td>9</td> <td>Lighting upgrade</td> <td style="text-align: right;"><i>RENLGT</i></td> </tr> <tr> <td>10</td> <td>Plumbing system upgrade</td> <td style="text-align: right;"><i>RENPLB</i></td> </tr> <tr> <td>11</td> <td>Electrical upgrade</td> <td style="text-align: right;"><i>RENELC</i></td> </tr> <tr> <td>12</td> <td>Insulation upgrade</td> <td style="text-align: right;"><i>RENINS</i></td> </tr> <tr> <td>13</td> <td>Fire, safety, or security upgrade</td> <td style="text-align: right;"><i>RENSAF</i></td> </tr> <tr> <td>14</td> <td>Structural upgrade</td> <td style="text-align: right;"><i>RENSTR</i></td> </tr> <tr> <td>15</td> <td>Other</td> <td style="text-align: right;"><i>RENOTH</i></td> </tr> </table>			1	Addition or annex	<i>RENADD</i>	2	Reduction of enclosed floorspace	<i>RENRDC</i>	3	Interior or exterior cosmetic improvements	<i>RENCOS</i>	4	Interior wall re-configuration	<i>RENINT</i>	5	Roof replacement	<i>RENFFF</i>	6	Exterior wall replacement	<i>RENWLL</i>	7	Window replacement	<i>RENWIN</i>	8	HVAC equipment upgrade	<i>RENHVC</i>	9	Lighting upgrade	<i>RENLGT</i>	10	Plumbing system upgrade	<i>RENPLB</i>	11	Electrical upgrade	<i>RENELC</i>	12	Insulation upgrade	<i>RENINS</i>	13	Fire, safety, or security upgrade	<i>RENSAF</i>	14	Structural upgrade	<i>RENSTR</i>	15	Other	<i>RENOTH</i>
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<b>NEXT</b>	IF Other ⇒ A36 [Other renovation] OTHERWISE → B1 [One activity in building]																																														

<b>A36</b>	<b>Other renovation</b>
<b>ASK</b>	IF A35 [What renovations] = Other
Please describe the other type of renovation.  ◆ RECORD in open box	
<b>NEXT</b>	→ B1 [One activity in building]

**SECTION B: BUILDING ACTIVITY**

<b>B1</b>	<b>One activity in building</b>	<i>ONEACT</i>
<b>ASK</b>	All Buildings	
<p><input type="checkbox"/> SHOW CARD B1</p> <p>Looking at the list of activities on Show Card B1, does one <u>single</u> activity account for 75 percent or more of the floorspace in the building?</p> <p>1 Yes 2 No</p>		[F1]-HELP
<b>NEXT</b>	IF Yes → B2 [Primary activity] IF No OR DK/RF → B3 [Activities in building]	

<b>B2</b>	<b>Primary activity</b>	<i>ACT</i>
<b>ASK</b>	IF B1 [One activity in building] = Yes	
<input type="checkbox"/> SHOW CARD B1		[F1]-HELP <input type="checkbox"/>
<p>Which one of the activities listed on Show Card B1 accounts for 75 percent or more of the floorspace in the building?</p> <p>◆ PROBE if DK</p> <ul style="list-style-type: none"> <li>11 Office/Professional</li> <li>12 Data center/Computer "server farm"</li> <li>13 Warehouse/Storage</li> <li>14 Food sales or service</li> <li>15 Enclosed mall</li> <li>16 Retail (other than mall)</li> <li>17 Education</li> <li>18 Religious worship</li> <li>19 Public assembly</li> <li>20 Health care</li> <li>21 Service</li> <li>22 Lodging</li> <li>23 Public order and safety</li> <li>24 Residential</li> <li>25 Industrial</li> <li>26 Agricultural</li> <li>27 Vacant</li> <li>28 Other</li> </ul>		
<b>NEXT</b>	IF Office/Professional → B5 [Office type] IF Data center/Computer "server farm" → B6 [Verify data center] IF Warehouse/Storage → B9 [Warehouse type] IF Food sales or service → B10 [Food sales or service type] IF Enclosed mall → B41 [Food court] IF Retail → B11 [Retail type] IF Education → B13 [Education type] IF Religious worship → B30 [Assign CBECS Activity = Religious worship] IF Public assembly → B14 [Assembly type] IF Health care → B15 [Health care type] IF Service → B16 [Service type] IF Lodging → B18 [Lodging type] IF Public order and safety → B19 [Public order type] IF Residential → B20 [Residential type] IF Industrial → B8 [Used as warehouse] IF Agricultural → B22 [Space for retail sales] IF Vacant → B23 [Vacant for noncommercial] IF Other → B25 [Other type] IF DK/RF → B42 [On a multibuilding complex]	

<b>B3</b>	<b>Activities in building</b>	<i>ACT1, ACT2, ACT3</i>
<b>ASK</b>	IF B1 [One activity in building] = No OR DK/RF	
<input type="checkbox"/> SHOW CARD B1		[F1]-HELP
<p>Which activities listed on Show Card B1 occupy the most space in this building? Choose up to three.</p> <p>◆ PROBE for any others (up to three)</p> <ul style="list-style-type: none"> <li>11 Office/Professional</li> <li>12 Data center/Computer "server farm"</li> <li>13 Warehouse/Storage</li> <li>14 Food sales or service</li> <li>15 Enclosed mall</li> <li>16 Retail (other than mall)</li> <li>17 Education</li> <li>18 Religious worship</li> <li>19 Public assembly</li> <li>20 Health care</li> <li>21 Service</li> <li>22 Lodging</li> <li>23 Public order and safety</li> <li>24 Residential</li> <li>25 Industrial</li> <li>26 Agricultural</li> <li>27 Vacant</li> <li>28 Other</li> </ul>		
<b>NEXT</b>	IF Activities given → B4 [Percents for activities] IF DK/RF → B42 [On a multibuilding complex]	

<b>B4</b>	<b>Percents for activities</b>	<i>ACT1PCT, ACT2PCT, ACT3PCT</i>
<b>ASK</b>	For each activity given in B3 [Activities in building]	
<b>FILL</b>	<p><b>{ActivityLabel}</b></p> <p>IF Office/Professional = "office space"</p> <p>IF Data center/Computer "server farm" = "used as a data center"</p> <p>IF Warehouse/Storage = "warehouse space"</p> <p>IF Food sales or service = "used for food sales or service"</p> <p>IF Enclosed mall = "enclosed mall"</p> <p>IF Retail = "used for retail"</p> <p>IF Education = "used for education"</p> <p>IF Religious worship = "used for religious worship"</p> <p>IF Public assembly = "used for public assembly"</p> <p>IF Health care = "used for health care"</p> <p>IF Service = "used for service"</p> <p>IF Lodging = "used for lodging"</p> <p>IF Public order and safety = "used for public order and safety"</p> <p>IF Residential = "residential"</p> <p>IF Industrial = "industrial or manufacturing"</p> <p>IF Agricultural = "agricultural"</p> <p>IF Vacant = "vacant"</p> <p>IF Other = "used for another activity"</p>	
About what percent of the total space is {ActivityLabel}?		
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	<p>IF There is an activity with a maximum percent, assign that as the primary activity</p> <p>IF There are equal maximum percents (e.g. 50% an 50%), or if they are all DK/RF, assign the primary activity as the most energy-intensive one (based on 2003 CBECS data)</p> <p>THEN, follow here based on the assigned primary activity:</p> <p>IF Office/Professional → B5 [Office type]</p> <p>IF Data center/Computer "server farm" → B6 [Verify data center]</p> <p>IF Warehouse/Storage → B9 [Warehouse type]</p> <p>IF Food sales or service → B10 [Food sales or service type]</p> <p>IF Enclosed mall → B41 [Food court]</p> <p>IF Retail → B11 [Retail type]</p> <p>IF Education → B13 [Education type]</p> <p>IF Religious worship → B30 [Assign CBECS Activity = Religious worship]</p> <p>IF Public assembly → B14 [Assembly type]</p> <p>IF Health care → B15 [Health care type]</p> <p>IF Service → B16 [Service type]</p> <p>IF Lodging → B18 [Lodging type]</p> <p>IF Public order and safety → B19 [Public order type]</p> <p>IF Residential → B20 [Residential type]</p> <p>IF Industrial → B8 [Used as warehouse]</p> <p>IF Agricultural → B22 [Space for retail sales]</p> <p>IF Vacant → B23 [Vacant for noncommercial]</p> <p>IF Other → B25 [Other type]</p>	

<b>B5</b>	<b>Office type</b>	<i>OFFCSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Office/Professional	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of office.” OTHERWISE = BLANK	
<input type="checkbox"/> SHOW CARD B3  {ActivityExplanation}  Looking at the list on Show Card B3, what type of office is this?  <ol style="list-style-type: none"> <li>1 Administrative or professional office building (e.g. consulting, insurance, law, utility/telephone company, publishing, or college administration)</li> <li>2 Government office</li> <li>3 Mixed-use office</li> <li>4 Bank or other financial institution</li> <li>5 Doctor's or dentist's office</li> <li>6 Sales or leasing office (e.g. vehicles or real estate)</li> <li>7 Contractor's office (e.g. construction, plumbing, or HVAC)</li> <li>8 Non-profit or social services office</li> <li>9 Research and development office</li> <li>10 City hall or city center</li> <li>11 Religious office</li> <li>12 Call center</li> <li>13 Courthouse or probation office</li> <li>14 Library</li> <li>15 Veterinarian's office</li> <li>16 Vacant</li> <li>17 Other type of office</li> </ol>		
<b>NEXT</b>	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; OR Call center → B30 [Assign CBECS Activity = Office] IF Courthouse or probation office → B30 [Assign CBECS Activity = Public order and safety] IF Library → B30 [Assign CBECS Activity = Public assembly] IF Veterinarian's office → B30 [Assign CBECS Activity = Outpatient health] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of office → B26 [Specify other activity]	



<b>B6</b>	<b>Verify data center</b>	<i>DATCTR</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Data center/Computer "server farm"	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of data center." OTHERWISE = BLANK	
		[F1]-HELP
	{ActivityExplanation}  A data center or server farm is a group of networked computer servers that are housed in one location, usually a secure area, and perform no other tasks besides server tasks such as data storage and processing.  There are usually many servers stacked in rows of racks, which operate continuously, day and night. Data centers are generally kept very cool and require a dedicated uninterruptible power supply.  Does this accurately describe your building?  1 Yes 2 No	
<b>NEXT</b>	IF Yes → B30 [Assign CBECS Activity = Data center] IF No OR DK/RF → B7 [Classify as office]	

<b>B7</b>	<b>Classify as office</b>	<i>NODCTR</i>
<b>ASK</b>	IF B6 [Verify data center] = No OR DK/RF	
	Then, for the purposes of this study, I am going to classify your building as an office.  ◆ ENTER "1" to continue	
<b>NEXT</b>	→ B30 [Assign CBECS Activity = Office]	

<b>B8</b>	<b>Used as warehouse</b>	<i>WARECHK</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Industrial	
	Is this building used primarily as a warehouse or distribution center?  1 Yes 2 No	
<b>NEXT</b>	IF Yes → B9 [Warehouse type] IF No OR DK/RF → B21 [Space for retail sales]	

<b>B9</b>	<b>Warehouse type</b>	<i>WARESP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Warehouse/Storage	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of warehouse." OTHERWISE = BLANK	
<input type="checkbox"/> SHOW CARD B4  {ActivityExplanation}  Looking at the list on Show Card B4, what type of warehouse is this?  1 Non-refrigerated warehouse or storage building 2 Refrigerated warehouse 3 Distribution or shipping center 4 Public rental storage units 5 Vehicle storage and/or maintenance (car barn) 6 Airplane hangar 7 Vacant 8 Other type of warehouse		[F1]-HELP
<b>NEXT</b>	IF Non-refrigerated warehouse; Distribution or shipping center; OR Public rental storage units → B30 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Refrigerated warehouse → B30 [Assign CBECS Activity = Refrigerated warehouse] IF Vehicle storage and/or maintenance → B30 [Assign CBECS Activity = Service] IF Airplane hangar → B30 [Assign CBECS Activity = Other] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of warehouse → B26 [Specify other activity]	

<b>B10</b>	<b>Food sales or service type</b>	<i>FOODSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Food sales or service	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of food sales or service."  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B5</p> <p>{ActivityExplanation}</p> <p>Looking at list on Show Card B5, what type of food sales or service is this?</p> <ol style="list-style-type: none"> <li>1 Restaurant or cafeteria</li> <li>2 Fast food</li> <li>3 Bar, pub, or lounge</li> <li>4 Grocery store or food market</li> <li>5 Gas station with a convenience store</li> <li>6 Convenience store</li> <li>7 Beer, wine, or liquor store</li> <li>8 Reception hall</li> <li>9 Catering service</li> <li>10 Coffee, doughnut, or bagel shop</li> <li>11 Ice cream or frozen yogurt shop</li> <li>12 Bakery</li> <li>13 Vacant</li> <li>14 Other type of food sales or service</li> </ol>		
<b>NEXT</b>	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 → B30 [Assign CBECS Activity = Food service] IF Grocery store or food market; Gas station with a convenience store; Convenience store; OR Bakery → B30 [Assign CBECS Activity = Food sales] IF Beer, wine, or liquor store → B30 [Assign CBECS Activity = Retail] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of food sales or service → B26 [Specify other activity]	

<b>B11</b>	<b>Retail type</b>	<i>RETLSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Retail	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of retail.”  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B6</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B6, what type of retail is this?</p> <ol style="list-style-type: none"> <li>1 Retail store (e.g. 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)</li> <li>2 Bank or other financial institution</li> <li>3 Convenience store</li> <li>4 Beer, wine, or liquor store</li> <li>5 Rental center (e.g. equipment, furnishings, movies)</li> <li>6 Dealership or showroom for vehicles or boats</li> <li>7 Studio or gallery</li> <li>8 Grocery store or food market</li> <li>9 Photo processing shop</li> <li>10 Copy center or printing service</li> <li>11 Distribution or shipping center</li> <li>12 Gas station with a convenience store</li> <li>13 Gas station (without convenience store)</li> <li>14 Post office or postal center</li> <li>15 Recreation (e.g. gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)</li> <li>16 Repair shop</li> <li>17 Vacant</li> <li>18 Other type of retail</li> </ol>		
<b>NEXT</b>	IF Store → B12 [Type of store] IF Alcoholic beverage store; Rental center; Dealership or showroom; OR Studio or gallery → B30 [Assign CBECS Activity = Retail] IF Bank or other financial institution → B30 [Assign CBECS Activity = Office] IF Convenience store; Grocery store or food market; OR Gas station with a convenience store → B30 [Assign CBECS Activity = Food sales] IF Photo processing shop; Copy center or printing service; Gas station; Post office or postal center; OR Repair shop → B30 [Assign CBECS Activity = Service] IF Distribution or shipping center → B30 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Recreation → B30 [Assign CBECS Activity = Public assembly] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of retail → B26 [Specify other activity]	

<b>B12</b>	<b>Type of store</b>	<i>STORE</i>
<b>ASK</b>	IF B11 [Retail type] = Store	
<p>☐ SHOW CARD B7</p> <p>Looking at the list on Show Card B7, please tell me the type of retail store.</p> <ol style="list-style-type: none"> <li>1 Apparel specialty</li> <li>2 Drug store</li> <li>3 Home center or hardware store</li> <li>4 Electronics or appliance store</li> <li>5 Other specialty merchandise (hard-line goods)</li> <li>6 Department store</li> <li>7 Warehouse club</li> <li>8 Discount or supercenter</li> <li>9 Other type of store</li> </ol>		
<b>NEXT</b>	➔ B30 [Assign CBECS Activity = Retail]	

<b>B13</b>	<b>Education type</b>	<i>EDUCSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Education	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of education.”  OTHERWISE = BLANK</p>	
<p>☐ SHOW CARD B8</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B8, what type of education is this?</p> <ol style="list-style-type: none"> <li>1 Elementary or middle school</li> <li>2 High school</li> <li>3 College or university</li> <li>4 Preschool or daycare</li> <li>5 Adult education</li> <li>6 Career or vocational training</li> <li>7 Religious education</li> <li>8 Library</li> <li>9 Laboratory</li> <li>10 Vacant</li> <li>11 Other type of classroom education</li> </ol>		
<b>NEXT</b>	IF Elementary or middle school; High school; College or university; Preschool or daycare; Adult education; Career or vocational training; OR Religious education → B30 [Assign CBECS Activity = Education] IF Library → B30 [Assign CBECS Activity = Public assembly] IF Laboratory → B30 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of classroom education → B26 [Specify other activity]	

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<b>B14</b>	<b>Assembly type</b>	<i>ASSMSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Public assembly	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of public assembly.”  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B9</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B9, what type of public assembly is this?</p> <ol style="list-style-type: none"> <li>1 Social or meeting (e.g. community center, lodge, meeting hall, convention center, or senior center)</li> <li>2 Recreation (e.g. gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)</li> <li>3 Entertainment or culture (e.g. museum, theater, cinema, sports arena, casino, or night club)</li> <li>4 Library</li> <li>5 Religious worship</li> <li>6 Funeral home</li> <li>7 Student activities center</li> <li>8 Armory</li> <li>9 Exhibition hall</li> <li>10 Broadcasting studio</li> <li>11 Transportation terminal (e.g. airport terminal, bus station, or train station)</li> <li>12 Elementary or middle school</li> <li>13 High school</li> <li>14 Restaurant or cafeteria</li> <li>15 Fast food</li> <li>16 Bar, pub, or lounge</li> <li>17 Vacant</li> <li>18 Other type of public assembly</li> </ol>		
<b>NEXT</b>	IF Social or meeting; Recreation; Entertainment or culture; Library; Funeral home; Student activities center; Armory; Exhibition hall; Broadcasting studio; OR Transportation terminal → B30 [Assign CBECS Activity = Public assembly] IF Religious worship → B30 [Assign CBECS Activity = Religious worship] IF Elementary or middle school; OR High school → B30 [Assign CBECS Activity = Education] IF Restaurant or cafeteria; Fast food; OR Bar → B30 [Assign CBECS Activity = Food service] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of public assembly → B26 [Specify other activity]	

<b>B15</b>	<b>Health care type</b>	<i>HLTHSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Health care	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of health care."  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B10</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B10, what type of health care is this?</p> <ol style="list-style-type: none"> <li>1 Doctor's or dentist's office</li> <li>2 Clinic or other outpatient health care building</li> <li>3 Hospital (inpatient)</li> <li>4 Outpatient rehabilitation center</li> <li>5 Inpatient rehabilitation center</li> <li>6 Nursing home, assisted living center, or other residential care building</li> <li>7 Retirement home</li> <li>8 Veterinarian's office</li> <li>9 Laboratory</li> <li>10 Vacant</li> <li>11 Other type of health care</li> </ol>		
<b>NEXT</b>	IF Clinic or other outpatient health care building; Outpatient rehabilitation center; OR Veterinarian's office → B30 [Assign CBECS Activity = Outpatient health care] IF Hospital (inpatient); OR Inpatient rehabilitation → B30 [Assign CBECS Activity = Inpatient health care] IF Doctor's or dentist's office → B30 [Assign CBECS Activity = Office] IF Nursing home, assisted living center, or other residential care building → B30 [Assign CBECS Activity = Nursing] IF Retirement home → B30 [Assign CBECS Activity = Lodging] IF Laboratory → B30 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of health care → B26 [Specify other activity]	



<b>B16</b>	<b>Service type</b>	<i>SERVSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Service	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of service." OTHERWISE = BLANK	
<input type="checkbox"/> SHOW CARD B11  {ActivityExplanation}  Looking at the list on Show Card B11, what type of service is this?  <ol style="list-style-type: none"> <li>1 Auto service or auto repair shop</li> <li>2 Vehicle storage and/or maintenance (car barn)</li> <li>3 Contractor's office (e.g. construction, plumbing, or HVAC)</li> <li>4 Building and grounds maintenance shop</li> <li>5 Repair shop</li> <li>6 Dry cleaner or laundromat</li> <li>7 Post office, postal center, or mail sorting</li> <li>8 Bank or other financial institution</li> <li>9 Restaurant or cafeteria</li> <li>10 Fast food</li> <li>11 Bar, pub, or lounge</li> <li>12 Car wash</li> <li>13 Gas station with a convenience store</li> <li>14 Gas station (without convenience store)</li> <li>15 Telephone switching facilities</li> <li>16 Photo processing shop</li> <li>17 Beauty parlor or barber shop</li> <li>18 Tanning salon</li> <li>19 Funeral home</li> <li>20 Airplane hangar</li> <li>21 Copy center or printing shop</li> <li>22 Distribution or shipping center</li> <li>23 Kennel</li> <li>24 Library</li> <li>25 Non-profit or social services office</li> <li>26 Preschool or daycare</li> <li>27 Recreation (e.g. gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports)</li> <li>28 Rental center (e.g. equipment, furnishings, movies)</li> <li>29 Public rental storage units</li> <li>30 Student activities center</li> <li>31 Transportation terminal (e.g. airport terminal, bus station, or train station)</li> <li>32 Indoor parking garage</li> <li>33 Vacant</li> <li>34 Other type of service</li> </ol>		

<b>NEXT</b>	<p>IF Dry cleaner or Laundromat → B17 [Dry cleaning onsite]</p> <p>IF Auto service or auto repair shop; Building and grounds maintenance shop; Vehicle storage and/or maintenance; Repair shop; Post office or postal center; Car wash; Gas station (without convenience store); Photo processing shop; Beauty parlor or barber shop; Tanning salon; Copy center or printing shop; OR Kennel → B30 [Assign CBECS Activity = Service]</p> <p>IF Contractor's office; Bank or other financial institution; OR Non-profit or social services office → B30 [Assign CBECS Activity = Office]</p> <p>IF Restaurant or cafeteria; Fast food; OR Bar, pub, or lounge → B30 [Assign CBECS Activity = Food service]</p> <p>IF Gas station with convenience store → B30 [Assign CBECS Activity = Food sales]</p> <p>IF Telephone switching facilities OR Airplane hangar → B30 [Assign CBECS Activity = Other]</p> <p>IF Distribution or shipping center OR Public rental storage units → B30 [Assign CBECS Activity = Nonrefrigerated warehouse]</p> <p>IF Funeral home; Library; Recreation; Student activities center; OR Transportation terminal → B30 [Assign CBECS Activity = Public assembly]</p> <p>IF Preschool or daycare → B30 [Assign CBECS Activity = Education]</p> <p>IF Rental center → B30 [Assign CBECS Activity = Retail]</p> <p>IF Indoor parking garage:  IF B1 [One activity in building] = Yes → B28 [End of interview]  IF B1 [One activity in building] ≠ Yes → B30 [Assign CBECS Activity = Other]</p> <p>IF Vacant:  IF More than one activity → B30 [Assign CBECS Activity = Vacant]  IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant]</p> <p>IF Other type of service → B26 [Specify other activity]</p>
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<b>B17</b>	<b>Dry cleaning onsite</b>	<i>DRYCL</i>
<b>ASK</b>	IF B16 [Service type] = Dry cleaner or laundromat	
<p>Is the dry cleaning or laundry done in this building, or is it done off-site?</p> <p>1 In this building</p> <p>2 Off-site</p>		
<b>NEXT</b>	→ B30 [Assign CBECS Activity = Service]	

<b>B18</b>	<b>Lodging type</b>	<i>LODGSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Lodging	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of lodging.”  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B12</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B12, what type of lodging is this?</p> <ol style="list-style-type: none"> <li>1 Motel or inn</li> <li>2 Hotel</li> <li>3 Dormitory, fraternity, or sorority</li> <li>4 Retirement home</li> <li>5 Nursing home, assisted living center, or other residential care building</li> <li>6 Convent or monastery</li> <li>7 Shelter, orphanage, or children's home</li> <li>8 Halfway house</li> <li>9 Jail, reformatory, or penitentiary</li> <li>10 Vacant</li> <li>11 Other type of lodging</li> </ol>		
<b>NEXT</b>	IF Motel or inn; Hotel; Dormitory, fraternity, or sorority; Retirement home; Convent or monastery; Shelter, orphanage, or children's home; OR Halfway house → B30 [Assign CBECS Activity = Lodging] IF Nursing home, assisted living center, or other residential care building → B30 [Assign CBECS Activity = Nursing] IF Jail, reformatory, or penitentiary → B30 [Assign CBECS Activity = Public order and safety] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of lodging → B26 [Specify other activity]	

<b>B19</b>	<b>Public order type</b>	<i>ORDRSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Public order and safety	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, I will include your building in the general category of public order and safety.”  OTHERWISE = BLANK</p>	
<p><input type="checkbox"/> SHOW CARD B13</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B13, what type of public order and safety is this?</p> <ol style="list-style-type: none"> <li>1 Police station</li> <li>2 Fire station</li> <li>3 Combination police and fire station</li> <li>4 Jail, reformatory, or penitentiary</li> <li>5 Courthouse or probation office</li> <li>6 Halfway house</li> <li>7 Armory</li> <li>8 City hall or city center</li> <li>9 Vacant</li> <li>10 Other type of public order and safety</li> </ol>		
<b>NEXT</b>	IF Police station; Fire station; Combination police and fire station; Jail, reformatory, or penitentiary; OR Courthouse or probation office → B30 [Assign CBECS Activity = Public order and safety] IF Halfway house → B30 [Assign CBECS Activity = Lodging] IF Armory → B30 [Assign CBECS Activity = Public assembly] IF City hall or city center → B30 [Assign CBECS Activity = Office] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Other type of public order and safety → B26 [Specify other activity]	

<b>B20</b>	<b>Residential type</b>	<i>RESDSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Residential	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of residential." OTHERWISE = BLANK	
<input type="checkbox"/> SHOW CARD B14  {ActivityExplanation}  Looking at the list on Show Card B14, what type of residential is this?  <ol style="list-style-type: none"> <li>1 Hotel</li> <li>2 Motel or inn</li> <li>3 Retirement home</li> <li>4 Shelter, orphanage, or children's home</li> <li>5 Convent or monastery</li> <li>6 Dormitory, fraternity, or sorority</li> <li>7 Nursing home, assisted living center, or other residential care building</li> <li>8 Halfway house</li> <li>9 Other type of residential</li> </ol>		
<b>NEXT</b>	IF Hotel; Motel or inn; Retirement home; Shelter, orphanage, or children's home; Convent or monastery; Dormitory, fraternity, or sorority; OR Halfway house → B30 [Assign CBECS Activity = Lodging] IF Nursing home, assisted living center, or other residential care building → B30 [Assign CBECS Activity = Nursing] IF Other type of residential → B27 [End of interview]	

<b>B21</b>	<b>Space for retail sales</b>	<i>INDRET</i>
<b>ASK</b>	IF (B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Industrial) & B8 [Used as warehouse] = No OR DK/RF	
		[F1]-HELP
Is any of the space in this building used for retail sales of the products that are made here?  <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → B30 [Assign CBECS Activity = Other] IF No OR DK/RF → B27 [End of interview]	

<b>B22</b>	<b>Space for retail sales</b>	<i>AGRRET</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Agricultural	
		[F1]-HELP
	Is any of the space in this building used for retail sales of the products that are grown here?	
	1 Yes 2 No	
<b>NEXT</b>	IF Yes → B30 [Assign CBECS Activity = Other] IF No OR DK/RF → B27 [End of interview]	

<b>B23</b>	<b>Vacant for noncommercial</b>	<i>VACUSE</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] Assigned activity = Vacant	
	Was the vacant space used for or intended to be used for either agricultural, industrial, manufacturing, or residential purposes or as a parking garage?	
	1 Yes 2 No	
<b>NEXT</b>	IF Yes → B29 [End of interview] IF No OR DK/RF: IF B1 [One activity in building] ≠ Yes → B30 [Assign CBECS Activity = Vacant] OTHERWISE → B24 [Completely vacant]	

<b>B24</b>	<b>Completely vacant</b>	<i>VACANT</i>
<b>ASK</b>	IF B1 [One activity in building] = Yes & B2 [Primary activity] = Vacant	
	Is this building <u>completely</u> vacant?	
	1 Yes 2 No	
<b>NEXT</b>	→ B30 [Assign CBECS Activity = Vacant]	

<b>B25</b>	<b>Other type</b>	<i>OTHRSP</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Other	
<b>FILL</b>	<b>{ActivityExplanation}</b> IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, I will include your building in the general category of other types of buildings." OTHERWISE = BLANK	
<input type="checkbox"/> SHOW CARD B15  {ActivityExplanation}  Looking at the list on Show Card B15, what type of other activity is this?  1 Airplane hangar 2 Broadcasting studio 3 Crematorium 4 Entertainment or culture (e.g. museum, theater, cinema, sports arena, casino or night club) 5 Funeral home 6 Laboratory 7 Library 8 Recreation (e.g. gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports) 9 Telephone switching facilities 10 Transportation terminal (e.g. airport terminal, bus station, or train station) 11 Vehicle storage and/or maintenance (car barn) 12 Post office, postal center, or mail sorting 13 Distribution or shipping center 14 Veterinarian's office 15 Vacant 16 Indoor parking garage 17 Agricultural building with some retail space 18 Manufacturing or industrial building with some retail space 19 Other type of building 20 50 percent commercial (for coding use only)		
<b>NEXT</b>	IF Airplane hangar; Crematorium; Telephone switching facilities; Agricultural building with some retail space; Manufacturing or industrial building with some retail space; OR 50 percent commercial → B30 [Assign CBECS Activity = Other] IF Broadcasting studio; Entertainment or culture; Funeral home; Library; Recreation; OR Transportation terminal → B30 [Assign CBECS Activity = Public assembly] IF Laboratory → B30 [Assign CBECS Activity = Laboratory] IF Vehicle storage and/or maintenance OR Post office, postal center, or mail sorting → B30 [Assign CBECS Activity = Service] IF Distribution or shipping center → B30 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Veterinarian's office → B30 [Assign CBECS Activity = Outpatient health care] IF Vacant: IF More than one activity → B30 [Assign CBECS Activity = Vacant] IF Only one activity OR Establishment OR Anchor → B24 [Completely vacant] IF Indoor parking garage: IF B1 [One activity in building] = Yes → B28 [End of interview] IF B1 [One activity in building] ≠ Yes → B30 [Assign CBECS Activity = Other] IF Other type of building → B26 [Specify other activity]	

<b>B26</b>	<b>Specify other activity</b>
<b>ASK</b>	<p>F 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 B13 [Education type] = Other type of classroom education OR  IF B14 [Assembly type] = Other type of public assembly OR  IF B15 [Health care type] = Other type of health care OR  IF B16 [Service type] = Other type of service OR  IF B18 [Lodging type] = Other type of lodging OR  IF B19 [Public order type] = Other type of public order and safety OR  IF B25 [Other type] = Other type of building</p>
<p>Please describe this other type of activity.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Previous question was:</p> <p>B5 [Office type] → B30 [Assign CBECS Activity = Office]  B9 [Warehouse type] → B30 [Assign CBECS Activity = Nonrefrigerated warehouse]  B10 [Food sales or service type] → B30 [Assign CBECS Activity = Food service]  B11 [Retail type] → B30 [Assign CBECS Activity = Retail]  B13 [Education type] → B30 [Assign CBECS Activity = Education]  B14 [Assembly type] → B30 [Assign CBECS Activity = Public assembly]  B15 [Health care type] → B30 [Assign CBECS Activity = Outpatient health care]  B16 [Service type] → B30 [Assign CBECS Activity = Service]  B18 [Lodging type] → B30 [Assign CBECS Activity = Lodging]  B19 [Public order type] → B30 [Assign CBECS Activity = Public order and safety]  B25 [Other type] → B30 [Assign CBECS Activity = Other]</p>

<b>B27</b>	<b>End of interview</b>
<b>ASK</b>	<p>IF B20 [Residential type] = Other type of residential OR B21 [Space for retail sales] = No OR DK/RF  OR B22 [Space for retail sales] = No OR DK/RF</p>
<b>FILL</b>	<p><b>{CollectWorksheet}</b>  IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."</p>
<p>Thank you, that's all the questions that I have at this time, since we are only interviewing commercial buildings.  {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE



<b>B28</b>	<b>End of interview</b>
<b>ASK</b>	IF B16 [Service type] OR B25 [Other type] = Indoor parking garage
<b>FILL</b>	<b>{CollectWorksheet}</b> IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."
<p>Thank you, that's all the questions that I have at this time, since this study does not cover parking garages. {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B29</b>	<b>End of interview</b>
<b>ASK</b>	IF B23 [Vacant for noncommercial] = Yes
<b>FILL</b>	<b>{CollectWorksheet}</b> IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."
<p>Thank you, that's all the questions that I have at this time, since we are only interviewing buildings intended for commercial use. {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B30</b>	<b>Assign CBECS Activity</b>	<i>PBA</i>
<b>NEXT</b>	<p>IF <b>Office</b> IN <b>B3</b> [Activities in building] OR <b>CBECS Activity = Office</b> → B31 [Open plan office space]</p> <p>OTHERWISE:</p> <ol style="list-style-type: none"> <li>1 <b>Vacant</b> → B42 [On a multibuilding complex]</li> <li>2 <b>Office</b> → B31 [Open plan office space]</li> <li>3 <b>Data center</b> → B42 [On a multibuilding complex]</li> <li>4 <b>Laboratory</b> → B42 [On a multibuilding complex]</li> <li>5 <b>Nonrefrigerated warehouse</b> → B42 [On a multibuilding complex]</li> <li>6 <b>Food sales</b> → B42 [On a multibuilding complex]</li> <li>7 <b>Public order and safety</b> → B42 [On a multibuilding complex]</li> <li>8 <b>Outpatient health care</b> → B42 [On a multibuilding complex]</li> <li>11 <b>Refrigerated warehouse</b> → B42 [On a multibuilding complex]</li> <li>12 <b>Religious worship</b> → B34 [Religious worship seating capacity]</li> <li>13 <b>Public assembly</b> → B35 [Assembly seating capacity]</li> <li>14 <b>Education</b> → B36 [Number of classroom seats]</li> <li>15 <b>Food service</b> → B37 [Food service seating capacity]</li> <li>16 <b>Inpatient health care</b> → B38 [Licensed bed capacity]</li> <li>17 <b>Nursing</b> → B39 [Licensed bed capacity]</li> <li>18 <b>Lodging</b> → B40 [Number of guest rooms]</li> <li>24 <b>Enclosed mall</b> → B41 [Food court]</li> <li>25 <b>Retail</b> → B42 [On a multibuilding complex]</li> <li>26 <b>Service</b> → B42 [On a multibuilding complex]</li> <li>91 <b>Other</b> → B42 [On a multibuilding complex]</li> </ol>	

<b>B31</b>	<b>Open plan office space</b>	<i>CUBE</i>
<b>ASK</b>	IF Office IN B3 [Activities in building] OR CBECS Activity = Office	
<p>Is any of the office space in this building set up as open plan offices, such as cubicles?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → B32 [Percent open plan] IF No OR DK/RF: IF CBECS Activity = Enclosed Mall → B41 [Food court] OTHERWISE → B42 [On a multibuilding complex]	

<b>B32</b>	<b>Percent open plan</b>	<i>CUBEC</i>
<b>ASK</b>	IF B31 [Open plan office space] = Yes	
<p>For the office areas in your building, approximately what percentage would you say is open plan? Would you say 1 to 20 percent, 21 to 50, or more than 50 percent of the office space is open plan?</p> <p>1 1 to 20 percent 2 21 to 50 percent 3 More than 50 percent</p>		
<b>NEXT</b>	→ B33 [Location of open plan]	

<b>B33</b>	<b>Location of open plan</b>	<i>CUBELOC</i>
<b>ASK</b>	IF B31 [Open plan office space] = Yes	
<p>Is most of the open plan office space located near the perimeter of the building, that is, within about 15 feet of the exterior walls, or in the core of the building?</p> <p>1 Near perimeter of building 2 In core of building 3 IF VOLUNTEERED: Entire building is open plan</p>		
<b>NEXT</b>	IF CBECS Activity = Enclosed Mall → B41 [Food court] OTHERWISE → B42 [On a multibuilding complex]	

<b>B34</b>	<b>Religious worship seating capacity</b>	<i>RWSEAT</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Religious worship	
		[F1]-HELP
	What is the total seating capacity of the religious worship areas in this building? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B35</b>	<b>Assembly seating capacity</b>	<i>PBSEAT</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Public assembly	
		[F1]-HELP
	What is the fixed seating capacity of the public assembly areas in this building? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B36</b>	<b>Number of classroom seats</b>	<i>EDSEAT</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Education	
		[F1]-HELP
	How many students can be seated in all of the classrooms in this building at one time? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B37</b>	<b>Food service seating capacity</b>	<i>FDSEAT</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Food service	
		[F1]-HELP
	What is the total seating capacity of the food service areas in this building? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B38</b>	<b>Licensed bed capacity</b>	<i>HCBED</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Inpatient health care	
		[F1]-HELP
	What is the inpatient licensed bed capacity in this building? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B39</b>	<b>Licensed bed capacity</b>	<i>NRSBED</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Nursing	
		[F1]-HELP
	What is the skilled or residential care licensed bed capacity in this building? ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B40</b>	<b>Number of guest rooms</b>	<i>LODGRM</i>
<b>ASK</b>	IF B30 [CBECS Activity] = Lodging	
<p>[F1]-HELP</p> <p>How many guest rooms or occupant rooms are there in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B41</b>	<b>Food court</b>	<i>COURT</i>
<b>ASK</b>	IF CBECS Activity = Enclosed mall	
<p>Is there a food court in this mall?</p> <p>◆ EXP: [A food court is a public area with tables and chairs surrounded by various food service establishments which generally offer only counter service.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B42 [On a multibuilding complex]	

<b>B42</b>	<b>On a multibuilding complex</b>	<i>FACIL</i>
<b>ASK</b>	All Buildings	
<p>[F1]-HELP</p> <p>Is this building part of a multibuilding campus or complex?</p> <p>◆ DEF: [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. It may also be referred to as a multibuilding facility.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → B43 [Federal complex] IF No OR DK/RF → C1 [Government owned]	

<b>B43</b>	<b>Federal complex</b>	<i>FEDFAC</i>
<b>ASK</b>	IF B42 [On a multibuilding complex] = Yes	
		[F1]-HELP
Is this <u>campus or complex</u> owned by the Federal government?		
<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>		
<b>NEXT</b>	➔ B44 [Type of complex]	

<b>B44</b>	<b>Type of complex</b>	<i>FACACT</i>
<b>ASK</b>	IF B42 [On a multibuilding complex] = Yes	
		[F1]-HELP
<input type="checkbox"/> SHOW CARD B16		
Looking at the list on Show Card B16, what is the primary business or function of this group of buildings as a whole?		
<ul style="list-style-type: none"> <li>1 College, university, or junior college</li> <li>2 Primary or secondary school [GRADES K-12]</li> <li>3 Other type of school</li> <li>4 Office complex</li> <li>5 Retail complex</li> <li>6 Storage complex</li> <li>7 Religious campus or complex</li> <li>8 Hospital or other health care complex</li> <li>9 Lodging or resort complex</li> <li>10 Post office complex</li> <li>11 Prison or correctional facility</li> <li>12 Other type of government complex</li> <li>13 Industrial complex</li> <li>14 Transportation complex such as a terminal, depot, or airport</li> <li>15 Other type of campus or complex</li> </ul>		
<b>NEXT</b>	IF Industrial complex ➔ B45 [Manufacturing industrial] IF Any other type ➔ B48 [Central physical plant]	

<b>B45</b>	<b>Manufacturing industrial</b>	<i>MANIND</i>
<b>ASK</b>	IF B44 [Type of complex] = Industrial complex	
		[F1]-HELP
	<p>Is it a <u>manufacturing</u> industrial complex?</p> <p>◆ DEF: [Manufacturing industrial complexes involve the production or processing of goods, merchandise, raw materials, or food.]</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → B46 [Same owner as manufacturing] IF No OR DK/RF → B48 [Central physical plant]	

<b>B46</b>	<b>Same owner as manufacturing</b>	<i>MANFAC</i>
<b>ASK</b>	IF B45 [Manufacturing industrial] = Yes	
		[F1]-HELP
	<p>Does this building have the same owner and operator as the manufacturing campus or complex?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → B47 [End of interview] IF No OR DK/RF → B48 [Central physical plant]	

<b>B47</b>	<b>End of interview</b>	
<b>ASK</b>	IF B46 [Same owner as manufacturing] = Yes	
<b>FILL</b>	<b>{CollectWorksheet}</b> IF R has Worksheet 1 = "However, I would like to collect Worksheet 1 and any other worksheets that you may have completed."	
	<p>Thank you, that's all the questions that I have at this time, since this study does not include buildings on manufacturing facilities. {CollectWorksheet}</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE	



<b>B48</b>	<b>Central physical plant</b>	<i>PLANT</i>
<b>ASK</b>	IF B42 [On a multibuilding complex] = Yes & NOT (B44 [Type of complex] = Industrial complex & B45 [Manufacturing industrial] = Yes & B46 [Same owner as manufacturing] = Yes)	
		[F1]-HELP
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 <u>more than one building</u> ?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes → B49 [Plant produces district steam] IF No OR DK/RF → C1 [Government owned]	

<b>B49</b>	<b>Plant produces district steam</b>	<i>FACDST</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes	
		[F1]-HELP
Does the central physical plant produce...		
District steam?		
1 Yes 2 No		
<b>NEXT</b>	→ B50 [Plant produces district hot water]	

<b>B50</b>	<b>Plant produces district hot water</b>	<i>FACDHW</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes	
		[F1]-HELP
(Does the central physical plant produce...)		
District hot water?		
1 Yes 2 No		
<b>NEXT</b>	→ B51 [Plant produces district chilled water]	

<b>B51</b>	<b>Plant produces district chilled water</b>	<i>FACDCW</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes	
		[F1]-HELP
<p>(Does the central physical plant produce...)</p> <p>District chilled water?</p> <p>1 Yes</p> <p>2 No</p>		
<b>NEXT</b>	→ B52 [Plant produces electricity]	

<b>B52</b>	<b>Plant produces electricity</b>	<i>FACELC</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes	
		[F1]-HELP
<p>(Does the central physical plant produce...)</p> <p>Electricity?</p> <p>1 Yes</p> <p>2 No</p>		
<b>NEXT</b>	→ B53 [Central plant in building]	

<b>B53</b>	<b>Central plant in building</b>	<i>BLDPLT</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes	
		[F1]-HELP
<p>Is the central physical plant for this campus or complex located in the building?</p> <p>1 Yes</p> <p>2 No</p>		
<b>NEXT</b>	→ C1 [Government owned]	

**SECTION C. OCCUPANCY AND OPERATING HOURS**

<b>C1</b>	<b>Government owned</b>	<i>GOVOWN</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<p><b>{BldgIntro}</b>                      IF B42 [On a multibuilding complex] = Yes = “For the rest of this survey, I will be asking you only about the <u>building</u>, not the entire campus or complex.”                      OTHERWISE = BLANK  <b>{SchoolExample}</b>                      IF B13 [Education type] = Elementary or middle school OR High school = “, such as a local school district”                      OTHERWISE = BLANK</p>	
		[F1]-HELP
	<p>{BldgIntro}</p> <p>Is this building owned by a government agency {SchoolExample}?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → C2 [Type of government] IF No OR DK/RF → C3 [Owner]	

<b>C2</b>	<b>Type of government</b>	<i>GOVTYP</i>
<b>ASK</b>	IF C1 [Government owned] = Yes	
		[F1]-HELP
	<p>Is it owned by the Federal government, a State government, or a local government?</p> <p>1 Federal 2 State 3 Local</p>	
<b>NEXT</b>	IF B24 [Completely vacant] = Yes → C11 [Owner operates] OTHERWISE → C5 [Number of businesses]	

<b>C3</b>	<b>Owner</b>	<i>OWNER</i>
<b>ASK</b>	IF C1 [Government owned] ≠ Yes	
<p>□ SHOW CARD C1</p> <p>Looking at Show Card C1, please tell me which category best describes the owner of this building.</p> <ol style="list-style-type: none"> <li>1 Real estate investment trust (REIT)</li> <li>2 Other public or private corporation, partnership, LLC, or LLP</li> <li>3 Individual owner(s)</li> <li>4 Religious organization</li> <li>5 Non-profit organization (other than religious or government)</li> <li>6 Private academic institution</li> <li>7 Other</li> </ol>		
<b>NEXT</b>	IF Other → C4 [Other owner] OTHERWISE: IF B24 [Completely vacant] ≠ Yes → C5 [Number of businesses] IF B24 [Completely vacant] = Yes: IF Owner known → C11 [Owner operates] IF DK/RF → C18 [Months in use]	

<b>C4</b>	<b>Other owner</b>	
<b>ASK</b>	IF C3 [Owner] = Other	
Please describe this other owner.  ◆ RECORD in open box		
<b>NEXT</b>	IF B24 [Completely vacant] = Yes → C11 [Owner operates] OTHERWISE → C5 [Number of businesses]	

<b>C5</b>	<b>Number of businesses</b>	<i>NOCC</i>
<b>ASK</b>	IF B24 [Completely vacant] ≠ Yes	
<b>RANGE</b>	0 to 9,999	
		[F1]-HELP
How many different businesses or organizations use space full-time in this building?		
<b>NEXT</b>	IF Zero → C6 [Any occupants] IF =1 & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C9 [Single occupant owner occupies] IF >1 & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C10 [Multi-occupant owner occupies] IF ≥1 & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C18 [Months in use] IF DK/RF → C8 [Number of businesses category]	

<b>C6</b>	<b>Any occupants</b>	VACCHK
<b>ASK</b>	IF C5 [Number of businesses] = Zero & B24 [Completely vacant] ≠ Yes	
<b>FILL</b>	<p><b>{OccExpl}</b>  IF CBECS Activity = Nonrefrigerated warehouse or Refrigerated warehouse = "If goods are stored in the warehouse, then it should be considered to have at least one occupant. Is this warehouse being used for storage?"  OTHERWISE = Unless a building is completely vacant and unused, it should be considered to have at least one occupant. At this time, is any space used by a company, business, school, organization, non-profit company, religious organization, government agency or establishment?</p>	
	[F1]-HELP	
	<p>I do not have this building recorded as being completely vacant. {OccExpl}</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → C7 [Re-ask number of businesses] IF No & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C11 [Owner operates] IF No & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C18 [Months in use] IF DK/RF → C8 [Number of businesses category]	

<b>C7</b>	<b>Re-ask number of businesses</b>	NOCC2
<b>ASK</b>	IF C5 [Number of businesses] = Zero & C6 [Any occupants] = Yes	
	[F1]-HELP	
	With this new information, please tell me again, how many businesses or organizations are there?	
<b>RANGE</b>	1 to 9,999	
<b>NEXT</b>	IF DK/RF → C8 [Number of businesses category] IF Number given=1 & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C9 [Single occupant owner occupies] IF Number given>1 & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C10 [Multi-occupant owner occupies] IF Number given & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C18 [Months in use]	

<b>C8</b>	<b>Number of businesses category</b>	<i>NOCCAT</i>
<b>ASK</b>	IF C5 [Number of businesses] = DK/RF OR C6 [Any occupants] = DK/RF OR C7 [Re-ask number of businesses] = DK/RF	
<input type="checkbox"/> SHOW CARD C2		[F1]-HELP
<p>Which category on Show Card C2 best describes the number of businesses or organizations that use space full-time in this building?</p> <ul style="list-style-type: none"> <li>0 Zero</li> <li>1 One</li> <li>2 2 to 5</li> <li>3 6 to 10</li> <li>4 11 to 20</li> <li>5 21 to 50</li> <li>6 51 to 100</li> <li>7 More than 100</li> </ul>		
<b>NEXT</b>	IF One & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C9 [Single occupant owner occupies] IF Any category except Zero OR One & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C10 [Multi-occupant owner occupies] IF Any category except Zero & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C18 [Months in use] IF Zero OR DK/RF & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C11 [Owner operates] IF Zero OR DK/RF & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C18 [Months in use]	

<b>C9</b>	<b>Single occupant owner occupies</b>	<i>OWNOCC</i>
<b>ASK</b>	IF <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) & C5 [Number of businesses] = 1 OR C8 [Number of businesses category] = One	
<p>Does the owner occupy the building or is it leased to a tenant?</p> <ul style="list-style-type: none"> <li>1 Owner occupies</li> <li>2 Leased to tenant</li> </ul>		
<b>NEXT</b>	→ C11 [Owner operates]	

<b>C10</b>	<b>Multi-occupant owner occupies</b>	<i>OWNOCC</i>
<b>ASK</b>	IF <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) & C5 [Number of businesses] > 1 OR C8 [Number of businesses category] > One	
<p>Is the space in this building occupied by the owner, leased to tenants, or a combination of both?</p> <p>1 Owner occupies 2 Leased to tenants 3 Combination of occupied and leased</p>		
<b>NEXT</b>	→ C11 [Owner operates]	

<b>C11</b>	<b>Owner operates</b>	<i>OWNOPR</i>
<b>ASK</b>	IF <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF)	
<p>Is the building owner responsible for the operation and maintenance of the energy systems?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → C12 [Owner has purchasing power] IF No → C14 [Nonowner operator] IF DK/RF → C18 [Months in use]	

<b>C12</b>	<b>Owner has purchasing power</b>	<i>OWNPPR</i>
<b>ASK</b>	IF C11 [Owner operates] = Yes	
<p>Does the building owner also have direct input on decisions regarding purchases of energy-related equipment?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes OR DK/RF → C18 [Months in use] IF No → C13 [Nonowner with purchasing power]	

<b>C13</b>	<b>Nonowner with purchasing power</b>	<i>NWNPPR</i>
<b>ASK</b>	IF C12 [Owner has purchasing power] = No	
<p>□ SHOW CARD C3</p> <p>Looking at Show Card C3, please tell me who <u>does</u> have direct input (on decisions regarding purchases of energy-related equipment).</p> <ol style="list-style-type: none"> <li>1 Property management company or leasing agent</li> <li>2 Business owner or tenant</li> <li>3 Facilities personnel employed directly by the building owner</li> <li>4 Facilities or energy management consultant</li> <li>5 Volunteer member of the organization</li> <li>6 Manager with general supervisory duties</li> <li>7 Other</li> </ol>		
<b>NEXT</b>	IF Other → C17 [Other with purchasing power] OTHERWISE → C18 [Months in use]	

<b>C14</b>	<b>Nonowner operator</b>	<i>NWNOPR</i>
<b>ASK</b>	IF C11 [Owner operates] = No	
<p>□ SHOW CARD C3</p> <p>Looking at Show Card C3, please tell me who <u>is</u> responsible for the operation and maintenance of the energy systems.</p> <ol style="list-style-type: none"> <li>1 Property management company or leasing agent</li> <li>2 Business owner or tenant</li> <li>3 Facilities personnel employed directly by the building owner</li> <li>4 Facilities or energy management consultant</li> <li>5 Volunteer member of the organization</li> <li>6 Manager with general supervisory duties</li> <li>7 Other</li> </ol>		
<b>NEXT</b>	IF Other → C15 [Other operator] OTHERWISE → C16 [Who has purchasing power]	

<b>C15</b>	<b>Other operator</b>
<b>ASK</b>	IF C14 [Nonowner operator] = Other
<p>Please describe who is responsible for the operation and maintenance of the energy systems.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ C16 [Who has purchasing power]



<b>C16</b>	<b>Who has purchasing power</b>	<i>WHOPPR</i>
<b>ASK</b>	IF C11 [Owner operates] = No	
<p>Who has the most direct input on decisions regarding purchases of energy-related equipment - the building owner or the party who is responsible for the energy systems?</p> <ol style="list-style-type: none"> <li>1 Building owner</li> <li>2 Party responsible for building operations</li> <li>3 IF VOLUNTEERED: Both (either they have equal input, or are the same person)</li> <li>4 IF VOLUNTEERED: Other</li> </ol>		
<b>NEXT</b>	IF Other → C17 [Other with purchasing power] OTHERWISE → C18 [Months in use]	

<b>C17</b>	<b>Other with purchasing power</b>
<b>ASK</b>	IF C16 [Who has purchasing power] = Other
<p>Please describe who has the most direct input on decisions regarding purchases of energy-related equipment.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ C18 [Months in use]

<b>C18</b>	<b>Months in use</b>	<i>MONUSE</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
Thinking of calendar year 2012, for how many months was this building in use?		
<b>RANGE</b>	0 to 12	
<b>NEXT</b>	IF Zero → D1 [Heating] IF 1-12: IF B24 [Completely vacant] = Yes → C19 [Previous use] IF C6 [Any occupants] = No OR C8 [Number of businesses category] = Zero → D1 [Heating] IF CBECs Activity = Office or Enclosed Mall OR Outpatient health care → C20 [Percent occupancy] IF B18 [Lodging type] = Hotel OR Motel or inn OR Retirement home OR B20 [Residential type] = Hotel OR Motel or inn OR Retirement home OR B15 [Health care type] = Retirement home → C21 [Lodging room percent occupancy] IF B14 [Assembly type] = Social or Meeting AND A6 [Square footage] > 50,000 OR A12 [Square footage category] > 50,001 to 100,000 sq ft → C22 [Social/meeting events] IF B10 [Food sales or service type] = Restaurant or cafeteria OR B14 [Assembly type] = Restaurant or cafeteria OR B16 [Service type] = Restaurant or cafeteria → C23 [Restaurant meals] OTHERWISE → C24 [Seasonal use] IF DK/RF → C24 [Seasonal use]	

<b>C19</b>	<b>Previous use</b>
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<b>ASK</b>	IF B24 [Completely vacant] = Yes AND C18 [Months in use] > 0
<p>Since this building was not completely vacant for all of 2012, I'd just like to remind you to think about the equipment and the energy that was used during the time that the building <u>was</u> in use when answering this questionnaire.</p> <p>Also, would you please briefly tell me what the building was used for during the months that it <u>was</u> used in 2012.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ D1 [Heating]

<b>C20</b>	<b>Percent occupancy</b>	<i>OCCUPYP</i>
<b>ASK</b>	IF CBECS Activity = Office OR Enclosed Mall OR Outpatient health care	
<b>FILL</b>	<b>{MonthsInUse}</b> IF C18 [Months in use] < 12 = "Thinking about the months that this building was in use in 2012, about " OTHERWISE = 'In 2012, about '	
{MonthsInUse} what percent of the total floorspace of this building was <u>occupied</u> ? If occupancy varied, please provide an average percent occupancy."		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	C24 [Seasonal use]	

<b>C21</b>	<b>Lodging room percent occupancy</b>	<i>LODOCCP</i>
<b>ASK</b>	IF B18 [Lodging type] = Hotel OR Motel or inn OR Retirement home OR B20 [Residential type] = Hotel OR Motel or inn OR Retirement home OR B15 [Health care type] = Retirement home	
<b>FILL</b>	<b>{LodgeRooms}</b> IF B40 [Number of guest rooms] known = "B40 [Number of guest rooms]" IF B40 [Number of guest rooms] = DK/RF = BLANK	
In 2012, on average, what percent of the {LodgeRooms} guest or occupant rooms in this building were occupied per night?		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	→ C24 [Seasonal use]	

<b>C22</b>	<b>Social/meeting events</b>	<i>EVENTN</i>
<b>ASK</b>	IF B14 [Assembly type] = Social or Meeting AND A6 [Square footage] > 50,000 OR A12 [Square footage category] > 50,001 to 100,000 sq ft	
About how many events were held in this public assembly building in 2012?		
<b>RANGE</b>	0 to 999,999	
<b>NEXT</b>	→ C24 [Seasonal use]	

<b>C23</b>	<b>Restaurant meals</b>	<i>MEALN</i>
<b>ASK</b>	IF B10 [Food sales or service type] = Restaurant or cafeteria OR B14 [Assembly type] = Restaurant or cafeteria OR B16 [Service type] = Restaurant or cafeteria	
About how many meals were served in this food service building in the year 2012?		
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	→ C24 [Seasonal use]	

<b>C24</b>	<b>Seasonal use</b>	<i>SEASONAL</i>
<b>ASK</b>	IF B24 [Completely vacant] ≠ Yes & C6 [Any occupants] ≠ No & C8 [Number of businesses category] ≠ Zero & C18 [Months in use] ≠ Zero	
Is this a seasonal building, that is, were there any months during 2012 when the hours of operation were significantly greater than the rest of the year?		
<p>◆ EXP: [For example, we are looking for buildings in resort towns that drastically reduce their hours during the off season. Do not include retail buildings that are open for extended hours during the holiday season.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → C25 [Months of high season] IF No/DK/RF → C26 [Open 24 hours a day]	

<b>C25</b>	<b>Months of high season</b>	<i>MONHIGH</i>
<b>ASK</b>	IF C24 [Seasonal use] = Yes	
How many months of 2012 were in the “high season,” that is, the months when the hours of operation were significantly greater than the rest of the year?		
<b>RANGE</b>	1 to 12	
<b>NEXT</b>	→ C26 [Open 24 hours a day]	

<b>C26</b>	<b>Open 24 hours a day</b>	<i>OPEN24</i>
<b>ASK</b>	IF B24 [Completely vacant] ≠ Yes & C6 [Any occupants] ≠ No & C8 [Number of businesses category] ≠ Zero & C18 [Months in use] ≠ Zero	
<b>FILL</b>	<b>{SeasonalFill}</b> IF C24 [Seasonal use] = Yes = “Thinking of the months of high seasonal use, now’ OTHERWISE = “Now”	
[F1]-HELP		
<p>{SeasonalFill} I have some questions about the hours that this building is normally open.</p> <p>“Normally open” means the hours when the usual activities occur. Do <u>not</u> consider the building to be open if <u>only</u> maintenance, housekeeping, or security personnel are present.</p> <p>Is this building normally open 24 hours a day, seven days a week?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No OR DK/RF → C27 [Open during week] IF Yes: IF C24 [Seasonal use] = Yes → C32 [Open during the off season] OTHERWISE → C34 [Number of employees]	

<b>C27</b>	<b>Open during week</b>	<i>OPNMF</i>
<b>ASK</b>	IF C26 [Open 24 hours a day] = No OR DK/RF	
[F1]-HELP		
<p>Thinking of Monday through Friday, is this building open all five days, open some of these days, or is it not open at all Monday through Friday?</p> <p>1 All five days 2 Some of these days 3 Not open at all Monday through Friday</p>		
<b>NEXT</b>	→ C28 [Open on weekend]	

<b>C28</b>	<b>Open on weekend</b>	<i>OPNWE</i>
<b>ASK</b>	IF C26 [Open 24 hours a day] = No OR DK/RF	
	<p>Is this building normally open at all on the weekend? <span style="float: right;">[F1]-HELP</span></p> <p>◆ EXP: [If only open one day of the weekend, consider to be open.]</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF C27 [Open during week] = Not open at all Monday through Friday & C28 [Open on weekend] = No → C29 [No operating hours] OTHERWISE → C30 [Total hours open per week]	

<b>C29</b>	<b>No operating hours</b>	<i>NOHRS</i>
<b>ASK</b>	IF C27 [Open during week] = Not open at all Monday through Friday & C28 [Open on weekend] = No	
	<p>I would just like to confirm that this building does not have any normal operating hours? <span style="float: right;">[F1]-HELP</span></p> <p>1 True, no operating hours 2 False, there are operating hours</p>	
<b>NEXT</b>	IF False, there are operating hours OR DK/RF → C30 [Total hours open per week] IF True, no operating hours: IF C24 [Seasonal use] = Yes → C32 [Open during the off season] OTHERWISE → C34 [Number of employees]	

<b>C30</b>	<b>Total hours open per week</b>	<i>WKHRS</i>
<b>ASK</b>	IF (C27 [Open during week] = All five days OR Some of these days) OR C28 [Open on weekend] = Yes OR C29 [No operating hours] = False, there are operating hours	
	<p>How many total hours per week is the building normally open? <span style="float: right;">[F1]-HELP</span></p> <p>◆ DEF: ["Normally open" means the hours when the usual activities occur. Press F1 for detailed definitions by building type.]</p> <p>◆ EXP: [If the hours vary for different parts of the building, ask for the hours for most of the building, based on square footage.]</p>	
<b>RANGE</b>	0 to 168	
<b>NEXT</b>	IF DK/RF → C31 [Weekly hours category] IF C24 [Seasonal use] = Yes → C32 [Open during the off season] OTHERWISE → C34 [Number of employees]	

<b>C31</b>	<b>Weekly hours category</b>	<i>WKHRSC</i>
<b>ASK</b>	IF C30 [Total hours open per week] = DK/RF	
<input type="checkbox"/> SHOW CARD C4		[F1]-HELP
<p>Which category on Show Card C4 best describes the total hours per week that the building is normally open?</p> <ul style="list-style-type: none"> <li>◆ DEF: ["Normally open" means the hours when the usual activities occur. Press F1 for detailed definitions by building type.]</li> <li>◆ EXP: [If the hours vary for different parts of the building, ask for the hours for most of the building, based on square footage.]</li> </ul> <ul style="list-style-type: none"> <li>1 1 to 39</li> <li>2 40 to 48</li> <li>3 49 to 60</li> <li>4 61 to 84</li> <li>5 85 to 167</li> <li>6 168</li> </ul>		
<b>NEXT</b>	IF C24 [Seasonal use] = Yes → C32 [Open during the off season] OTHERWISE → C34 [Number of employees]	

<b>C32</b>	<b>Open during the off season</b>	<i>OFFSEASN</i>
<b>ASK</b>	IF C24 [Seasonal use] = Yes	
<p>Is this building normally open at all during the months that are <u>not</u> in the high season?</p> <ul style="list-style-type: none"> <li>◆ DEF: ["Normally open" means the hours when the usual activities occur.]</li> </ul> <ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>		
<b>NEXT</b>	IF Yes → C33 [Off season hours category] IF No OR DK/RF → C34 [Number of employees]	

<b>C33</b>	<b>Off season hours category</b>	<i>LOWHRSC</i>
<b>ASK</b>	IF C32 [Open during the off season] = Yes	
<b>FILL</b>	<b>{LowMonths}</b> IF C25 [Months of high season] ≠ DK/RF = 12 - C25 [Months of high season] IF C25 [Months of high season] = DK/RF = BLANK	
<input type="checkbox"/> SHOW CARD C4		[F1]-HELP
<p>Thinking of the {LowMonths} months that are <u>not</u> in the high season, which category on Show Card C4 best describes the total hours per week that the building is normally open?</p> <p>◆ DEF: ["Normally open" means the hours when the usual activities occur.]</p> <ul style="list-style-type: none"> <li>1 1 to 39</li> <li>2 40 to 48</li> <li>3 49 to 60</li> <li>4 61 to 84</li> <li>5 85 to 167</li> <li>6 168</li> </ul>		
<b>NEXT</b>	→ C34 [Number of employees]	

<b>C34</b>	<b>Number of employees</b>	<i>NWKER</i>
<b>ASK</b>	IF B24 [Completely vacant] ≠ Yes & C6 [Any occupants] ≠ No & C8 [Number of businesses category] ≠ Zero & C18 [Months in use] ≠ Zero	
<input type="checkbox"/> SHOW CARD C4		[F1]-HELP
<p>How many employees work <u>in the building</u> during the main shift, that is, when most employees are present?</p> <p>◆ EXP: [Include any volunteer workers. Do not include employees who always work outside the building (such as drivers with delivery routes), customers, patients, students, or institutionalized residents.]</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	IF Number given: IF B19 [Public order type] = Fire station OR Combination police and fire station → C27a [Fire station personnel] OTHERWISE → D1 [Heating] IF DK/RF → C35 [Number of employees category]	

<b>C35</b>	<b>Number of employees category</b>	<i>NWKERC</i>
<b>ASK</b>	IF C34 [Number of employees] = DK/RF	
<input type="checkbox"/> SHOW CARD C5		[F1]-HELP
<p>Which category on Show Card C5 best describes how many employees work <u>in the building</u> during the main shift?</p>		
<ol style="list-style-type: none"> <li>1 None</li> <li>2 1 to 4</li> <li>3 5 to 9</li> <li>4 10 to 19</li> <li>5 20 to 49</li> <li>6 50 to 99</li> <li>7 100 to 249</li> <li>8 250 to 499</li> <li>9 500 to 999</li> <li>10 1,000 to 2,499</li> <li>11 2,500 to 4,999</li> <li>12 5,000 or More</li> </ol>		
<b>NEXT</b>	IF B19 [Public order type] = Fire station OR Combination police and fire station → C36 [Fire station personnel] OTHERWISE → D1 [Heating]	

<b>C36</b>	<b>Fire station personnel</b>	<i>FIREWKER</i>
<b>ASK</b>	IF B19 [Public order type] = Fire station OR Combination police and fire station	
<p>Are the personnel at this fire station career only, volunteer only, or a combination of career and volunteer?</p>		
<ol style="list-style-type: none"> <li>1 Career only</li> <li>2 Volunteer only</li> <li>3 Combination of career and volunteer</li> </ol>		
<b>NEXT</b>	→ D1 [Heating]	



## SECTION D. ENERGY USE AND EQUIPMENT

<b>D1</b>	<b>Heating</b>	<i>HT1</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<b>{Worksheet1Intro}</b> IF R has Worksheet 1 = "Please continue to refer to Worksheet 1 for some of these next questions on energy sources, uses, and equipment." OTHERWISE = BLANK	
		[F1]-HELP
{Worksheet1Intro}  For the next five questions, please tell me if energy was used in this building for any of these purposes during calendar year 2012.  Was any energy used for heating the building?  1 Yes 2 No		
<b>NEXT</b>	→ D2 [Cooling]	

<b>D2</b>	<b>Cooling</b>	<i>COOL</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
(Was any energy used...)  For air conditioning?  1 Yes 2 No		
<b>NEXT</b>	→ D3 [Water heating]	

<b>D3</b>	<b>Water heating</b>	<i>WATR</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
(Was any energy used...)  For heating water for purposes such as washing hands, dishes, or clothes?  1 Yes 2 No		
<b>NEXT</b>	→ D4 [Cooking]	

<b>D4</b>	<b>Cooking</b>	<i>COOK</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
	<p>(Was any energy used...)</p> <p>For cooking?</p> <p>◆ EXP: [If there is only minimal cooking, such as microwaves, hot plates, or toaster ovens, answer "No."]</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF D1 [Heating] = DK/RF & D2 [Cooling] = DK/RF & D3 [Water heating] = DK/RF & D4 [Cooking] = DK/RF → D5 [Missing end uses] OTHERWISE → D6 [Manufacturing]	

<b>D5</b>	<b>Missing end uses</b>	
<b>SHOW</b>	IF D1 [Heating] = DK/RF & D2 [Cooling] = DK/RF & D3 [Water heating] = DK/RF & D4 [Cooking] = DK/RF	
	<p>◆ INTERVIEWER: You have entered DK or RF for the four major end use questions. <b>This information is important for understanding how energy is used in this building.</b> You may need to find a new respondent at this point. Explain to the current respondent that the remainder of the questionnaire contains technical information about energy use and equipment and ask whether the respondent would want us to consult someone else in the building for these questions.</p> <p>◆ ENTER "1" when you are ready to continue</p>	
<b>NEXT</b>	→ D6 [Manufacturing]	

<b>D6</b>	<b>Manufacturing</b>	<i>MANU</i>
<b>ASK</b>	All Buildings	
		[F1]-HELP
	<p>(Was any energy used...)</p> <p>For manufacturing?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF No & D1 [Heating] = No & D2 [Cooling] = No & D3 [Water heating] = No & D4 [Cooking] = No → D7 [Any energy used] OTHERWISE → D8 [Electricity generation capability]	

<b>D7</b>	<b>Any energy used</b>	<i>ANYEGY</i>
<b>ASK</b>	IF D1 [Heating] = No & D2 [Cooling] = No & D3 [Water heating] = No & D4 [Cooking] = No & D6 [Manufacturing] = No	
<p>I did not record any uses of energy for this building. Did this building use <u>any</u> energy in 2012 for other purposes, such as lighting or appliances?</p> <p>1 Yes, some energy was used in 2012 2 No, no energy was used</p>		
<b>NEXT</b>	IF Yes, some energy was used OR DK/RF ⇒ D8 [Electricity generation capability] IF No, no energy was used ⇒ E83 [Window glass type]	

<b>D8</b>	<b>Electricity generation capability</b>	<i>CAPGEN</i>
<b>ASK</b>	IF D1 [Heating] = Yes OR D2 [Cooling] = Yes OR D3 [Water heating] = Yes OR D4 [Cooking] = Yes OR D6 [Manufacturing] = Yes OR D7 [Any energy used] = Yes, some energy was used OR DK/RF	
<p style="text-align: right;">[F1]-HELP</p> <p>Does this building have the ability to generate electricity, including for emergency backup?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	⇒ D9 [Energy sources used]	

<b>D9</b>	<b>Energy sources used</b>	<i>see below</i>																											
<b>ASK</b>	IF D1 [Heating] = Yes OR D2 [Cooling] = Yes OR D3 [Water heating] = Yes OR D4 [Cooking] = Yes OR D6 [Manufacturing] = Yes OR D7 [Any energy used] = Yes, some energy was used OR DK/RF																												
<div style="text-align: right;">[F1]-HELP</div> <p>☐ SHOW CARD D1</p> <p>Looking at this list of energy sources on Show Card D1, please tell me which ones were used <u>in this building</u> for any purpose in 2012.</p> <ul style="list-style-type: none"> <li>◆ EXP: [Include fuel oil, diesel, or kerosene if it was purchased or delivered in 2012, even if it was not used during that time.]</li> <li>◆ EXP: [Do not include any fuels used in vehicles outside the building.]</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; vertical-align: top;">11</td> <td style="width: 70%;">Electricity</td> <td style="width: 20%; text-align: right;"><i>ELUSED</i></td> </tr> <tr> <td>12</td> <td>Natural gas</td> <td style="text-align: right;"><i>NGUSED</i></td> </tr> <tr> <td>13</td> <td>Fuel oil, diesel, or kerosene</td> <td style="text-align: right;"><i>FKUSED</i></td> </tr> <tr> <td>14</td> <td>Bottled gas, also known as LPG or propane</td> <td style="text-align: right;"><i>PRUSED</i></td> </tr> <tr> <td>15</td> <td>District steam piped in from a separate building or utility</td> <td style="text-align: right;"><i>STUSED</i></td> </tr> <tr> <td>16</td> <td>District hot water piped in from a separate building or utility</td> <td style="text-align: right;"><i>HWUSED</i></td> </tr> <tr> <td>17</td> <td>District chilled water piped in from a separate building or utility</td> <td style="text-align: right;"><i>CWUSED</i></td> </tr> <tr> <td>18</td> <td>Wood, coal, or solar</td> <td></td> </tr> <tr> <td>24</td> <td>Other source or sources</td> <td style="text-align: right;"><i>OTUSED</i></td> </tr> </table>			11	Electricity	<i>ELUSED</i>	12	Natural gas	<i>NGUSED</i>	13	Fuel oil, diesel, or kerosene	<i>FKUSED</i>	14	Bottled gas, also known as LPG or propane	<i>PRUSED</i>	15	District steam piped in from a separate building or utility	<i>STUSED</i>	16	District hot water piped in from a separate building or utility	<i>HWUSED</i>	17	District chilled water piped in from a separate building or utility	<i>CWUSED</i>	18	Wood, coal, or solar		24	Other source or sources	<i>OTUSED</i>
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24	Other source or sources	<i>OTUSED</i>																											
<b>NEXT</b>	IF Fuel, oil, diesel, or kerosene selected ⇒ D10 [Fuel oil, diesel, or kerosene] IF Wood, coal, or solar selected ⇒ D11 [Wood, coal, or solar] IF Other source or sources selected ⇒ D12 [Other energy source 1] IF District steam or District hot water selected & B48 [Central physical plant] = Yes & B53 [Central plant in building] = No ⇒ D15 [From central plant] IF DK/RF: IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] IF D8 [Electricity generation capability] ≠ Yes → E1 [Section E Routing] <b>OTHERWISE:</b> IF D1 [Heating] = Yes ⇒ D17 [Source for main heating] IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] <b>OTHERWISE</b> ⇒ D90 [Any other sources]																												

<b>D10</b>	<b>Fuel oil, diesel, or kerosene</b>	<i>FKTYPE</i>
<b>ASK</b>	IF Fuel oil, diesel, or kerosene IN D9 [Energy sources used]	
		[F1]-HELP
	<p>◆ VERIFY if volunteered in previous question</p> <p>You mentioned fuel oil, diesel, or kerosene. Which of these were used (in this building in 2012)?</p> <p>◆ ENTER all that apply</p> <p>1 Fuel oil 2 Diesel 3 Kerosene</p>	
<b>NEXT</b>	<p>IF Wood, coal, or solar IN D9 [Energy sources used] ⇒ D11 [Wood, coal, or solar] IF Other source or sources IN D9 [Energy sources used] ⇒ D12 [Other energy source 1] IF District steam or District hot water IN D9 [Energy sources used] &amp; B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ D15 [From central plant] OTHERWISE: IF D1 [Heating] = Yes ⇒ D17 [Source for main heating] IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]</p>	

<b>D11</b>	<b>Wood, coal, or solar</b>	<i>see below</i>
<b>ASK</b>	IF Wood, coal, or solar IN D9 [Energy sources used]	
	<p>◆ VERIFY if volunteered in previous question</p> <p>You mentioned wood, coal, or solar. Which of these were used (in this building in 2012)?</p> <p>◆ ENTER all that apply</p> <p>1 Wood <span style="float: right;"><i>WOUSED</i></span> 2 Coal <span style="float: right;"><i>COUSED</i></span> 3 Solar <span style="float: right;"><i>SOUSED</i></span></p>	
<b>NEXT</b>	<p>IF Other source or sources IN D9 [Energy sources used] ⇒ D12 [Other energy source 1] IF District steam or District hot water IN D9 [Energy sources used] &amp; B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ D15 [From central plant] OTHERWISE: IF D1 [Heating] = Yes ⇒ D17 [Source for main heating] IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]</p>	

<b>D12</b>	<b>Other energy source 1</b>	<i>OTUSDX1</i>
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<b>ASK</b>	IF Other source or sources IN D9 [Energy sources used]
<p>What was the first other energy source used (in this building in 2012)?</p> <p>◆ ENTER the first energy source used</p>	
<b>NEXT</b>	⇒ D13 [Other energy source 2]

<b>D13</b>	<b>Other energy source 2</b>	<i>OTUSDX2</i>
<b>ASK</b>	IF Other source or sources IN D9 [Energy sources used]	
<p>Were there any other energy sources used (in this building in 2012)?</p> <p>◆ ENTER the next energy source</p> <p>◆ [ENTER] if no others</p>		
<b>NEXT</b>	<p>IF Source entered here ⇒ D14 [Other energy source 3]</p> <p>IF No source entered here:</p> <p>IF District steam or District hot water IN D9 [Energy sources used] &amp; B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ D15 [From central plant]</p> <p>OTHERWISE:</p> <p>IF D1 [Heating] = Yes ⇒ D17 [Source for main heating]</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating]</p> <p>IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking]</p> <p>IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing]</p> <p>IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation]</p> <p>OTHERWISE ⇒ D90 [Any other sources]</p>	

<b>D14</b>	<b>Other energy source 3</b>	<i>OTUSDX3</i>
<b>ASK</b>	IF Source was entered in D13 [Other energy source 2]	
<p>Were there any other energy sources used (in this building in 2012)?</p> <p>◆ ENTER the next energy source</p> <p>◆ [ENTER] if no others</p>		
<b>NEXT</b>	<p>IF District steam or District hot water IN D9 [Energy sources used] &amp; B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ D15 [From central plant]</p> <p>OTHERWISE:</p> <p>IF D1 [Heating] = Yes ⇒ D17 [Source for main heating]</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating]</p> <p>IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking]</p> <p>IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing]</p> <p>IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation]</p> <p>OTHERWISE ⇒ D90 [Any other sources]</p>	

<b>D15</b>	<b>From central plant</b>	<i>DHFRPL</i>
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<b>ASK</b>	IF District steam or District hot water IN D9 [Energy sources used] & B48 [Central physical plant] = Yes & B53 [Central plant in building] = No
<p>Is the district steam or hot water piped in from a central plant that is part of the same campus or complex as your building?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	<p>IF No OR DK/RF ⇒ D16 [Purchase from offsite]</p> <p>IF Yes:</p> <p>IF D1 [Heating] = Yes ⇒ D17 [Source for main heating]</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating]</p> <p>IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking]</p> <p>IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing]</p> <p>IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation]</p> <p>OTHERWISE ⇒ D90 [Any other sources]</p>

<b>D16</b>	<b>Purchase from offsite</b>	<i>DHOFF</i>
<b>ASK</b>	IF D15 [From central plant] = No OR DK/RF	
<p>Is it (the district steam or hot water) purchased from somewhere off-site, such as a commercial or municipal plant?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF D1 [Heating] = Yes ⇒ D17 [Source for main heating]</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating]</p> <p>IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking]</p> <p>IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing]</p> <p>IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation]</p> <p>OTHERWISE ⇒ D90 [Any other sources]</p>	

<b>D17</b>	<b>Source for main heating</b>	<i>see below</i>																																							
<b>ASK</b>	IF D1 [Heating] = Yes																																								
<b>FILL</b>	<p><b>{Ht1SourcesList}</b> = List of all energy sources used  <b>{Electricity}</b> – <b>{Other3}</b> = If a source is used, it appears in this list; if not, the line is blank  <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]  <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p>																																								
<p>What was the <u>main</u> energy source for heating? (Was it {Ht1SourcesList}?)</p> <ul style="list-style-type: none"> <li>◆ DEF: [The main energy source for heating is the energy source used to heat most of the square footage in this building most of the time.]</li> <li>◆ EXP: [Do not include electricity if it is used only to run fan motors.]</li> <li>◆ Only sources already selected are shown here</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">11</td><td style="width: 70%;">{Electricity}</td><td style="width: 25%; text-align: right;"><i>ELHT1</i></td></tr> <tr><td>12</td><td>{Natural gas}</td><td style="text-align: right;"><i>NGHT1</i></td></tr> <tr><td>13</td><td>{FuelOilType}</td><td style="text-align: right;"><i>FKHT1</i></td></tr> <tr><td>14</td><td>{Bottled gas}</td><td style="text-align: right;"><i>PRHT1</i></td></tr> <tr><td>15</td><td>{District steam}</td><td style="text-align: right;"><i>STHT1</i></td></tr> <tr><td>16</td><td>{District hot water}</td><td style="text-align: right;"><i>HWHT1</i></td></tr> <tr><td>18</td><td>{Wood}</td><td style="text-align: right;"><i>WOHT1</i></td></tr> <tr><td>19</td><td>{Coal}</td><td style="text-align: right;"><i>COHT1</i></td></tr> <tr><td>20</td><td>{Solar}</td><td style="text-align: right;"><i>SOHT1</i></td></tr> <tr><td>21</td><td>{Other1}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>22</td><td>{Other2}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>23</td><td>{Other3}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>24</td><td>Some other energy source</td><td></td></tr> </table>			11	{Electricity}	<i>ELHT1</i>	12	{Natural gas}	<i>NGHT1</i>	13	{FuelOilType}	<i>FKHT1</i>	14	{Bottled gas}	<i>PRHT1</i>	15	{District steam}	<i>STHT1</i>	16	{District hot water}	<i>HWHT1</i>	18	{Wood}	<i>WOHT1</i>	19	{Coal}	<i>COHT1</i>	20	{Solar}	<i>SOHT1</i>	21	{Other1}	<i>OTHT1</i>	22	{Other2}	<i>OTHT1</i>	23	{Other3}	<i>OTHT1</i>	24	Some other energy source	
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<b>NEXT</b>	IF Some other energy source ⇒ D18 [Other source for main heating] IF Anything but Some other energy source OR DK/RF: IF More than one energy source used ⇒ D19 [Which other sources for heating] IF Only one energy source used ⇒ D20 [Any other sources for heating]																																								

<b>D18</b>	<b>Other source for main heating</b>	<i>see below</i>																														
<b>ASK</b>	IF D17 [Source for main heating] = Some other energy source																															
<p>What was the other energy source used for <u>main</u> space heating?</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%;">11</td><td style="width: 70%;">Electricity</td><td style="width: 25%; text-align: right;"><i>ELHT1</i></td></tr> <tr><td>12</td><td>Natural gas</td><td style="text-align: right;"><i>NGHT1</i></td></tr> <tr><td>13</td><td>Fuel oil/Diesel/Kerosene</td><td style="text-align: right;"><i>FKHT1</i></td></tr> <tr><td>14</td><td>Bottled gas</td><td style="text-align: right;"><i>PRHT1</i></td></tr> <tr><td>15</td><td>District steam</td><td style="text-align: right;"><i>STHT1</i></td></tr> <tr><td>16</td><td>District hot water</td><td style="text-align: right;"><i>HWHT1</i></td></tr> <tr><td>18</td><td>Wood</td><td style="text-align: right;"><i>WOHT1</i></td></tr> <tr><td>19</td><td>Coal</td><td style="text-align: right;"><i>COHT1</i></td></tr> <tr><td>20</td><td>Solar</td><td style="text-align: right;"><i>SOHT1</i></td></tr> <tr><td>24</td><td>Some other energy source</td><td style="text-align: right;"><i>OTHT1</i></td></tr> </table>			11	Electricity	<i>ELHT1</i>	12	Natural gas	<i>NGHT1</i>	13	Fuel oil/Diesel/Kerosene	<i>FKHT1</i>	14	Bottled gas	<i>PRHT1</i>	15	District steam	<i>STHT1</i>	16	District hot water	<i>HWHT1</i>	18	Wood	<i>WOHT1</i>	19	Coal	<i>COHT1</i>	20	Solar	<i>SOHT1</i>	24	Some other energy source	<i>OTHT1</i>
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<b>NEXT</b>	⇒ D20 [Any other sources for heating]																															



<b>D19</b>	<b>Which other sources for heating</b>	<i>HT2 &amp; see below</i>																																										
<b>ASK</b>	IF D1 [Heating] = Yes & More than one energy source used																																											
<b>FILL</b>	<p><b>{Ht2SourcesList}</b> = List of all energy sources used, minus the one used for main heating  <b>{Electricity} – {Other3}</b> = If a source is used (other than for main space heating), it appears in this list; if not, the line is blank  <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]  <b>{Other1} – {Other3}</b> = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p> <p>Which other energy sources, if any, were used for heating? ({Ht2SourcesList})</p> <ul style="list-style-type: none"> <li>◆ EXP: [Do not include electricity if it is used only to run fan motors.]</li> <li>◆ Only sources already selected are shown here</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">11</td> <td style="width: 70%;">{Electricity}</td> <td style="width: 25%; text-align: right;"><i>ELHT2</i></td> </tr> <tr> <td>12</td> <td>{Natural gas}</td> <td style="text-align: right;"><i>NGHT2</i></td> </tr> <tr> <td>13</td> <td>{FuelOilType}</td> <td style="text-align: right;"><i>FKHT2</i></td> </tr> <tr> <td>14</td> <td>{Bottled gas}</td> <td style="text-align: right;"><i>PRHT2</i></td> </tr> <tr> <td>15</td> <td>{District steam}</td> <td style="text-align: right;"><i>STHT2</i></td> </tr> <tr> <td>16</td> <td>{District hot water}</td> <td style="text-align: right;"><i>HWHT2</i></td> </tr> <tr> <td>18</td> <td>{Wood}</td> <td style="text-align: right;"><i>WOHT2</i></td> </tr> <tr> <td>19</td> <td>{Coal}</td> <td style="text-align: right;"><i>COHT2</i></td> </tr> <tr> <td>20</td> <td>{Solar}</td> <td style="text-align: right;"><i>SOHT2</i></td> </tr> <tr> <td>21</td> <td>{Other1}</td> <td style="text-align: right;"><i>OTHT2</i></td> </tr> <tr> <td>22</td> <td>{Other2}</td> <td style="text-align: right;"><i>OTHT2</i></td> </tr> <tr> <td>23</td> <td>{Other3}</td> <td style="text-align: right;"><i>OTHT2</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td></td> </tr> <tr> <td>99</td> <td>No other sources for heating</td> <td></td> </tr> </table>		11	{Electricity}	<i>ELHT2</i>	12	{Natural gas}	<i>NGHT2</i>	13	{FuelOilType}	<i>FKHT2</i>	14	{Bottled gas}	<i>PRHT2</i>	15	{District steam}	<i>STHT2</i>	16	{District hot water}	<i>HWHT2</i>	18	{Wood}	<i>WOHT2</i>	19	{Coal}	<i>COHT2</i>	20	{Solar}	<i>SOHT2</i>	21	{Other1}	<i>OTHT2</i>	22	{Other2}	<i>OTHT2</i>	23	{Other3}	<i>OTHT2</i>	24	Some other energy source		99	No other sources for heating	
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<b>NEXT</b>	IF Some other energy source ⇒ D21 [Other source for heating] IF Anything but Some other energy source OR DK/RF ⇒ D22 [Percent heated]																																											

<b>D20</b>	<b>Any other sources for heating</b>	<i>HT2</i>
<b>ASK</b>	IF D1 [Heating] = Yes & Only one energy source used	
	<p>Were there any other energy sources used for heating?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes ⇒ D21 [Other source for heating] IF No OR DK/RF ⇒ D22 [Percent heated]	

<b>D21</b>	<b>Other source for heating</b>																														
<b>ASK</b>	IF D19 [Which other sources for heating] = Some other energy source OR D20 [Any other sources for heating] = Yes																														
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**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 D9 [Energy sources used], if sources are added along the way, such as in D18 [Other source for main heating] OR D21 [Other source for heating], those sources are then also considered to be used.

<b>D22</b>	<b>Percent heated</b>	<i>HEATP</i>
<b>ASK</b>	IF D1 [Heating] = Yes	
<b>FILL</b>	<b>{SqFt}</b> IF A6 [Square footage] known = "A6 [Square footage]" IF A6 [Square footage] = DK/RF = "floorspace"	
		[F1]-HELP
	What percent of the {SqFt} in this building was heated to at least 50 degrees Fahrenheit during 2012, including basements and indoor parking levels if they were heated to at least 50 degrees?	
	<ul style="list-style-type: none"> <li>◆ If heated square footage is known, but not the percent, RECORD square footage in comments, then code DK</li> <li>◆ PROBE for estimate if DK</li> </ul>	
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF Zero ⇒ D23 [Heated to less than 50 degrees] IF Anything else ⇒ D24 [Heating equipment types]	

<b>D23</b>	<b>Heated to less than 50 degrees</b>	<i>HTLS50</i>
<b>ASK</b>	IF D22 [Percent heated] = Zero	
	Was any of this building heated to less than 50 degrees Fahrenheit?	
	<ul style="list-style-type: none"> <li>◆ EXP: [Areas may be heated to less than 50 degrees to prevent pipes from freezing.]</li> </ul>	
	<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>	
<b>NEXT</b>	IF Yes OR DK/RF ⇒ D24 [Heating equipment types] IF No: IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D24</b>	<b>Heating equipment types</b>	<i>see below</i>																					
<b>ASK</b>	IF D22 [Percent heated] > 0 OR D23 [Heated to less than 50 degrees] = Yes OR DK/RF																						
<p>[F1]-HELP</p> <p>☐ SHOW CARD D2</p> <p>Looking at the list of heating equipment types on Show Card D2, please tell me which types are used in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Furnaces that heat air directly, without using steam or hot water</td> <td style="width: 25%; text-align: right;"><i>FURNAC</i></td> </tr> <tr> <td>2</td> <td>Packaged central unit (roof mounted)</td> <td style="text-align: right;"><i>PKGHT</i></td> </tr> <tr> <td>3</td> <td>Boilers inside (or adjacent to) the building that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER</i></td> </tr> <tr> <td>4</td> <td>District steam or hot water piped in from outside the building</td> <td style="text-align: right;"><i>STHW</i></td> </tr> <tr> <td>5</td> <td>Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH</i></td> </tr> <tr> <td>6</td> <td>Individual space heaters, other than heat pumps</td> <td style="text-align: right;"><i>SLFCON</i></td> </tr> <tr> <td>7</td> <td>Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ</i></td> </tr> </table>		1	Furnaces that heat air directly, without using steam or hot water	<i>FURNAC</i>	2	Packaged central unit (roof mounted)	<i>PKGHT</i>	3	Boilers inside (or adjacent to) the building that produce steam or hot water	<i>BOILER</i>	4	District steam or hot water piped in from outside the building	<i>STHW</i>	5	Heat pumps (other than components of a packaged unit)	<i>HTPMPH</i>	6	Individual space heaters, other than heat pumps	<i>SLFCON</i>	7	Other heating equipment	<i>OTHTEQ</i>	
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<b>NEXT</b>	IF Furnaces ⇒ D25 [Type of furnace] IF Boilers ⇒ D28 [Type of boiler system] IF District steam or hot water ⇒ D29 [Type of district heat system] IF Other heating equipment ⇒ D30 [Other heating components] IF Packaged central unit ⇒ D36 [Type of packaged heating] IF Heat pumps ⇒ D38 [Heat pump heating system] IF Individual space heaters ⇒ D41 [Type of individual heater] IF DK/RF: IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] OTHERWISE ⇒ D66 [Building automation system]																						

<b>D25</b>	<b>Type of furnace</b>
<b>ASK</b>	IF Furnaces IN D24 [Heating equipment types]
[F1]-HELP	
<p>□ SHOW CARD D3</p> <p>Looking at Show Card D3, please tell me the type or types of furnace systems used in the building.</p> <p>◆ ENTER all that apply</p> <ol style="list-style-type: none"> <li>1 Packaged central unit (roof mounted)</li> <li>2 Split system (residential-type furnace with DX cooling unit)</li> <li>3 Duct furnace (installed in air distribution duct)</li> <li>4 Individual room furnace (freestanding or floor-mounted)</li> </ol>	
<b>NEXT</b>	<p>IF Packaged central unit OR Duct furnace ⇒ D26 [Classify furnace as packaged]</p> <p>IF Individual room furnace ⇒ D27 [Classify furnace as space heater]</p> <p>OTHERWISE:</p> <p>IF Boilers IN D24 [Heating equipment types] ⇒ D28 [Type of boiler system]</p> <p>IF District steam or hot water IN D24 [Heating equipment types] ⇒ D29 [Type of district heat system]</p> <p>IF Other heating equipment IN D24 [Heating equipment types] ⇒ D30 [Other heating components]</p> <p>IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]</p> <p>IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]</p> <p>IF Individual space heaters ⇒ D41 [Type of individual heater]</p> <p>OTHERWISE:</p> <p>IF More than one energy source used for heating ⇒ D42 [Explain sources for heating]</p> <p>OTHERWISE ⇒ D43 [Heating ventilation types]</p>

<b>D26</b>	<b>Classify furnace as packaged</b>
<b>ASK</b>	IF Packaged central unit OR Duct furnace IN D25 [Type of furnace]
<p>For the purposes of this study, I am going to refer to the packaged central furnace as a "packaged unit."</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	<p>IF Individual room furnace IN D25 [Type of furnace] ⇒ D27 [Classify furnace as space heater]</p> <p>OTHERWISE:</p> <p>IF Boilers IN D24 [Heating equipment types] ⇒ D28 [Type of boiler system]</p> <p>IF District steam or hot water IN D24 [Heating equipment types] ⇒ D29 [Type of district heat system]</p> <p>IF Other heating equipment IN D24 [Heating equipment types] ⇒ D30 [Other heating components]</p> <p>OTHERWISE ⇒ D36 [Type of packaged heating]</p>

<b>D27</b>	<b>Classify furnace as space heater</b>
<b>ASK</b>	IF D25 [Type of furnace] = Individual room furnace
<p>For the purposes of this study, I am going to refer to the individual room furnace as an "individual space heater."</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	<p>IF Boilers IN D24 [Heating equipment types] ⇒ D28 [Type of boiler system]  IF District steam or hot water IN D24 [Heating equipment types] ⇒ D29 [Type of district heat system]  IF Other heating equipment IN D24 [Heating equipment types] ⇒ D30 [Other heating components]  IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]  IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]  IF Individual space heaters ⇒ D41 [Type of individual heater]  <b>OTHERWISE:</b>  IF More than one heating equipment ⇒ D45 [Percent heated by each type]  IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR  A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]  <b>OTHERWISE:</b>  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  <b>OTHERWISE</b> ⇒ D66 [Building automation system]</p>

<b>D28</b>	<b>Type of boiler system</b>																					
<b>ASK</b>	IF Boilers IN D24 [Heating equipment types]																					
	[F1]-HELP																					
	<p>□ SHOW CARD D4</p> <p>Looking at Show Card D4, please tell me the type or types of distribution systems used with the boiler.</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10px;">1</td> <td style="width: 70%;">Radiators</td> <td style="width: 20%; text-align: right;"><i>BLRRAD</i></td> </tr> <tr> <td>2</td> <td>Fan coil units in rooms (or areas)</td> <td style="text-align: right;"><i>BLRFNCL</i></td> </tr> <tr> <td>3</td> <td>Induction units</td> <td style="text-align: right;"><i>BLRINDC</i></td> </tr> <tr> <td>4</td> <td>Water loop heat pump</td> <td style="text-align: right;"><i>BLRWATR</i></td> </tr> <tr> <td>5</td> <td>Central air handler (hydronic/steam coils)</td> <td style="text-align: right;"><i>BLRAIR</i></td> </tr> <tr> <td>6</td> <td>Packaged unit (hydronic/steam coils)</td> <td style="text-align: right;"><i>BLRPKG</i></td> </tr> <tr> <td>7</td> <td>Duct reheat (hydronic/steam coils)</td> <td style="text-align: right;"><i>BLRDUCT</i></td> </tr> </table>	1	Radiators	<i>BLRRAD</i>	2	Fan coil units in rooms (or areas)	<i>BLRFNCL</i>	3	Induction units	<i>BLRINDC</i>	4	Water loop heat pump	<i>BLRWATR</i>	5	Central air handler (hydronic/steam coils)	<i>BLRAIR</i>	6	Packaged unit (hydronic/steam coils)	<i>BLRPKG</i>	7	Duct reheat (hydronic/steam coils)	<i>BLRDUCT</i>
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<b>D29</b>	<b>Type of district heat system</b>																					
<b>ASK</b>	IF District steam or hot water IN D24 [Heating equipment types]																					
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5	Central air handler (hydronic/steam coils)	<i>DHAIR</i>																				
6	Packaged unit (hydronic/steam coils)	<i>DHPKG</i>																				
7	Duct reheat (hydronic/steam coils)	<i>DHDUCT</i>																				
<b>NEXT</b>	<p>IF Other heating equipment IN D24 [Heating equipment types] ⇒ D30 [Other heating components]</p> <p>IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]</p> <p>IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]</p> <p>IF Individual space heaters ⇒ D41 [Type of individual heater]</p> <p>OTHERWISE:</p> <p>IF Water loop, Central air handler, Packaged unit, OR Duct reheat given here  OR Any type except Individual room furnace IN D25 [Type of furnace]  OR Packaged central unit IN D24 [Heating equipment types]  ⇒ D43 [Heating ventilation types]</p> <p>IF More than one heating equipment ⇒ D45 [Percent heated by each type]</p> <p>IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR  A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]</p> <p>OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>																					



<b>D30</b>	<b>Other heating components</b>												
<b>ASK</b>	IF Other heating equipment IN D24 [Heating equipment types]												
<p>□ SHOW CARD D5</p> <p>Looking at Show Card D5, please tell me if the other heating equipment includes any of these components.</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; text-align: center;">1</td> <td style="width: 70%;">Heating coil or electric heat strip</td> <td style="width: 20%; text-align: right;"><i>OTSTRP</i></td> </tr> <tr> <td style="text-align: center;">2</td> <td>Duct reheat or electric reheat</td> <td style="text-align: right;"><i>OTDUCT</i></td> </tr> <tr> <td style="text-align: center;">3</td> <td>Powered induction units (PIU)</td> <td style="text-align: right;"><i>OTPIU</i></td> </tr> <tr> <td style="text-align: center;">4</td> <td>None of these components</td> <td></td> </tr> </table>		1	Heating coil or electric heat strip	<i>OTSTRP</i>	2	Duct reheat or electric reheat	<i>OTDUCT</i>	3	Powered induction units (PIU)	<i>OTPIU</i>	4	None of these components	
1	Heating coil or electric heat strip	<i>OTSTRP</i>											
2	Duct reheat or electric reheat	<i>OTDUCT</i>											
3	Powered induction units (PIU)	<i>OTPIU</i>											
4	None of these components												
<b>NEXT</b>	IF Any components: IF Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] ⇒ D31 [Classify other as part of packaged] IF Boiler IN D24 [Heating equipment types] ⇒ D32 [Classify other as part of boiler] IF District steam or hot water IN D24 [Heating equipment types] ⇒ D33 [Classify other as part of district] OTHERWISE ⇒ D34 [Classify other as packaged] IF None of these components OR DK/RF ⇒ D35 [Other heat specify]												

<b>D31</b>	<b>Classify other as part of packaged</b>
<b>ASK</b>	IF Any components given in D30 [Other heating components] & Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace]
<p>For the purposes of this study, I am going to consider the other heating equipment to be part of the packaged unit.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	⇒ D36 [Type of packaged heating]

<b>D32</b>	<b>Classify other as part of boiler</b>
<b>ASK</b>	IF Any components given in D30 [Other heating components] & Boiler IN D24 [Heating equipment types]
<p>For the purposes of this study, I am going to consider the other heating equipment to be part of the boiler system.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	<p>IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]  IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]  IF Individual space heaters ⇒ D41 [Type of individual heater]  <b>OTHERWISE:</b>  IF Any type except Individual room furnace IN D25 [Type of furnace]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]  OR Any components given in D30 [Other heating components]  OR Packaged central unit IN D24 [Heating equipment types] ⇒ D43 [Heating ventilation types]  IF More than one heating equipment ⇒ D45 [Percent heated by each type]  IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D47 [Main heating replaced]  <b>OTHERWISE:</b>  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  <b>OTHERWISE</b> ⇒ D66 [Building automation system]</p>

<b>D33</b>	<b>Classify other as part of district</b>
<b>ASK</b>	IF Any components given in D30 [Other heating components] & District steam or hot water IN D24 [Heating equipment types]
<p>For the purposes of this study, I am going to consider the other heating equipment to be part of the district heating system.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	<p>IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]</p> <p>IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]</p> <p>IF Individual space heaters ⇒ D41 [Type of individual heater]</p> <p>OTHERWISE:</p> <p>IF Any type except Individual room furnace IN D25 [Type of furnace]</p> <p>OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]</p> <p>OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]</p> <p>OR Any components given in D30 [Other heating components]</p> <p>OR Packaged central unit IN D24 [Heating equipment types] ⇒ D43 [Heating ventilation types]</p> <p>IF More than one heating equipment ⇒ D45 [Percent heated by each type]</p> <p>IF Only one equipment, assign it as Main heating equipment, THEN</p> <p>IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D47 [Main heating replaced]</p> <p>OTHERWISE:</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>OTHERWISE ⇒ D66 [Building automation system]</p>

<b>D34</b>	<b>Classify other as packaged</b>
<b>ASK</b>	IF Any components given in D30 [Other heating components] & <b>NOT</b> (Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] OR Boiler IN D24 [Heating equipment types] OR District steam or hot water IN D24 [Heating equipment types])
<p>For the purposes of this study, I am going to refer to the other heating equipment as a "packaged unit." In the next couple questions I just need to verify some of the components of the packaged system.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	⇒ D36 [Type of packaged heating]

<b>D35</b>	<b>Other heat specify</b>
<b>ASK</b>	IF Other heating equipment IN D24 [Heating equipment types] & D30 [Other heating components] = None of these components
<p>Please describe the other type of heating equipment.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Packaged central unit IN D24 [Heating equipment types] ⇒ D36 [Type of packaged heating]</p> <p>IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system]</p> <p>IF Individual space heaters ⇒ D41 [Type of individual heater]</p> <p>OTHERWISE:</p> <p>IF Any type except Individual room furnace IN D25 [Type of furnace]</p> <p>OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]</p> <p>OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]</p> <p>OR Any components given in D30 [Other heating components]</p> <p>OR Packaged central unit IN D24 [Heating equipment types] ⇒ D43 [Heating ventilation types]</p> <p>IF More than one heating equipment ⇒ D45 [Percent heated by each type]</p> <p>IF Only one equipment, assign it as Main heating equipment, THEN</p> <p>IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D47 [Main heating replaced]</p> <p>OTHERWISE:</p> <p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]</p> <p>OTHERWISE ⇒ D66 [Building automation system]</p>

<b>D36</b>	<b>Type of packaged heating</b>	<i>PKGHTTYP</i>
<b>ASK</b>	IF Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] OR Any components given in D30 [Other heating components] & <b>NOT</b> (Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] OR Boiler IN D24 [Heating equipment types] OR District steam or hot water IN D24 [Heating equipment types])	
		[F1]-HELP
<input type="checkbox"/> SHOW CARD D6  Please look at Show Card D6 and tell me if the packaged unit is a factory-assembled unitary packaged unit or a custom built-up unit?  1 Factory-assembled unitary packaged unit 2 Custom built-up packaged unit 3 IF VOLUNTEERED: Both factory-assembled and custom built-up packaged units		
<b>NEXT</b>	IF Any type given ⇒ D37 [Packaged heating components] IF DK/RF: IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system] IF Individual space heaters ⇒ D41 [Type of individual heater] OTHERWISE ⇒ D43 [Heating ventilation types]	

<b>D37</b>	<b>Packaged heating components</b>											
<b>ASK</b>	IF Any type given in D36 [Type of packaged heating]											
		[F1]-HELP										
<input type="checkbox"/> SHOW CARD D6  Looking at the second list on Show Card D6, please tell me which heating components are part of this packaged system.  ◆ ENTER all that apply  <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Furnace</td> <td style="width: 50%; text-align: right;"><i>PKG FURN</i></td> </tr> <tr> <td>2 Heat pump</td> <td style="text-align: right;"><i>PKG HTP</i></td> </tr> <tr> <td>3 Heating coil</td> <td style="text-align: right;"><i>PKG COIL</i></td> </tr> <tr> <td>4 Powered induction unit (PIU)</td> <td style="text-align: right;"><i>PKG PIU</i></td> </tr> <tr> <td>5 Duct reheat</td> <td style="text-align: right;"><i>PKG DUCT</i></td> </tr> </table>			1 Furnace	<i>PKG FURN</i>	2 Heat pump	<i>PKG HTP</i>	3 Heating coil	<i>PKG COIL</i>	4 Powered induction unit (PIU)	<i>PKG PIU</i>	5 Duct reheat	<i>PKG DUCT</i>
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<b>NEXT</b>	IF Heat pumps IN D24 [Heating equipment types] ⇒ D38 [Heat pump heating system] IF Individual space heaters ⇒ D41 [Type of individual heater] OTHERWISE ⇒ D43 [Heating ventilation types]											

<b>D38</b>	<b>Heat pump heating system</b>	<i>see below</i>															
<b>ASK</b>	IF Heat pumps IN D24 [Heating equipment types]																
<p>[ ] SHOW CARD D7</p> <p>Please look at the first list on Show Card D7 and tell me which heat pump systems are used for heating in this building.</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Packaged unit</td> <td><i>HPPKPG</i></td> </tr> <tr> <td>2</td> <td>Split system (residential-type)</td> <td><i>HPSPLT</i></td> </tr> <tr> <td>3</td> <td>Individual room heat pump (packaged terminal heat pump or PTHP)</td> <td><i>HPHROOM</i></td> </tr> <tr> <td>4</td> <td>Ductless mini-split system</td> <td><i>HPHMINI</i></td> </tr> <tr> <td>5</td> <td>Variable refrigerant flow (VRF) system</td> <td><i>HPHVRF</i></td> </tr> </table>		1	Packaged unit	<i>HPPKPG</i>	2	Split system (residential-type)	<i>HPSPLT</i>	3	Individual room heat pump (packaged terminal heat pump or PTHP)	<i>HPHROOM</i>	4	Ductless mini-split system	<i>HPHMINI</i>	5	Variable refrigerant flow (VRF) system	<i>HPHVRF</i>	[F1]-HELP
1	Packaged unit	<i>HPPKPG</i>															
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5	Variable refrigerant flow (VRF) system	<i>HPHVRF</i>															
<b>NEXT</b>	⇒ D39 [Heat pump heating type]																

<b>D39</b>	<b>Heat pump heating type</b>	<i>see below</i>												
<b>ASK</b>	IF Heat pumps IN D24 [Heating equipment types]													
<p>[ ] SHOW CARD D7</p> <p>Looking at the second list on Show Card D7, which types of heat pumps are these?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Air source heat pump</td> <td><i>HPHAIR</i></td> </tr> <tr> <td>2</td> <td>Ground source or ground water heat pump (geothermal)</td> <td><i>HPHGRD</i></td> </tr> <tr> <td>3</td> <td>Dual source heat pump (combination air source and geothermal)</td> <td><i>HPHDUAL</i></td> </tr> <tr> <td>4</td> <td>Water loop heat pump</td> <td><i>HPHWTR</i></td> </tr> </table>		1	Air source heat pump	<i>HPHAIR</i>	2	Ground source or ground water heat pump (geothermal)	<i>HPHGRD</i>	3	Dual source heat pump (combination air source and geothermal)	<i>HPHDUAL</i>	4	Water loop heat pump	<i>HPHWTR</i>	[F1]-HELP
1	Air source heat pump	<i>HPHAIR</i>												
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4	Water loop heat pump	<i>HPHWTR</i>												
<b>NEXT</b>	IF Air source heat pump & Natural gas OR Bottled gas used for heating ⇒ D40 [Heat pump backup] IF Individual space heaters ⇒ D41 [Type of individual heater] OTHERWISE: IF Any type except Individual room furnace IN D25 [Type of furnace] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system] OR Any components given in D30 [Other heating components] OR Packaged central unit IN D24 [Heating equipment types] OR Packaged unit OR Split system IN D38 [Heat pump heating system] ⇒ D43 [Heating ventilation types] IF More than one heating equipment ⇒ D45 [Percent heated by each type] IF Only one equipment, assign it as Main heating equipment, THEN IF Main heating equipment ≠ District steam or hot water & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D47 [Main heating replaced] OTHERWISE: IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] OTHERWISE ⇒ D66 [Building automation system]													

<b>D40</b>	<b>Heat pump backup</b>	<i>HPHBKUP</i>
<b>ASK</b>	IF D39 [Heat pump heating type] = Air source heat pump & Natural gas OR Bottled gas used for heating	
<b>FILL</b>	<p><b>{NatGasBotGas}</b>  IF Natural gas but not bottled gas for heating = "natural gas"  IF Bottled gas but not natural gas for heating = "bottled gas"  IF Both natural gas and bottled gas for heating = "natural gas or bottled gas"  <b>{ NatGasBotGasList}</b>  IF Natural gas but not bottled gas for heating = "Natural gas"  IF Bottled gas but not natural gas for heating = "Bottled gas"  IF Both natural gas and bottled gas for heating = "Natural gas or bottled gas"</p>	
<p>Does the air source heat pump have electric resistance backup, is it a dual fuel heat pump with {NatGasBotGas} backup, or is there no backup source for the heat pump?</p> <p>◆ DEF: [Air source heat pumps do not operate efficiently when outside temperatures are sub-freezing for extended periods of time. An air source heat pump may use electric resistance coils to provide supplemental heat. Other air source heat pumps may use a natural gas or bottled gas furnace that operates at colder temperatures (these are also known as dual fuel heat pumps)]</p> <ol style="list-style-type: none"> <li>1 Electric resistance backup</li> <li>2 {NatGasBotGasList} backup (dual fuel)</li> <li>3 No backup source</li> </ol>		
<b>NEXT</b>	IF Individual space heaters ⇒ D41 [Type of individual heater] OTHERWISE: IF Any type except Individual room furnace IN D25 [Type of furnace] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system] OR Any components given in D30 [Other heating components] OR Packaged central unit IN D24 [Heating equipment types] OR Packaged unit OR Split system IN D38 [Heat pump heating system] ⇒ D43 [Heating ventilation types] IF More than one heating equipment ⇒ D45 [Percent heated by each type] IF Only one equipment, assign it as Main heating equipment, THEN IF Main heating equipment ≠ District steam or hot water & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D47 [Main heating replaced] OTHERWISE: IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling] OTHERWISE ⇒ D66 [Building automation system]	

<b>D41</b>	<b>Type of individual heater</b>																					
<b>ASK</b>	IF Individual space heaters IN D24 [Heating equipment types]																					
	[F1]-HELP																					
	<p>□ SHOW CARD D8</p> <p>Looking at Show Card D8, please tell me the type or types of individual heaters used in the building.</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10px;">1</td> <td style="width: 70%;">Infrared radiant heater (permanent)</td> <td style="width: 20%; text-align: right;"><i>SHRDNT</i></td> </tr> <tr> <td>2</td> <td>Baseboard heater (permanent)</td> <td style="text-align: right;"><i>SHBBRD</i></td> </tr> <tr> <td>3</td> <td>Portable space heater</td> <td style="text-align: right;"><i>SHPORT</i></td> </tr> <tr> <td>4</td> <td>Wall heater</td> <td style="text-align: right;"><i>SHWALL</i></td> </tr> <tr> <td>5</td> <td>Individual furnace</td> <td style="text-align: right;"><i>SHFURN</i></td> </tr> <tr> <td>6</td> <td>Unit heater</td> <td style="text-align: right;"><i>SHUNIT</i></td> </tr> <tr> <td>7</td> <td>Heating element in package terminal air conditioner (PTAC)</td> <td style="text-align: right;"><i>SHPTAC</i></td> </tr> </table>	1	Infrared radiant heater (permanent)	<i>SHRDNT</i>	2	Baseboard heater (permanent)	<i>SHBBRD</i>	3	Portable space heater	<i>SHPORT</i>	4	Wall heater	<i>SHWALL</i>	5	Individual furnace	<i>SHFURN</i>	6	Unit heater	<i>SHUNIT</i>	7	Heating element in package terminal air conditioner (PTAC)	<i>SHPTAC</i>
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<b>NEXT</b>	<p>IF Any type except Individual room furnace IN D25 [Type of furnace]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]  OR Any components given in D30 [Other heating components]  OR Packaged central unit IN D24 [Heating equipment types]  OR Packaged unit OR Split system IN D38 [Heat pump heating system]  ⇒ D43 [Heating ventilation types]</p> <p>IF More than one heating equipment ⇒ D45 [Percent heated by each type]</p> <p>IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR  A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]</p> <p>OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>																					



<b>D42</b>	<b>Explain sources for heating</b>
<b>ASK</b>	IF ONLY Boiler, Furnace, OR District heat as heating equipment but more than one energy source used for heating
<b>FILL</b>	<p><b>{HeatEquip}</b>  IF Boilers = "boiler"  IF Furnace = "furnace"  IF District heat = "district heating system"  <b>{HeatSources}</b> = list of the energy sources given for heating</p>
<p>I've recorded just one type of heating equipment - a {HeatEquip} - but more than one energy source – {HeatSources} - for heating. For clarification, will you please briefly explain how these sources are used for operating the {HeatEquip}.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Any type except Individual room furnace IN D25 [Type of furnace]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]  OR Any components given in D30 [Other heating components]  OR Packaged central unit IN D24 [Heating equipment types]  OR Packaged unit OR Split system IN D38 [Heat pump heating system]  ⇒ D43 [Heating ventilation types]  OTHERWISE:  IF More than one heating equipment ⇒ D45 [Percent heated by each type]  IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]  OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>

<b>D43</b>	<b>Heating ventilation types</b>																		
<b>ASK</b>	<p>IF Any type except Individual room furnace IN D25 [Type of furnace]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D28 [Type of boiler system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D29 [Type of district heat system]  OR Any components given in D30 [Other heating components]  OR Packaged central unit IN D24 [Heating equipment types]  OR Packaged unit OR Split system IN D38 [Heat pump heating system]</p>																		
[F1]-HELP																			
<p>□ SHOW CARD D9</p> <p>Show Card D9 provides a list of mechanical ventilation equipment types. Please tell me which types are used with the heating system.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Central air handling unit(s) with constant air volume (CAV) control</td> <td style="width: 25%; text-align: right;"><i>HTVCAV</i></td> </tr> <tr> <td>2</td> <td>Central air handling unit(s) with variable air volume (VAV) control</td> <td style="text-align: right;"><i>HTVVAV</i></td> </tr> <tr> <td>3</td> <td>Underfloor air distribution</td> <td style="text-align: right;"><i>HTVFLR</i></td> </tr> <tr> <td>4</td> <td>Dedicated outside air system (DOAS)</td> <td style="text-align: right;"><i>HTVOAS</i></td> </tr> <tr> <td>5</td> <td>Demand controlled ventilation</td> <td style="text-align: right;"><i>HTVDEM</i></td> </tr> <tr> <td>6</td> <td>None of these types</td> <td style="text-align: right;"><i>HTVNON</i></td> </tr> </table>		1	Central air handling unit(s) with constant air volume (CAV) control	<i>HTVCAV</i>	2	Central air handling unit(s) with variable air volume (VAV) control	<i>HTVVAV</i>	3	Underfloor air distribution	<i>HTVFLR</i>	4	Dedicated outside air system (DOAS)	<i>HTVOAS</i>	5	Demand controlled ventilation	<i>HTVDEM</i>	6	None of these types	<i>HTVNON</i>
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4	Dedicated outside air system (DOAS)	<i>HTVOAS</i>																	
5	Demand controlled ventilation	<i>HTVDEM</i>																	
6	None of these types	<i>HTVNON</i>																	
<b>NEXT</b>	<p>IF None of these types ⇒ D44 [Heating ventilation specify]  OTHERWISE:  IF More than one heating equipment ⇒ D45 [Percent heated by each type]  IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]  OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>																		

<b>D44</b>	<b>Heating ventilation specify</b>
<b>ASK</b>	IF D43 [Heating ventilation types] = None of these types
<p>Please describe the ventilation system that is used with the heating system.</p> <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	<p>IF More than one heating equipment ⇒ D45 [Percent heated by each type]  IF Only one equipment, assign it as Main heating equipment, THEN  IF Main heating equipment ≠ District steam or hot water &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]  OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>

<b>D45</b>	<b>Percent heated by each type</b> <p style="text-align: right;"><i>FURNP, PKGHP, BOILP, STHWP, HTPHP, SLFCNP, OTHTP</i></p>
<b>ASK</b>	For each equipment type given in D24 [Heating equipment types]
<b>FILL</b>	<p><b>{Introduction}</b>  IF First equipment = “The next questions are about the percent of floorspace heated by the equipment you just mentioned. Please keep in mind.”  OTHERWISE = BLANK</p> <p><b>{Explanation}</b>  IF First equipment and D22 [Percent heated] <math>\neq</math> 100 = “We are talking only about the <u>heated portion</u> of the floorspace, so these percents 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 <u>more</u> than 100.”  IF First equipment and D22 [Percent heated] = 100 = “These percents 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 <u>more</u> than 100.”  OTHERWISE = BLANK</p> <p><b>{Equipment}</b>  IF Furnaces that heat air directly IN D24 [Heating equipment types] = “furnace”  IF Packaged heating units IN D24 [Heating equipment types] = “packaged heating”  IF Boilers inside the building IN D24 [Heating equipment types] = “boiler”  IF District steam or hot water IN D24 [Heating equipment types] = “district steam or hot water”  IF Heat pumps IN D24 [Heating equipment types] = “heat pump”  IF Individual space heaters IN D24 [Heating equipment types] = “space heater”  IF Other heating equipment IN D24 [Heating equipment types] = “other heating equipment”</p>
<p><input type="checkbox"/> SHOW CARD D10</p> <p>{Introduction}</p> <p>{Explanation}</p> <p>Please look at Show Card D10. What percent of the heated area in this building is served by the {Equipment}?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	0 to 100
<b>NEXT</b>	IF There are equal maximum percents OR DK/RF $\Rightarrow$ D46 [Main heating equipment] IF There is an equipment with a maximum percent, assign that equipment as the Main heating equipment [MAINHT]. THEN: IF Main heating equipment $\neq$ District steam or hot water & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] $\neq$ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) $\Rightarrow$ D47 [Main heating replaced] OTHERWISE: IF D2 [Cooling] = Yes $\Rightarrow$ D48 [Sources for cooling] OTHERWISE $\Rightarrow$ D66 [Building automation system]

<b>D46</b>	<b>Main heating equipment</b>	<i>MNHTEQ</i>
<b>ASK</b>	IF D45 [Percent heated by each type] has equal maximum percents OR DK/RF	
<b>FILL</b>	<p><b>{EquipmentList}</b> = List of the equipments with equal maximum percents  <b>{Furnace} – {Other heating equipment}</b> = Each equipment with an equal maximum percent appears on this list; otherwise the line is blank</p>	
<p>Which do you consider to be your main heating equipment – {EquipmentList} ?</p> <p>◆ Only equipment types with equal percentages are shown here</p> <ol style="list-style-type: none"> <li>1 {Furnace}</li> <li>2 {Packaged heating}</li> <li>3 {Boiler}</li> <li>4 {District steam or hot water}</li> <li>5 {Heat pump}</li> <li>6 {Space heater}</li> <li>7 {Other heating equipment}</li> </ol>		
<b>NEXT</b>	<p>IF Main equipment NOT (District steam or hot water OR DK/RF) &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)  ⇒ D47 [Main heating replaced]</p> <p>OTHERWISE:  IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>	

<b>D47</b>	<b>Main heating replaced</b>	<i>NWMNHT</i>
<b>ASK</b>	IF Main heating equipment known & NOT District steam or hot water & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)	
<b>FILL</b>	<p><b>{MainHeatEquip}</b>  IF Main heating equipment = Furnace = “Has the furnace”  IF Main heating equipment = Boiler = “Has the boiler”  IF Main heating equipment = Packaged heating = “Has the packaged heating unit”  IF Main heating equipment = Individual space heater = “Have any of the individual space heaters”  IF Main heating equipment = Heat pump = “Has the heat pump”  IF Main heating equipment = Other = “Has the other type of heating equipment”</p>	
<p>{MainHeatEquip} been replaced since 1990?</p> <p>◆ EXP: [If there is more than one of this equipment type and at least one has been replaced, answer "Yes."]</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	<p>IF D2 [Cooling] = Yes ⇒ D48 [Sources for cooling]  OTHERWISE ⇒ D66 [Building automation system]</p>	

<b>D48</b>	<b>Sources for cooling</b>	<i>see below</i>																																	
<b>ASK</b>	IF D2 [Cooling] = Yes																																		
<b>FILL</b>	<p><b>{CoolSourcesList}</b> = List of all possible air conditioning energy sources used  <b>{Electricity}</b> – <b>{Other3}</b> = If a source is used, it appears in this list; if not, the line is blank  <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]  <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p> <p>Which energy sources were used for air conditioning? ({CoolSourcesList})</p> <ul style="list-style-type: none"> <li>◆ Only sources already selected are shown here</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">11</td> <td style="width: 70%;">{Electricity}</td> <td style="width: 25%; text-align: right;"><i>ELCOOL</i></td> </tr> <tr> <td>12</td> <td>{Natural gas}</td> <td style="text-align: right;"><i>NGCOOL</i></td> </tr> <tr> <td>13</td> <td>{FuelOilType}</td> <td style="text-align: right;"><i>FKCOOL</i></td> </tr> <tr> <td>14</td> <td>{Bottled gas}</td> <td style="text-align: right;"><i>PRCOOL</i></td> </tr> <tr> <td>15</td> <td>{District steam}</td> <td style="text-align: right;"><i>STCOOL</i></td> </tr> <tr> <td>16</td> <td>{District hot water}</td> <td style="text-align: right;"><i>HWCOOL</i></td> </tr> <tr> <td>17</td> <td>{District chilled water}</td> <td style="text-align: right;"><i>CWCOOL</i></td> </tr> <tr> <td>21</td> <td>{Other1}</td> <td style="text-align: right;"><i>OTCOOL</i></td> </tr> <tr> <td>22</td> <td>{Other2}</td> <td style="text-align: right;"><i>OTCOOL</i></td> </tr> <tr> <td>23</td> <td>{Other3}</td> <td style="text-align: right;"><i>OTCOOL</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td></td> </tr> </table>		11	{Electricity}	<i>ELCOOL</i>	12	{Natural gas}	<i>NGCOOL</i>	13	{FuelOilType}	<i>FKCOOL</i>	14	{Bottled gas}	<i>PRCOOL</i>	15	{District steam}	<i>STCOOL</i>	16	{District hot water}	<i>HWCOOL</i>	17	{District chilled water}	<i>CWCOOL</i>	21	{Other1}	<i>OTCOOL</i>	22	{Other2}	<i>OTCOOL</i>	23	{Other3}	<i>OTCOOL</i>	24	Some other energy source	
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<b>NEXT</b>	IF Some other energy source selected ⇒ D49 [Other source for cooling] OTHERWISE ⇒ D50 [Percent cooled]																																		

<b>D49</b>	<b>Other source for cooling</b>	<i>see below</i>																								
<b>ASK</b>	IF Some other energy source IN D48 [Sources for cooling]																									
	<p>What was the other energy source used for air conditioning?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">11</td> <td style="width: 70%;">Electricity</td> <td style="width: 25%; text-align: right;"><i>ELCOOL</i></td> </tr> <tr> <td>12</td> <td>Natural gas</td> <td style="text-align: right;"><i>NGCOOL</i></td> </tr> <tr> <td>13</td> <td>Fuel oil/Diesel/Kerosene</td> <td style="text-align: right;"><i>FKCOOL</i></td> </tr> <tr> <td>14</td> <td>Bottled gas</td> <td style="text-align: right;"><i>PRCOOL</i></td> </tr> <tr> <td>15</td> <td>District steam</td> <td style="text-align: right;"><i>STCOOL</i></td> </tr> <tr> <td>16</td> <td>District hot water</td> <td style="text-align: right;"><i>HWCOOL</i></td> </tr> <tr> <td>17</td> <td>District chilled water</td> <td style="text-align: right;"><i>CWCOOL</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td style="text-align: right;"><i>OTCOOL</i></td> </tr> </table>		11	Electricity	<i>ELCOOL</i>	12	Natural gas	<i>NGCOOL</i>	13	Fuel oil/Diesel/Kerosene	<i>FKCOOL</i>	14	Bottled gas	<i>PRCOOL</i>	15	District steam	<i>STCOOL</i>	16	District hot water	<i>HWCOOL</i>	17	District chilled water	<i>CWCOOL</i>	24	Some other energy source	<i>OTCOOL</i>
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<b>NEXT</b>	⇒ D50 [Percent cooled]																									

<b>D50</b>	<b>Percent cooled</b>	<i>COOLP</i>
<b>ASK</b>	IF D1 [Cooling] = Yes	
<b>FILL</b>	{SqFtIn} IF A6 [Square footage] known = A6 [Square footage] IF A6 [Square footage] = DK/RF = "floorspace"	
		[F1]-HELP
	<p>What percent of the {SqFt} in this building was cooled by air conditioning equipment during 2012?</p> <ul style="list-style-type: none"> <li>◆ If cooled square footage is known, but not the percent, RECORD square footage in comments, then code DK</li> <li>◆ PROBE for estimate if DK</li> </ul>	
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF 1-100, DK/RF ⇒ D51 [Cooling equipment types] IF Zero: IF More than just Individual space heaters IN D24 [Heating equipment types] → D74 [Regular HVAC maintenance] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D51</b>	<b>Cooling equipment types</b>	<i>see below</i>																								
<b>ASK</b>	IF D50 [Percent cooled] = 1 to 100 OR DK/RF																									
	[F1]-HELP																									
	<p>□ SHOW CARD D11</p> <p>Looking at the list of cooling equipment types on Show Card D11, please tell me which types are used in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Residential-type central air conditioners, other than heat pumps, that cool air directly and circulate it without using chilled water</td> <td style="width: 25%; text-align: right;"><i>RCAC</i></td> </tr> <tr> <td>2</td> <td>Packaged air conditioning units, other than heat pumps</td> <td style="text-align: right;"><i>PKGCL</i></td> </tr> <tr> <td>3</td> <td>Central chillers inside (or adjacent to) the building that chill water for air conditioning</td> <td style="text-align: right;"><i>CHILLR</i></td> </tr> <tr> <td>4</td> <td>District chilled water piped in from outside the building</td> <td style="text-align: right;"><i>CHWT</i></td> </tr> <tr> <td>5</td> <td>Heat pumps for cooling</td> <td style="text-align: right;"><i>HTPMPC</i></td> </tr> <tr> <td>6</td> <td>Individual room air conditioners, other than heat pumps</td> <td style="text-align: right;"><i>ACWNWL</i></td> </tr> <tr> <td>7</td> <td>"Swamp" coolers or evaporative coolers</td> <td style="text-align: right;"><i>EVAPCL</i></td> </tr> <tr> <td>8</td> <td>Other cooling equipment</td> <td style="text-align: right;"><i>OTCLEQ</i></td> </tr> </table>		1	Residential-type central air conditioners, other than heat pumps, that cool air directly and circulate it without using chilled water	<i>RCAC</i>	2	Packaged air conditioning units, other than heat pumps	<i>PKGCL</i>	3	Central chillers inside (or adjacent to) the building that chill water for air conditioning	<i>CHILLR</i>	4	District chilled water piped in from outside the building	<i>CHWT</i>	5	Heat pumps for cooling	<i>HTPMPC</i>	6	Individual room air conditioners, other than heat pumps	<i>ACWNWL</i>	7	"Swamp" coolers or evaporative coolers	<i>EVAPCL</i>	8	Other cooling equipment	<i>OTCLEQ</i>
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<b>NEXT</b>	<p>IF Packaged air conditioning units ⇒ D52 [Type of packaged cooling]</p> <p>IF Central chillers ⇒ D53 [Type of chiller]</p> <p>IF District chilled water ⇒ D56 [Type of district chilled water system]</p> <p>IF Heat pumps for cooling AND NOT Heat pumps for heating ⇒ D57 [Heat pump cooling system]</p> <p>IF Other cooling equipment ⇒ D59 [Other cool specify]</p> <p>IF DK/RF ⇒ D66 [Building automation system]</p> <p>OTHERWISE:</p> <p>IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation]</p> <p>IF Residential-type central air &amp; D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF ⇒ D61 [Cooling ventilation same as heating]</p> <p>IF Residential-type central air &amp; (D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] =DK/RF) ⇒ D62 [Cooling ventilation types]</p> <p>OTHERWISE:</p> <p>IF More than one selected ⇒ D63 [Percent cooled by each type]</p> <p>IF Only one selected, assign as Main cooling equipment. THEN:</p> <p>IF (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]</p> <p>OTHERWISE → D66 [Building automation system]</p>																									

<b>D52</b>	<b>Type of packaged cooling</b>	<i>PKGCLTYP</i>
<b>ASK</b>	IF Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] OR Any components given in D30 [Other heating components] & <b>NOT</b> (Packaged central unit IN D24 [Heating equipment types] OR Packaged central unit OR Duct furnace IN D25 [Type of furnace] OR Boiler IN D24 [Heating equipment types] OR District steam or hot water IN D24 [Heating equipment types])	
<p style="text-align: right;">[F1]-HELP</p> <p>□ SHOW CARD D6</p> <p>Please look at Show Card D6 and tell me if the packaged unit for cooling is a factory-assembled unitary packaged unit or a custom built-up unit?</p> <ol style="list-style-type: none"> <li>1 Factory-assembled unitary packaged unit</li> <li>2 Custom built-up packaged unit</li> <li>3 IF VOLUNTEERED: Both factory-assembled and custom built-up packaged units</li> </ol>		
<b>NEXT</b>	IF Central chillers ⇒ D53 [Type of chiller] IF District chilled water ⇒ D56 [Type of district chilled water system] IF Heat pumps for cooling AND NOT Heat pumps for heating ⇒ D57 [Heat pump cooling system] IF Other cooling equipment ⇒ D59 [Other cool specify] OTHERWISE: IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation] OTHERWISE: IF D1 [Heating] = Yes & D43 [Heating ventilation types] ≠DK/RF ⇒ D61 [Cooling ventilation same as heating] IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] =DK/RF ⇒ D62 [Cooling ventilation types]	



<b>D53</b>	<b>Type of chiller</b>	<i>see below</i>									
<b>ASK</b>	IF Central chillers IN D51 [Cooling equipment types]										
<p>[F1]-HELP</p> <p>[ ] SHOW CARD D12</p> <p>Please look at Show Card D12 and tell me whether the chiller is air-cooled, water cooled, or an absorption chiller?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Air-cooled</td> <td><i>CHLAIRCL</i></td> </tr> <tr> <td>2</td> <td>Water cooled</td> <td><i>CHLWTRCL</i></td> </tr> <tr> <td>3</td> <td>Absorption</td> <td><i>CHLABSRP</i></td> </tr> </table>		1	Air-cooled	<i>CHLAIRCL</i>	2	Water cooled	<i>CHLWTRCL</i>	3	Absorption	<i>CHLABSRP</i>	
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<b>NEXT</b>	IF Absorption ⇒ D54 [Heater chiller] OTHERWISE ⇒ D55 [Type of chiller system]										

<b>D54</b>	<b>Heater chiller</b>	<i>HTRCHLR</i>				
<b>ASK</b>	IF Absorption IN D53 [Type of chiller]					
<p>A “heater chiller” is a type of absorption chiller can produce both chilled and hot water and can provide both cooling and heating. Does this absorption chiller have this capability?</p> <table> <tr> <td>1</td> <td>Yes</td> </tr> <tr> <td>2</td> <td>No</td> </tr> </table>		1	Yes	2	No	
1	Yes					
2	No					
<b>NEXT</b>	⇒ D55 [Type of chiller system]					

<b>D55</b>	<b>Type of chiller system</b>	<i>see below</i>																					
<b>ASK</b>	IF Central chillers IN D51 [Cooling equipment types]																						
<p style="text-align: right;">[F1]-HELP</p> <p>□ SHOW CARD D13</p> <p>Please look at Show Card D13 and tell me which system or systems are used for distributing the water from the chiller.</p> <p>◆ ENTER all that apply</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 10px;">1</td> <td>Central air handler (hydronic coils)</td> <td style="text-align: right;"><i>CHLAIR</i></td> </tr> <tr> <td>2</td> <td>Fan coil units in rooms (or areas)</td> <td style="text-align: right;"><i>CHLFNCL</i></td> </tr> <tr> <td>3</td> <td>Induction units</td> <td style="text-align: right;"><i>CHLINDC</i></td> </tr> <tr> <td>4</td> <td>Water loop heat pump</td> <td style="text-align: right;"><i>CHLWATR</i></td> </tr> <tr> <td>5</td> <td>Chilled beam</td> <td style="text-align: right;"><i>CHLBEAM</i></td> </tr> <tr> <td>6</td> <td>Packaged unit (hydronic coils)</td> <td style="text-align: right;"><i>CHLPKG</i></td> </tr> <tr> <td>7</td> <td>Duct reheat</td> <td style="text-align: right;"><i>CHLDUCT</i></td> </tr> </table>			1	Central air handler (hydronic coils)	<i>CHLAIR</i>	2	Fan coil units in rooms (or areas)	<i>CHLFNCL</i>	3	Induction units	<i>CHLINDC</i>	4	Water loop heat pump	<i>CHLWATR</i>	5	Chilled beam	<i>CHLBEAM</i>	6	Packaged unit (hydronic coils)	<i>CHLPKG</i>	7	Duct reheat	<i>CHLDUCT</i>
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7	Duct reheat	<i>CHLDUCT</i>																					
<b>NEXT</b>	<p>IF District chilled water ⇒ D56 [Type of district chilled water system]  IF Heat pumps for cooling AND NOT Heat pumps for heating ⇒ D57 [Heat pump cooling system]  IF Other cooling equipment ⇒ D59 [Other cool specify]  OTHERWISE:  IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation]  IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D61 [Cooling ventilation same as heating]  IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] = DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D62 [Cooling ventilation types]  OTHERWISE:  IF More than one selected ⇒ D63 [Percent cooled by each type]  IF Only one selected, assign as Main cooling equipment. THEN:  IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating) &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump) &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  OTHERWISE → D66 [Building automation system]</p>																						

<b>D56</b>	<b>Type of district chilled water system</b>	<i>see below</i>																					
<b>ASK</b>	IF District chilled water IN D51 [Cooling equipment types]																						
<p style="text-align: right;">[F1]-HELP</p> <p>□ SHOW CARD D13</p> <p>Please look at Show Card D13 and tell me which system or systems are used for distributing the district chilled water.</p> <p>◆ ENTER all that apply</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 10px;">1</td> <td>Central air handler (hydronic coils)</td> <td style="text-align: right;"><i>DCWAIR</i></td> </tr> <tr> <td>2</td> <td>Fan coil units in rooms (or areas)</td> <td style="text-align: right;"><i>DCWFNCL</i></td> </tr> <tr> <td>3</td> <td>Induction units</td> <td style="text-align: right;"><i>DCWINDC</i></td> </tr> <tr> <td>4</td> <td>Water loop heat pump</td> <td style="text-align: right;"><i>DCWWATR</i></td> </tr> <tr> <td>5</td> <td>Chilled beam</td> <td style="text-align: right;"><i>DCWBEAM</i></td> </tr> <tr> <td>6</td> <td>Packaged unit (hydronic coils)</td> <td style="text-align: right;"><i>DCWPKG</i></td> </tr> <tr> <td>7</td> <td>Duct reheat</td> <td style="text-align: right;"><i>DCWDUCT</i></td> </tr> </table>			1	Central air handler (hydronic coils)	<i>DCWAIR</i>	2	Fan coil units in rooms (or areas)	<i>DCWFNCL</i>	3	Induction units	<i>DCWINDC</i>	4	Water loop heat pump	<i>DCWWATR</i>	5	Chilled beam	<i>DCWBEAM</i>	6	Packaged unit (hydronic coils)	<i>DCWPKG</i>	7	Duct reheat	<i>DCWDUCT</i>
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<b>NEXT</b>	<p>IF Heat pumps for cooling AND NOT Heat pumps for heating ⇒ D57 [Heat pump cooling system]  IF Other cooling equipment ⇒ D59 [Other cool specify]  OTHERWISE:  IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation]  IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D61 [Cooling ventilation same as heating]  IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] = DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D62 [Cooling ventilation types]  OTHERWISE:  IF More than one selected ⇒ D63 [Percent cooled by each type]  IF Only one selected, assign as Main cooling equipment. THEN:  IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating) &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump) &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  OTHERWISE → D66 [Building automation system]</p>																						

<b>D57</b>	<b>Heat pump cooling system</b>	<i>see below</i>															
<b>ASK</b>	IF Heat pumps IN D51 [Cooling equipment types] & Heat pumps NOT IN D24 [Heating equipment types]																
<p>[ ] SHOW CARD D7</p> <p>Please look at the first list on Show Card D7 and tell me which heat pump systems are used for cooling in this building.</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Packaged unit</td> <td><i>HPCPKG</i></td> </tr> <tr> <td>2</td> <td>Split system (residential-type)</td> <td><i>HPCSPLT</i></td> </tr> <tr> <td>3</td> <td>Individual room heat pump (packaged terminal heat pump or PTHP)</td> <td><i>HPCROOM</i></td> </tr> <tr> <td>4</td> <td>Ductless mini-split system</td> <td><i>HPCMINI</i></td> </tr> <tr> <td>5</td> <td>Variable refrigerant flow (VRF) system</td> <td><i>HPCVRF</i></td> </tr> </table>		1	Packaged unit	<i>HPCPKG</i>	2	Split system (residential-type)	<i>HPCSPLT</i>	3	Individual room heat pump (packaged terminal heat pump or PTHP)	<i>HPCROOM</i>	4	Ductless mini-split system	<i>HPCMINI</i>	5	Variable refrigerant flow (VRF) system	<i>HPCVRF</i>	[F1]-HELP
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5	Variable refrigerant flow (VRF) system	<i>HPCVRF</i>															
<b>NEXT</b>	⇒ D58 [Heat pump cooling type]																

<b>D58</b>	<b>Heat pump cooling type</b>	<i>see below</i>												
<b>ASK</b>	IF Heat pumps IN D51 [Cooling equipment types] & Heat pumps NOT IN D24 [Heating equipment types]													
<p>[ ] SHOW CARD D7</p> <p>Looking at the second list on Show Card D7, which types of heat pumps are these?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Air source heat pump</td> <td><i>HPCAIR</i></td> </tr> <tr> <td>2</td> <td>Ground source or ground water heat pump (geothermal)</td> <td><i>HPCGRD</i></td> </tr> <tr> <td>3</td> <td>Dual source heat pump (combination air source and geothermal)</td> <td><i>HPCDUAL</i></td> </tr> <tr> <td>3</td> <td>Water loop heat pump</td> <td><i>HPCWTR</i></td> </tr> </table>		1	Air source heat pump	<i>HPCAIR</i>	2	Ground source or ground water heat pump (geothermal)	<i>HPCGRD</i>	3	Dual source heat pump (combination air source and geothermal)	<i>HPCDUAL</i>	3	Water loop heat pump	<i>HPCWTR</i>	[F1]-HELP
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3	Dual source heat pump (combination air source and geothermal)	<i>HPCDUAL</i>												
3	Water loop heat pump	<i>HPCWTR</i>												
<b>NEXT</b>	<p>IF Other cooling equipment ⇒ D59 [Other cool specify] OTHERWISE:</p> <p>IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation]</p> <p>IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types] OR Packaged unit IN D51 [Cooling equipment types] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system] OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D61 [Cooling ventilation same as heating]</p> <p>IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] = DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types] OR Packaged unit IN D51 [Cooling equipment types] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system] OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system] OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D62 [Cooling ventilation types]</p> <p>OTHERWISE:</p> <p>IF More than one selected ⇒ D63 [Percent cooled by each type] IF Only one selected, assign as Main cooling equipment. THEN: IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating) &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump) &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced] OTHERWISE → D66 [Building automation system]</p>													

<b>D59</b>	<b>Other cool specify</b>
<b>ASK</b>	IF Other cooling equipment in D51 [Cooling equipment types]
<p>Please describe the other type of cooling equipment.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] ⇒ D60 [Cool source explanation]</p> <p>IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D61 [Cooling ventilation same as heating]</p> <p>IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] = DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system] ⇒ D62 [Cooling ventilation types]</p> <p>OTHERWISE:  IF More than one selected ⇒ D63 [Percent cooled by each type]  IF Only one selected, assign as Main cooling equipment. THEN:  IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating)  &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump)  &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  OTHERWISE → D66 [Building automation system]</p>

<b>D60</b>	<b>Cool source explanation</b>
<b>ASK</b>	IF Any source(s) other than electricity or chilled water reported in D48 [Sources for cooling] OR D49 [Other source for cooling] & Central chillers NOT IN D51 [Cooling equipment types]
<b>FILL</b>	<p><b>{CoolSources}</b> = List of the energy sources given for cooling, other than electricity or chilled water  <b>{IsAre}</b> =  IF Only one cooling source in list = "is"  IF More than one cooling source in list = "are"</p>
<p>Among the sources for cooling, I have recorded that {CoolSources} {IsAre} used. Because it is somewhat unusual to use sources other than electricity or chilled water for cooling, will you please briefly describe how the {CoolSources} {IsAre} used with the cooling equipment.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system]  ⇒ D61 [Cooling ventilation same as heating]</p> <p>IF D1 [Heating] ≠ Yes OR D43 [Heating ventilation types] = DK/RF &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system]  ⇒ D62 [Cooling ventilation types]</p> <p>OTHERWISE:  IF More than one cooling equipment ⇒ D63 [Percent cooled by each type]  IF Only one equipment, assign as Main cooling equipment. THEN:  IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating)  &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump)  &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  OTHERWISE → D66 [Building automation system]</p>

<b>D61</b>	<b>Cooling ventilation same as heating</b>
<b>ASK</b>	<p>IF D1 [Heating] = Yes &amp; D43 [Heating ventilation types] ≠ (No ventilation or DK/RF) &amp; Residential-type central air IN D51 [Cooling equipment types]  OR Packaged unit IN D51 [Cooling equipment types]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D55 [Type of chiller system]  OR Water loop, Central air handler, Packaged unit, OR Duct reheat IN D56 [Type of district chilled water system]  OR Packaged unit OR Split system IN D57 [Heat pump cooling system]</p>
<p>Is the ventilation system for cooling the same as the one for heating?</p> <p>1 Yes  2 No</p>	
<b>NEXT</b>	<p>IF No ⇒ D62 [Cooling ventilation types]  <b>OTHERWISE:</b>  IF More than one cooling equipment ⇒ D63 [Percent cooled by each type]  IF Only one equipment, assign as Main cooling equipment. THEN:  IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating)  &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump)  &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  <b>OTHERWISE</b> ⇒ D66 [Building automation system]</p>



<b>D62</b>	<b>Cooling ventilation types</b>																		
<b>ASK</b>	IF D61 [Cooling ventilation same as heating] = No																		
[F1]-HELP																			
<input type="checkbox"/> SHOW CARD D9  Show Card D9 provides a list of mechanical ventilation equipment types. Please tell me which types are used with the cooling system.																			
<ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul>																			
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Central air handling unit(s) with constant air volume (CAV) control</td> <td style="width: 25%;">CLVCAV</td> </tr> <tr> <td>2</td> <td>Central air handling unit(s) with variable air volume (VAV) control</td> <td>CLVVAV</td> </tr> <tr> <td>3</td> <td>Underfloor air distribution</td> <td>CLVFLR</td> </tr> <tr> <td>4</td> <td>Dedicated outside air system (DOAS)</td> <td>CLVOAS</td> </tr> <tr> <td>5</td> <td>Demand controlled ventilation</td> <td>CLVDEM</td> </tr> <tr> <td>6</td> <td>None of these types</td> <td>CLVNON</td> </tr> </table>		1	Central air handling unit(s) with constant air volume (CAV) control	CLVCAV	2	Central air handling unit(s) with variable air volume (VAV) control	CLVVAV	3	Underfloor air distribution	CLVFLR	4	Dedicated outside air system (DOAS)	CLVOAS	5	Demand controlled ventilation	CLVDEM	6	None of these types	CLVNON
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6	None of these types	CLVNON																	
<b>NEXT</b>	IF None of these types ⇒ D62a [Cooling ventilation specify] OTHERWISE: IF More than one cooling equipment ⇒ D63 [Percent cooled by each type] IF Only one equipment, assign as Main cooling equipment. THEN: IF (Main equipment NOT District chilled water OR DK/RF) & (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) & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced] OTHERWISE ⇒ D66 [Building automation system]																		

<b>D62a</b>	<b>Cooling ventilation specify</b>
<b>ASK</b>	IF D62 [Cooling ventilation types] = None of these types
Please describe the ventilation system that is used with the cooling system.	
<ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	IF More than one cooling equipment ⇒ D63 [Percent cooled by each type] IF Only one equipment, assign as Main cooling equipment. THEN: IF (Main equipment NOT District chilled water OR DK/RF) & (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) & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced] OTHERWISE ⇒ D66 [Building automation system]

<b>D63</b>	<p align="right"><i>RCACP, PKGCP, CHILP, CHWTP, HTPCP, ACWNWP, EVAPP, OTCLP</i></p>
<b>ASK</b>	For each equipment type given in D51 [Cooling equipment types]
<b>FILL</b>	<p><b>{Introduction}</b>  IF First equipment = "The next questions are about the percent of floorspace cooled by the equipment you just mentioned. Please keep in mind."  OTHERWISE = BLANK</p> <p><b>{Explanation}</b>  IF First equipment and D50 [Percent cooled] <math>\neq</math> 100 = "We are talking only about the <u>cooled portion</u> of the floorspace, so these percents 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 <u>more</u> than 100."  IF First equipment and D50 [Percent cooled] = 100 = "These percents 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 <u>more</u> than 100."  OTHERWISE = BLANK</p> <p><b>{Equipment}</b>  IF Residential-type central air conditioners IN D51 [Cooling equipment types] = "central air conditioner"  IF Packaged air conditioning units IN D51 [Cooling equipment types] = "packaged cooling"  IF Central chillers inside the building IN D51 [Cooling equipment types] = "central chiller"  IF District chilled water IN D51 [Cooling equipment types] = "district chilled water"  IF Heat pumps for cooling IN D51 [Cooling equipment types] = "heat pump"  IF Individual room air conditioners IN D51 [Cooling equipment types] = "room air conditioner"  IF "Swamp" coolers or evaporative coolers IN D51 [Cooling equipment types] = "swamp cooler"  IF Other cooling equipment IN D51 [Cooling equipment types] = "other cooling equipment"</p>
<p>□ SHOW CARD D14</p> <p>{Introduction}</p> <p>{Explanation}</p> <p>Please look at Show Card D14. What percent of the cooled area in this building is served by the {Equipment}?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	0 to 100
<b>NEXT</b>	IF there are equal maximum percents OR DK/RF $\Rightarrow$ D64 [Main cooling equipment] IF there is an equipment with a maximum percent, assign that equipment as the Main cooling equipment [MAINCL9]. THEN: IF (Main equipment NOT District chilled water OR DK/RF) & (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) & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] $\neq$ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) $\Rightarrow$ D65 [Main cooling replaced] OTHERWISE $\Rightarrow$ D66 [Building automation system]

<b>D64</b>	<b>Main cooling equipment</b>	<i>MNCLEQ</i>
<b>ASK</b>	IF D63 [Percent cooled by each type] has equal maximum percents OR DK/RF	
<b>FILL</b>	<p><b>{EquipmentList}</b> = List of the equipments with equal maximum percents  <b>{Packaged cooling}</b> – <b>{Other cooling equipment}</b> = Each equipment with an equal maximum percent appears on this list; otherwise the line is blank</p>	
<p>Which do you consider to be your main cooling equipment – {EquipmentList} ?</p> <p>◆ Only equipment types with equal percentages are shown here</p> <ol style="list-style-type: none"> <li>1 {Central air conditioner}</li> <li>2 {Packaged cooling}</li> <li>3 {Central chiller}</li> <li>4 {District chilled water}</li> <li>5 {Heat pump}</li> <li>6 {Room air conditioner}</li> <li>7 {Swamp coolers}</li> <li>8 {Other cooling equipment}</li> </ol>		
<b>NEXT</b>	<p>IF (Main equipment NOT District chilled water OR DK/RF) &amp; (Main cooling equipment NOT Packaged cooling if the Main heating equipment was Packaged heating)  &amp; (Main cooling equipment NOT Heat pump if the main heating equipment was Heat pump)  &amp; (A30 [Year of construction] &lt; 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012) ⇒ D65 [Main cooling replaced]  OTHERWISE ⇒ D66 [Building automation system]</p>	

<b>D65</b>	<b>Main cooling replaced</b>	<i>NWMNCL</i>
<b>ASK</b>	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) & (A30 [Year of construction] < 1990 OR A31 [Year of construction category] ≠ 2000 to 2003 OR 2004 to 2007 OR 2008 to 2012)	
<b>FILL</b>	<b>{MainCoolEquip}</b> IF Main cooling equipment = Packaged cooling = “Has the packaged air conditioning unit” IF Main cooling equipment = Central air conditioner = “Has the central air conditioner” IF Main cooling equipment = Room air conditioner = “Have any of the room air conditioners” IF Main cooling equipment = Heat pump = “Has the heat pump” IF Main cooling equipment = Central chiller = “Has the central chiller” IF Main cooling equipment = Swamp coolers = “Has the swamp cooler” IF Main cooling equipment = Other cooling equipment = “Has the other type of cooling equipment”	
{MainCoolEquip} been replaced since 1990?  ◆ EXP: [If there is more than one of this equipment type and at least one has been replaced, the answer is "Yes."]  1 Yes 2 No		
<b>NEXT</b>	⇒ D66 [Building automation system]	

<b>D66</b>	<b>Building automation system</b>	<i>EMCS</i>
<b>ASK</b>	IF D22 [Percent heated] > 0 OR D50 [Percent cooled] > 0	
Does this building have a “Building Automation System” which may also be referred to as BAS, smart building controls, an energy management and control system, or EMCS?  ◆ DEF: [These systems monitor changes in ambient temperature and operating conditions and automatically modify the heating and cooling levels in different interior zones. This is accomplished by means of remote sensing and control instruments, and interpretive and control software.]  1 Yes 2 No		
<b>NEXT</b>	IF D22 [Percent heated] > 0 ⇒ D67 [Reduce heating] OTHERWISE ⇒ D69 [Reduce cooling]	

<b>D67</b>	<b>Reduce heating</b>	<i>RDHTNF</i>
<b>ASK</b>	IF D22 [Percent heated] > 0	
<b>FILL</b>	<b>{TimesNotInFullUse}</b> IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = 168 = "Are there any periods during a normal 24-hour day when there is" OTHERWISE = "When this building is not in full use, is there"	
		[F1]-HELP
{TimesNotInFullUse} a change in the temperature setting for heating?  1 Yes 2 No		
<b>NEXT</b>	IF Yes ⇒ D68 [How reduce heating] IF No OR DK/RF: IF D50 [Percent cooled] > 0 ⇒ D69 [Reduce cooling] OTHERWISE: IF More than just Individual space heaters IN D24 [Heating equipment types] → D74 [Regular HVAC maintenance] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D68</b>	<b>How reduce heating</b>	<i>HWRDHT</i>
<b>ASK</b>	IF D67 [Reduce heating] = Yes	
<b>FILL</b>	<b>{PartOfBAS}</b> IF D66 [Building automation system] = Yes = 'as part of the Building Automation System' OTHERWISE = BLANK	
How is the temperature for heating usually changed – {PartOfBAS}, using a programmable thermostat, manually changing the thermostat, or manually shutting down the equipment?  ◆ DEF: [A programmable thermostat, or "time-clock thermostat" is programmed to automatically change thermostat settings for times when the building is unoccupied.]  1 {Part of the Building Automation System} 2 Programmable thermostat 3 Manually reset thermostat 4 Manually shut down equipment		
<b>NEXT</b>	IF D50 [Percent cooled] > 0 ⇒ D69 [Reduce cooling] OTHERWISE: IF More than just Individual space heaters IN D24 [Heating equipment types] → D74 [Regular HVAC maintenance] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D69</b>	<b>Reduce cooling</b>	<i>RDCLNF</i>
<b>ASK</b>	IF D50 [Percent cooled] > 0	
<b>FILL</b>	<b>{TimesNotInFullUse}</b> IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = 168 = "Are there any periods during a normal 24-hour day when there is" OTHERWISE = "When this building is not in full use, is there"	
		[F1]-HELP
{TimesNotInFullUse} a change in the temperature setting for <u>cooling</u> ?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes → D70 [How reduce cooling] IF No OR DK/RF: IF More than just Individual room air conditioners IN D51 [Cooling equipment types] → D71 [Economizer cycle] IF Packaged air conditioning units OR Central chillers OR Heat pumps for cooling IN D51 [Cooling equipment types] → D73 [Cooling tower] IF More than just individual space heaters IN D24 [Heating equipment types] ⇒ D74 [Regular HVAC maintenance] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D70</b>	<b>How reduce cooling</b>	<i>HWRDCL</i>
<b>ASK</b>	IF D69 [Reduce cooling] = Yes	
<b>FILL</b>	<b>{PartOfBAS}</b> IF D66 [Building automation system] = Yes = 'as part of the Building Automation System' OTHERWISE = BLANK	
<p>How is the temperature for cooling usually changed – {PartOfBAS}, using a programmable thermostat, manually changing the thermostat, or manually shutting down the equipment?</p> <p>◆ DEF: [A programmable thermostat, or "time-clock thermostat" is programmed to automatically change thermostat settings for times when the building is unoccupied.]</p> <ol style="list-style-type: none"> <li>1 {Part of the Building Automation System}</li> <li>2 Programmable thermostat</li> <li>3 Manually reset thermostat</li> <li>4 Manually shut down equipment</li> </ol>		
<b>NEXT</b>	IF More than just Individual room air conditioners IN D51 [Cooling equipment types] → D71 [Economizer cycle] IF Packaged air conditioning units OR Central chillers OR Heat pumps for cooling IN D51 [Cooling equipment types] → D73 [Cooling tower] IF More than just individual space heaters IN D24 [Heating equipment types] ⇒ D74 [Regular HVAC maintenance] IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D71</b>	<b>Economizer cycle</b>	<i>ECN</i>
<b>ASK</b>	IF More than just Individual room air conditioners IN D51 [Cooling equipment types]	
		[F1]-HELP
<p>Does this building have any equipment that uses outside air for cooling, often called an "economizer cycle"?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → D72 [Type of economizer cycle] OTHERWISE: IF Packaged air conditioning units OR Central chillers OR Heat pumps for cooling IN D51 [Cooling equipment types] → D73 [Cooling tower] OTHERWISE → D74 [Regular HVAC maintenance]	

<b>D72</b>	<b>Type of economizer cycle</b>	<i>ECNTYPE</i>
<b>ASK</b>	IF D71 [Economizer cycle] = Yes	
<p>□ SHOW CARD D15</p> <p>Looking at Show Card D15, is this an air-side economizer or a water-side economizer?</p> <p>1 Air-side economizer 2 Water-side economizer</p>		
<b>NEXT</b>	IF Packaged air conditioning units OR Central chillers OR Heat pumps for cooling IN D51 [Cooling equipment types] → D73 [Cooling tower] OTHERWISE → D74 [Regular HVAC maintenance]	

<b>D73</b>	<b>Cooling tower</b>	<i>CTOWER</i>
<b>ASK</b>	IF Packaged air conditioning units OR Central chillers OR Heat pumps for cooling IN D51 [Cooling equipment types]	
<p>Does this building have a cooling tower for the cooling equipment?</p> <p>◆ DEF: [A cooling tower is used to dispose of unwanted heat from the cooling equipment.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ D74 [Regular HVAC maintenance]	

<b>D74</b>	<b>Regular HVAC maintenance</b>	<i>MAINT</i>
<b>ASK</b>	IF More than just Individual space heaters IN D24 [Heating equipment types] OR More than just Individual room air conditioners IN D51 [Cooling equipment types]	
<b>FILL</b>	<b>{HeatCool}</b> IF Heating only = "heating" IF Cooling only = "cooling" IF Heating & Cooling = "heating and cooling"	
<p style="text-align: right;">[F1]-HELP</p> <p>Is there any regularly scheduled maintenance and repair for the {HeatCool} system?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF D3 [Water heating] = Yes ⇒ D75 [Sources for water heating] IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	



<b>D75</b>	<b>Sources for water heating</b>	<i>see below</i>																																							
<b>ASK</b>	IF D3 [Water heating] = Yes																																								
<b>FILL</b>	<p>{<b>WatrSourcesList</b>} = List of all energy sources used          {<b>Electricity</b>} – {<b>Other3</b>} = If a source is used, it appears in this list; if not, the line is blank          {<b>FuelOilType</b>} = Type or types specified in D10 [Fuel oil, diesel, or kerosene]          {<b>Other1</b>} – {<b>Other3</b>} = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p>																																								
<p>Which energy sources were used for water heating? ({<b>WatrSourcesList</b>})</p> <ul style="list-style-type: none"> <li>◆ Only sources already selected are shown here</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">11</td> <td style="width: 70%;">{Electricity}</td> <td style="width: 25%; text-align: right;"><i>ELWATR</i></td> </tr> <tr> <td>12</td> <td>{Natural gas}</td> <td style="text-align: right;"><i>NGWATR</i></td> </tr> <tr> <td>13</td> <td>{FuelOilType}</td> <td style="text-align: right;"><i>FKWATR</i></td> </tr> <tr> <td>14</td> <td>{Bottled gas}</td> <td style="text-align: right;"><i>PRWATR</i></td> </tr> <tr> <td>15</td> <td>{District steam}</td> <td style="text-align: right;"><i>STWATR</i></td> </tr> <tr> <td>16</td> <td>{District hot water}</td> <td style="text-align: right;"><i>HWWATR</i></td> </tr> <tr> <td>18</td> <td>{Wood}</td> <td style="text-align: right;"><i>WOWATR</i></td> </tr> <tr> <td>19</td> <td>{Coal}</td> <td style="text-align: right;"><i>COWATR</i></td> </tr> <tr> <td>20</td> <td>{Solar}</td> <td style="text-align: right;"><i>SOWATR</i></td> </tr> <tr> <td>21</td> <td>{Other1}</td> <td style="text-align: right;"><i>OTWATR</i></td> </tr> <tr> <td>22</td> <td>{Other2}</td> <td style="text-align: right;"><i>OTWATR</i></td> </tr> <tr> <td>23</td> <td>{Other3}</td> <td style="text-align: right;"><i>OTWATR</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td></td> </tr> </table>			11	{Electricity}	<i>ELWATR</i>	12	{Natural gas}	<i>NGWATR</i>	13	{FuelOilType}	<i>FKWATR</i>	14	{Bottled gas}	<i>PRWATR</i>	15	{District steam}	<i>STWATR</i>	16	{District hot water}	<i>HWWATR</i>	18	{Wood}	<i>WOWATR</i>	19	{Coal}	<i>COWATR</i>	20	{Solar}	<i>SOWATR</i>	21	{Other1}	<i>OTWATR</i>	22	{Other2}	<i>OTWATR</i>	23	{Other3}	<i>OTWATR</i>	24	Some other energy source	
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<b>NEXT</b>	IF Some other energy source selected ⇒ D76 [Other water heating source] OTHERWISE ⇒ D77 [Water heating equipment]																																								

<b>D76</b>	<b>Other water heating source</b>	<i>see below</i>																														
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<b>NEXT</b>	⇒ D77 [Water heating equipment]																															

<b>D77</b>	<b>Water heating equipment</b>	<i>WTHTEQ</i>
<b>ASK</b>	IF D3 [Water heating] = Yes	
	[F1]-HELP	
	Does this building have one or more centralized water heaters, one or more "point-of-use" water heaters, or both of these types (of water heaters)?	
	<ul style="list-style-type: none"> <li>1 One or more centralized water heaters</li> <li>2 One or more "point-of-use" water heaters</li> <li>3 Both types</li> </ul>	
<b>NEXT</b>	IF D77 [Water heating equipment] = One or more point-of-use OR Both types & CBECS Activity = Food service OR Inpatient health OR B16 [Service type] = Dry cleaner or Laundromat OR Car wash ⇒ D78 [Booster water heaters] IF CBECS Activity = Lodging ⇒ D79 [Instant hot water] OTHERWISE: IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D78</b>	<b>Booster water heaters</b>	<i>BOOSTWT</i>
<b>ASK</b>	IF D77 [Water heating equipment] = One or more point-of-use OR Both types & CBECS Activity = Food service OR Inpatient health OR B16 [Service type] = Dry cleaner or Laundromat OR Car wash	
	How many of the point-of-use water heaters are "booster" water heaters, which are used to increase service water temperature up to 180 degrees, often for the purpose of sanitizing?	
<b>RANGE</b>	0 to 99	
<b>NEXT</b>	IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D79</b>	<b>Instant hot water</b>	<i>INSTWT</i>
<b>ASK</b>	IF D3 [Water heating] = Yes & CBECS Activity = Lodging	
	Is the water hot <u>as soon as</u> you turn on the faucet?	
	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>	
<b>NEXT</b>	IF D4 [Cooking] = Yes ⇒ D80 [Sources for cooking] IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing] IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] OTHERWISE ⇒ D90 [Any other sources]	

<b>D80</b>	<b>Sources for cooking</b>	<i>see below</i>																																							
<b>ASK</b>	IF D4 [Cooking] = Yes																																								
<b>FILL</b>	<p><b>{CookSourcesList}</b> = List of all energy sources used  <b>{Electricity}</b> – <b>{Other3}</b> = If a source is used, it appears in this list; if not, the line is blank  <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]  <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p>																																								
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<b>NEXT</b>	<p>IF Some other energy source selected ⇒ D81 [Other cooking source]  OTHERWISE:  IF D6 [Manufacturing] = Yes ⇒ D82 [Sources for manufacturing]  IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation]  OTHERWISE ⇒ D90 [Any other sources]</p>																																								

<b>D81</b>	<b>Other cooking source</b>																														
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<b>D82</b>	<b>Sources for manufacturing</b>	<i>see below</i>																																							
<b>ASK</b>	IF D6 [Manufacturing] = Yes																																								
<b>FILL</b>	<p>{ManuSourcesList} = List of all energy sources used          {Electricity} – {Other3} = If a source is used, it appears in this list; if not, the line is blank          {FuelOilType} = Type or types specified in D10 [Fuel oil, diesel, or kerosene]          {Other1} – {Other3} = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]</p>																																								
<p>Which energy sources were used for manufacturing? [ {ManuSourcesList} ]</p> <ul style="list-style-type: none"> <li>◆ Only sources already selected are shown here</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table> <tr><td>11</td><td>{Electricity}</td><td>ELMANU</td></tr> <tr><td>12</td><td>{Natural gas}</td><td>NGMANU</td></tr> <tr><td>13</td><td>{FuelOilType}</td><td>FKMANU</td></tr> <tr><td>14</td><td>{Bottled gas}</td><td>PRMANU</td></tr> <tr><td>15</td><td>{District steam}</td><td>STMANU</td></tr> <tr><td>16</td><td>{District hot water}</td><td>HWMANU</td></tr> <tr><td>18</td><td>{Wood}</td><td>WOMANU</td></tr> <tr><td>19</td><td>{Coal}</td><td>COMANU</td></tr> <tr><td>20</td><td>{Solar}</td><td>SOMANU</td></tr> <tr><td>21</td><td>{Other1}</td><td>OTMANU</td></tr> <tr><td>22</td><td>{Other2}</td><td>OTMANU</td></tr> <tr><td>23</td><td>{Other3}</td><td>OTMANU</td></tr> <tr><td>24</td><td>Some other energy source</td><td></td></tr> </table>			11	{Electricity}	ELMANU	12	{Natural gas}	NGMANU	13	{FuelOilType}	FKMANU	14	{Bottled gas}	PRMANU	15	{District steam}	STMANU	16	{District hot water}	HWMANU	18	{Wood}	WOMANU	19	{Coal}	COMANU	20	{Solar}	SOMANU	21	{Other1}	OTMANU	22	{Other2}	OTMANU	23	{Other3}	OTMANU	24	Some other energy source	
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<b>NEXT</b>	IF Some other energy source selected ⇒ D83 [Other manufacturing source] OTHERWISE: IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] IF D8 [Electricity generation capability] ≠ Yes ⇒ D90 [Any other sources]																																								

<b>D83</b>	<b>Other manufacturing source</b>	<i>see below</i>																														
<b>ASK</b>	IF Some other energy source IN D82 [Sources for manufacturing]																															
<p>What was the other energy source used for manufacturing?</p> <table> <tr> <td>11</td> <td>Electricity</td> <td><i>ELMANU</i></td> </tr> <tr> <td>12</td> <td>Natural gas</td> <td><i>NGMANU</i></td> </tr> <tr> <td>13</td> <td>Fuel oil/Diesel/Kerosene</td> <td><i>FKMANU</i></td> </tr> <tr> <td>14</td> <td>Bottled gas</td> <td><i>PRMANU</i></td> </tr> <tr> <td>15</td> <td>District steam</td> <td><i>STMANU</i></td> </tr> <tr> <td>16</td> <td>District hot water</td> <td><i>HWMANU</i></td> </tr> <tr> <td>18</td> <td>Wood</td> <td><i>WOMANU</i></td> </tr> <tr> <td>19</td> <td>Coal</td> <td><i>COMANU</i></td> </tr> <tr> <td>20</td> <td>Solar</td> <td><i>SOMANU</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td><i>OTMANU</i></td> </tr> </table>			11	Electricity	<i>ELMANU</i>	12	Natural gas	<i>NGMANU</i>	13	Fuel oil/Diesel/Kerosene	<i>FKMANU</i>	14	Bottled gas	<i>PRMANU</i>	15	District steam	<i>STMANU</i>	16	District hot water	<i>HWMANU</i>	18	Wood	<i>WOMANU</i>	19	Coal	<i>COMANU</i>	20	Solar	<i>SOMANU</i>	24	Some other energy source	<i>OTMANU</i>
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<b>NEXT</b>	IF D8 [Electricity generation capability] = Yes ⇒ D84 [Energy for generation] IF D8 [Electricity generation capability] ≠ Yes ⇒ D90 [Any other sources]																															

<b>D84</b>	<b>Energy for generation</b>	<i>GENR</i>				
<b>ASK</b>	IF D8 [Electricity generation capability] = Yes					
<p>Was any energy actually <u>used</u> for generating electricity in this building during 2012, even if just a small amount was used for emergency backup or for testing generators?</p> <table> <tr> <td>1</td> <td>Yes</td> </tr> <tr> <td>2</td> <td>No</td> </tr> </table>			1	Yes	2	No
1	Yes					
2	No					
<b>NEXT</b>	IF Yes ⇒ D85 [Sources for electricity generation] IF No OR DK/RF ⇒ D90 [Any other sources]					

<b>D85</b>	<b>Sources for electricity generation</b>	<i>see below</i>																														
<b>ASK</b>	IF D84 [Energy for generation] = Yes																															
<b>FILL</b>	{Other1} – {Other3} = Sources specified in D12 [Other energy source 1] – D14 [Other energy source 3]																															
<p>□ SHOW CARD D16</p> <p>Looking at Show Card D16, please tell me which energy sources were used for electricity generation.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">12</td> <td style="width: 70%;">Natural gas</td> <td style="width: 25%; text-align: right;"><i>NGGENR</i></td> </tr> <tr> <td>13</td> <td>Fuel oil/Diesel/Kerosene</td> <td style="text-align: right;"><i>FKGENR</i></td> </tr> <tr> <td>14</td> <td>Bottled gas/LPG/Propane</td> <td style="text-align: right;"><i>PRGENR</i></td> </tr> <tr> <td>18</td> <td>Wood</td> <td style="text-align: right;"><i>WOGENR</i></td> </tr> <tr> <td>19</td> <td>Coal</td> <td style="text-align: right;"><i>COGENR</i></td> </tr> <tr> <td>20</td> <td>Solar</td> <td style="text-align: right;"><i>SOGENR</i></td> </tr> <tr> <td>21</td> <td>{Other1}</td> <td style="text-align: right;"><i>OTGENR</i></td> </tr> <tr> <td>22</td> <td>{Other2}</td> <td style="text-align: right;"><i>OTGENR</i></td> </tr> <tr> <td>23</td> <td>{Other3}</td> <td style="text-align: right;"><i>OTGENR</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td style="text-align: right;"><i>OTGENR</i></td> </tr> </table>			12	Natural gas	<i>NGGENR</i>	13	Fuel oil/Diesel/Kerosene	<i>FKGENR</i>	14	Bottled gas/LPG/Propane	<i>PRGENR</i>	18	Wood	<i>WOGENR</i>	19	Coal	<i>COGENR</i>	20	Solar	<i>SOGENR</i>	21	{Other1}	<i>OTGENR</i>	22	{Other2}	<i>OTGENR</i>	23	{Other3}	<i>OTGENR</i>	24	Some other energy source	<i>OTGENR</i>
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<b>NEXT</b>	⇒ D86 [Generation technologies]																															

<b>D86</b>	<b>Generation technologies</b>	<i>see below</i>																					
<b>ASK</b>	IF D84 [Energy for generation] = Yes																						
<p>□ SHOW CARD D17</p> <p>Looking at Show Card D17, were any of the technologies on the list used on-site for generating electricity?</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Photovoltaic cells</td> <td style="width: 25%; text-align: right;"><i>PVC</i></td> </tr> <tr> <td>2</td> <td>Fuel cells</td> <td style="text-align: right;"><i>FUELCL</i></td> </tr> <tr> <td>5</td> <td>Large turbines</td> <td style="text-align: right;"><i>LRGTRB</i></td> </tr> <tr> <td>3</td> <td>Microturbines</td> <td style="text-align: right;"><i>MCROTB</i></td> </tr> <tr> <td>4</td> <td>Wind turbines</td> <td style="text-align: right;"><i>WNDTRB</i></td> </tr> <tr> <td>6</td> <td>Reciprocating engines</td> <td style="text-align: right;"><i>ENGINE</i></td> </tr> <tr> <td>7</td> <td>IF VOLUNTEERED: None of these</td> <td></td> </tr> </table>			1	Photovoltaic cells	<i>PVC</i>	2	Fuel cells	<i>FUELCL</i>	5	Large turbines	<i>LRGTRB</i>	3	Microturbines	<i>MCROTB</i>	4	Wind turbines	<i>WNDTRB</i>	6	Reciprocating engines	<i>ENGINE</i>	7	IF VOLUNTEERED: None of these	
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<b>NEXT</b>	⇒ D87 [Use of generated electricity]																						

<b>D87</b>	<b>Use of generated electricity</b>	<i>GENUSE</i>
<b>ASK</b>	IF D84 [Energy for generation] = Yes	
	[F1]-HELP	
	<p>During 2012, was the electricity generated in this building used: primarily for emergency back-up or testing, during periods of high electricity demand, or whenever electricity was used?</p> <ol style="list-style-type: none"> <li>1 Primarily for emergency back-up or testing</li> <li>2 During periods of high electricity demand</li> <li>3 Whenever electricity was used</li> </ol>	
<b>NEXT</b>	IF Primarily for emergency back-up and testing OR DK/RF ⇒ D90 [Any other sources] IF During periods of high electricity demand OR Whenever electricity was used ⇒ D88 [Cogeneration system]	

<b>D88</b>	<b>Cogeneration system</b>	<i>COGEN</i>
<b>ASK</b>	IF D87 [Use of generated electricity] = During periods of high electricity demand OR Whenever electricity was used	
	[F1]-HELP	
	<p>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 <u>is used</u> in this or another building for space heating, water heating, or industrial processes?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>	
<b>NEXT</b>	⇒ D89 [Deliver electricity to grid]	

<b>D89</b>	<b>Deliver electricity to grid</b>	<i>TOGRID</i>
<b>ASK</b>	IF D87 [Use of generated electricity] = During periods of high electricity demand OR Whenever electricity was used	
	<p>Is the generation system interconnected with an electric utility so that it is able to deliver or sell electricity <u>to the grid</u>?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>	
<b>NEXT</b>	⇒ D90 [Any other sources]	

<b>D90</b>	<b>Any other sources</b>
<b>ASK</b>	IF D9 [Energy sources used] was answered
<b>FILL</b>	<b>{SourcesList}</b> = List of all energy sources used
<p>As a final check, were there any energy sources used in this building other than {Sources List} ?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	<p>IF Yes ⇒ D91 [Other sources]  IF No OR DK/RF:  Check that every energy source given in D9 [Energy sources used] (other than electricity or district chilled water) was assigned an end use. THEN:  IF Yes:  IF Electricity used ⇒ D94 [How purchase electricity]  IF Natural gas used ⇒ D96 [How purchase natural gas]  IF Bottled gas used ⇒ D97 [Bottled gas amount]  IF Wood used ⇒ D99 [Amount wood burned]  IF No → D93 [Missed {energy source} use]</p>

<b>D91</b>	<b>Other sources</b>	<i>see below</i>																																	
<b>ASK</b>	IF D90 [Any other sources] =Yes																																		
<b>FILL</b>	<b>{Electricity}</b> – <b>{Solar}</b> = If a source has NOT been mentioned, it appears in this list; if it has, the line is blank																																		
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<b>NEXT</b>	⇒ D92 [{Energy source} use]																																		



<b>D92</b>	<b>{Energy source} use</b> <i>see below where {XX} is the energy source abbreviation</i>																
<b>ASK</b>	For each source selected in D91 [Other sources]																
<b>FILL</b>	<p><b>{EnergySource}</b>  IF Electricity IN D91 [Other sources] = "electricity"  IF Natural gas IN D91 [Other sources] = "natural gas"  IF Fuel oil/Diesel/Kerosene IN D91 [Other sources] = "fuel oil/diesel/kerosene"  IF Bottled gas IN D91 [Other sources] = "bottled gas"  IF District steam IN D91 [Other sources] = "district steam"  IF District hot water IN D91 [Other sources] = "district hot water"  IF Wood IN D91 [Other sources] = "wood"  IF Coal IN D91 [Other sources] = "coal"  IF Solar IN D91 [Other sources] = "solar energy"  IF Other IN D91 [Other sources] = "other fuel"</p> <p><b>{Cooling}</b>  Does not appear as a choice for Wood use, Coal use, OR Solar use</p> <p><b>{Electricity generation}</b>  Does not appear as a choice for Electricity use, District steam use, OR District hot water use</p>																
<p>What was the {EnergySource} used for?</p> <table border="0"> <tr> <td>1 Heating</td> <td>{XX}HT1/HT2</td> </tr> <tr> <td>2 {Cooling}</td> <td>{XX}COOL</td> </tr> <tr> <td>3 Water heating</td> <td>{XX}WATR</td> </tr> <tr> <td>4 Cooking</td> <td>{XX}COOK</td> </tr> <tr> <td>5 Manufacturing</td> <td>{XX}MANU</td> </tr> <tr> <td>6 {Electricity generation}</td> <td>{XX}GENR</td> </tr> <tr> <td>7 Some other use</td> <td>{XX}OTH</td> </tr> <tr> <td>8 Incorrectly recorded--source not used</td> <td></td> </tr> </table>		1 Heating	{XX}HT1/HT2	2 {Cooling}	{XX}COOL	3 Water heating	{XX}WATR	4 Cooking	{XX}COOK	5 Manufacturing	{XX}MANU	6 {Electricity generation}	{XX}GENR	7 Some other use	{XX}OTH	8 Incorrectly recorded--source not used	
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<b>NEXT</b>	<p>Check that every energy source given in D9 [Energy sources used] (other than electricity or district chilled water) was assigned an end use:  IF Yes:  IF Electricity used ⇒ D94 [How purchase electricity]  IF Natural gas used ⇒ D96 [How purchase natural gas]  IF Bottled gas used ⇒ D97 [Bottled gas amount]  IF Wood used ⇒ D99 [Amount wood burned]  IF No ⇒ D93 [Missed {energy source} use]</p>																

<b>D93</b>	<b>Missed {energy source} use</b> <i>see below where {XX} is the energy source abbreviation</i>																								
<b>ASK</b>	For every energy source given in D9 [Energy sources used] that was not assigned an end use (other than electricity)																								
<b>FILL</b>	<p><b>{EnergySource}</b>  IF No end use for Natural gas = "natural gas"  IF No end use for Fuel oil = Type or types specified in D10 [Fuel oil, diesel, or kerosene]  IF No end use for Bottled gas = "bottled gas"  IF No end use for District steam = "district steam"  IF No end use for District hot water = "district hot water"  IF No end use for District chilled water = "district chilled water"  IF No end use for Wood = "wood"  IF No end use for Coal = "coal"  IF No end use for Solar = "solar energy"  IF No end use for Other = "another energy source" (second fill = "other energy source")  <b>{Heating}, {Water heating}, {Cooking}, {Manufacturing}</b>  Do not appear as a choice for District chilled water use  <b>{Cooling}</b>  Does not appear as a choice for Wood use, Coal use, OR Solar use  <b>{Electricity generation}</b>  Does not appear as a choice for District chilled water use, District steam use OR District hot water use</p>																								
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**NOTE ON USES OF ENERGY:**

In addition to the end uses given in D1 [Heating], D2 [Cooling], D3 [Water heating], D4 [Cooking], and D6 [Manufacturing], it is now possible that an end use was added in D92 [{Energy source} use] OR D93 [Missed {energy source} use]. For the rest of this questionnaire, end uses will just simply be stated, for example: "IF Cooking" would mean: IF D4 [Cooking] =Yes OR Cooking was added as an end use in D92 [{Energy source} use] OR in D93 [Missed {energy source} use].

"Any energy used" will be used to refer to:

IF D1 [Heating] = Yes OR D2 [Cooling] = Yes OR D3 [Water heating] = Yes OR D4 [Cooking] = Yes OR D6 [Manufacturing] = Yes OR D7 [Any energy used] = Yes, some energy was used OR DK/RF

<b>D94</b>	<b>How purchase electricity</b>	<i>see below</i>												
<b>ASK</b>	IF Electricity used													
	[F1]-HELP													
	<p>□ SHOW CARD D18</p> <p>In some areas of the country, consumers may purchase their electricity from more than one supplier. Looking at Show Card D18, please tell me all the ways that electricity is purchased for this building.</p> <ul style="list-style-type: none"> <li>◆ EXP: [If electricity is bought from the city, that is considered to be the local utility.]</li> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Bought from the local utility</td> <td style="width: 25%; text-align: right;"><i>ELLOCUT</i></td> </tr> <tr> <td>2</td> <td>Contracted or bought from an independent power producer or non-local utility</td> <td style="text-align: right;"><i>ELNONLU</i></td> </tr> <tr> <td>3</td> <td>Bought from someone else, such as a broker</td> <td style="text-align: right;"><i>ELOTSRC</i></td> </tr> <tr> <td>4</td> <td>IF VOLUNTEERED: Produced by a central plant on campus</td> <td style="text-align: right;"><i>ELCPLT</i></td> </tr> </table>		1	Bought from the local utility	<i>ELLOCUT</i>	2	Contracted or bought from an independent power producer or non-local utility	<i>ELNONLU</i>	3	Bought from someone else, such as a broker	<i>ELOTSRC</i>	4	IF VOLUNTEERED: Produced by a central plant on campus	<i>ELCPLT</i>
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<b>NEXT</b>	IF more than one selected, including Bought from the local utility ⇒ D95 [Percent from local utility] OTHERWISE: IF Natural gas used ⇒ D96 [How purchase natural gas] IF Bottled gas used ⇒ D97 [Bottled gas amount] IF Wood used ⇒ D99 [Amount wood burned] OTHERWISE → D103 [AMI smart metering]													

<b>D95</b>	<b>Percent from local utility</b>	<i>ELLUPCT</i>
<b>ASK</b>	IF More than one response selected in D94 [How purchase electricity], including Bought from the local utility	
	About what percent of the electricity would you estimate was obtained from the local utility?	
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	IF Natural gas used ⇒ D96 [How purchase natural gas] IF Bottled gas used ⇒ D97 [Bottled gas amount] IF Wood used ⇒ D99 [Amount wood burned] OTHERWISE → D103 [AMI smart metering]	

<b>D96</b>	<b>How purchase natural gas</b>	<i>NGSRC &amp; see below</i>									
<b>ASK</b>	IF Natural gas used										
<b>FILL</b>	<p><b>{Introduction}</b>  IF Electricity used = "Consumers may also be able to purchase their natural gas from more than one supplier."  IF Electricity not used = "In some areas of the country, consumers may purchase their natural gas from more than one supplier."</p>										
[F1]-HELP											
<p>{Introduction} Was the natural gas in this building bought from the local utility, bought from someone else, such as a non-utility or a broker, or bought both of these ways?</p>											
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<b>NEXT</b>	IF Bottled gas used ⇒ D97 [Bottled gas amount] IF Wood used ⇒ D99 [Amount wood burned] IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]										

<b>D97</b>	<b>Bottled gas amount</b>	<i>PRAMTC</i>												
<b>ASK</b>	IF Bottled gas used													
<p>☐ SHOW CARD D19</p> <p>You mentioned that bottled gas is used in this building. Looking at Show Card D19, which range best describes the amount of bottled gas used in 2012?</p>														
<table style="width: 100%; border: none;"> <tr> <td style="width: 5%; vertical-align: top;">1</td> <td style="width: 70%;">Less than 100</td> <td style="width: 25%;"></td> </tr> <tr> <td style="vertical-align: top;">2</td> <td>100 to 499</td> <td></td> </tr> <tr> <td style="vertical-align: top;">3</td> <td>500 to 999</td> <td></td> </tr> <tr> <td style="vertical-align: top;">4</td> <td>1,000 or more</td> <td></td> </tr> </table>			1	Less than 100		2	100 to 499		3	500 to 999		4	1,000 or more	
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2	100 to 499													
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<b>NEXT</b>	IF Amount given ⇒ D98 [Bottled gas units] IF DK/RF: IF Wood used ⇒ D99 [Amount wood burned] IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]													

<b>D98</b>	<b>Bottled gas units</b>	<i>PRUNIT</i>
<b>ASK</b>	IF D97 [Bottled gas amount] was answered	
	<p>◆ VERIFY if volunteered in previous question</p> <p>Is that in gallons or pounds?</p> <ol style="list-style-type: none"> <li>1 Gallons</li> <li>2 Pounds</li> </ol>	
<b>NEXT</b>	IF Wood used ⇒ D99 [Amount wood burned] IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D99</b>	<b>Amount wood burned</b>	<i>WOAMT</i>
<b>ASK</b>	IF Wood used	
	<input type="checkbox"/> SHOW CARD D20  Looking at Show Card D20, which range best describes how much wood was burned in this building in 2012? <ol style="list-style-type: none"> <li>1 Less than 1 cord</li> <li>2 1 to 9 cords</li> <li>3 10 to 20 cords</li> <li>4 More than 20 cords</li> </ol>	
<b>NEXT</b>	⇒ D100 [How obtain wood]	

<b>D100</b>	<b>How obtain wood</b>	<i>WOSRC</i>
<b>ASK</b>	IF Wood used	
	Did you purchase all the wood, obtain it all free of charge, or was some purchased and some free? <ol style="list-style-type: none"> <li>1 Purchased all the wood</li> <li>2 Obtained it all free of charge</li> <li>3 Some purchased and some free</li> </ol>	
<b>NEXT</b>	IF Purchased all the wood OR Some purchased and some free ⇒ D101 [Expenditures for wood] IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D101</b>	<b>Expenditures for wood</b>	WOEXP
<b>ASK</b>	IF D100 [How obtain wood] = Purchase all the wood OR Some purchased and some free	
<p>Please give me an estimate of the total amount spent for the wood used in 2012.</p> <ul style="list-style-type: none"> <li>◆ Do not enter cents</li> <li>◆ VERIFY number digit by digit</li> </ul>		
<b>RANGE</b>	1 to 99,999	
<b>NEXT</b>	IF DK/RF ⇒ D102 [Wood expenditures category] IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D102</b>	<b>Wood expenditures category</b>	WOEXPC
<b>ASK</b>	IF D101 [Expenditures for wood] = DK/RF	
<input type="checkbox"/> SHOW CARD D21  Looking at Show Card D21, which range best describes the total amount spent for the wood used in 2012?  1 \$1 to \$100 2 \$101 to \$500 3 \$501 to \$1,000 4 \$1,001 to \$2,000 5 Over \$2,000		
<b>NEXT</b>	IF Electricity used → D103 [AMI smart metering] OTHERWISE: IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D103</b>	<b>AMI smart metering</b>	<i>AMIMETER</i>
<b>ASK</b>	IF Electricity used	
<p>Does this building have advanced metering infrastructure, sometimes referred to as AMI or "smart metering"?</p> <p>◆ DEF: [An AMI or "smart meter" is a meter that records electricity consumption in intervals of one hour or less. Daily data are available to both the energy company and the consumer through a web portal, display device, or other form of communication.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Heating OR Cooling → D104 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D104</b>	<b>Energy management plan</b>	<i>ENRGYPLN</i>
<b>ASK</b>	IF Heating OR Cooling	
<p>Does this building have a formal energy management plan in which energy targets are set and consistently monitored?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ E1 [Section E Routing]	

**SECTION E. MISCELLANEOUS EQUIPMENT**

<b>E1</b>	<b>Section E Routing</b>
<b>NEXT</b>	<p>IF Cooking &amp; CBECS Activity ≠ Food service ⇒ E2 [Type of food area]            IF Water heating ⇒ E9 [Large amounts of hot water]            IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]            IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office                OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care;                Outpatient rehabilitation center; Other type of health care ⇒ E16 [Medical equipment]            IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail;                OR Service ⇒ E23 [Laboratory equipment]            IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]            IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]            OTHERWISE:                IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]                OTHERWISE ⇒ E31 [Refrigeration]</p>



E2	Type of food area	FDRM																								
ASK	IF Cooking & CBECS Activity ≠ Food service																									
<p>□ SHOW CARD E1</p> <p>Now I have some questions about uses of space and equipment in this building.</p> <p>Please look at Show Card E1 and tell me which of these types of food preparation or serving areas are found in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table border="0" style="width: 100%;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Snack bar or concession stand</td> <td style="width: 25%; text-align: right;">SNACK</td> </tr> <tr> <td>2</td> <td>Fast food or small restaurant</td> <td style="text-align: right;">FASTFD</td> </tr> <tr> <td>3</td> <td>Cafeteria or large restaurant</td> <td style="text-align: right;">CAF</td> </tr> <tr> <td>4</td> <td>Large kitchen, commercial kitchen, or other large food preparation area</td> <td style="text-align: right;">FDPREP</td> </tr> <tr> <td>5</td> <td>Small kitchen area</td> <td style="text-align: right;">KITCHN</td> </tr> <tr> <td>6</td> <td>Employee lounge, breakroom, or pantry</td> <td style="text-align: right;">PANTRY</td> </tr> <tr> <td>7</td> <td>Some other type of food preparation area</td> <td style="text-align: right;">OTFDRM</td> </tr> <tr> <td>8</td> <td colspan="2">IF VOLUNTEERED: None of these food preparation areas</td> </tr> </table>			1	Snack bar or concession stand	SNACK	2	Fast food or small restaurant	FASTFD	3	Cafeteria or large restaurant	CAF	4	Large kitchen, commercial kitchen, or other large food preparation area	FDPREP	5	Small kitchen area	KITCHN	6	Employee lounge, breakroom, or pantry	PANTRY	7	Some other type of food preparation area	OTFDRM	8	IF VOLUNTEERED: None of these food preparation areas	
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NEXT	<p>IF ONLY Employee lounge/breakroom/pantry selected → E3 [Cooking in break room]  IF Snack bar or concession stand → E4 [Snack bar square footage]  IF Fast food or small restaurant → E5 [Fast food square footage]  IF Cafeteria or large restaurant → E6 [Cafeteria square footage]  IF Large kitchen, commercial kitchen, or other large food preparation area → E7 [Commercial kitchen square footage]  IF Some other type → E8 [Other food area]  OTHERWISE:  IF Water heating ⇒ E9 [Large amounts of hot water]  IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]  IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office  OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care; Outpatient rehabilitation center; Other type of health care ⇒ E16 [Medical equipment]  IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service ⇒ E23 [Laboratory equipment]  IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]  IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]  OTHERWISE:  IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]  OTHERWISE ⇒ E31 [Refrigeration]</p>																									

<b>E3</b>	<b>Cooking in break room</b>	<i>COOKBRK</i>
<b>ASK</b>	IF ONLY Employee lounge/breakroom/pantry selected IN E2 [Type of food area]	
<p>Does this employee lounge or break room contain a full-size oven or stove for cooking?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Water heating ⇒ E9 [Large amounts of hot water]  IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]  IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office  OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care;  Outpatient rehabilitation center; Other type of health care  ⇒ E16 [Medical equipment]  IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail;  OR Service ⇒ E23 [Laboratory equipment]  IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]  IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]  OTHERWISE:  IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]  OTHERWISE ⇒ E31 [Refrigeration]</p>	

<b>E4</b>	<b>Snack bar square footage</b>	<i>SNACKSF</i>
<b>ASK</b>	IF Snack bar or concession stand IN E2 [Type of food area]	
<p>What is the square footage of the snack bar or concession stand area in this building?</p> <p>◆ EXP: [Include seating area, if any.]  ◆ EXP: PROBE for estimate if DK</p>		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	<p>IF Fast food or small restaurant IN E2 [Type of food area] → E5 [Fast food square footage]  IF Cafeteria or large restaurant IN E2 [Type of food area] → E6 [Cafeteria square footage]  IF Large kitchen, commercial kitchen, or other large food preparation area  IN E2 [Type of food area] → E7 [Commercial kitchen square footage]  IF Some other type IN E2 [Type of food area] → E8 [Other food area]  OTHERWISE:  IF Water heating ⇒ E9 [Large amounts of hot water]  IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]  IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office  OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care;  Outpatient rehabilitation center; Other type of health care  ⇒ E16 [Medical equipment]  IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail;  OR Service ⇒ E23 [Laboratory equipment]  IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]  IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]  OTHERWISE:  IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]  OTHERWISE ⇒ E31 [Refrigeration]</p>	

<b>E5</b>	<b>Fast food square footage</b>	<i>FASTFDSF</i>
<b>ASK</b>	IF Fast food or small restaurant IN E2 [Type of food area]	
	<p>What is the square footage of the fast food or small restaurant in this building?</p> <ul style="list-style-type: none"> <li>◆ EXP: [Include seating area, if any.]</li> <li>◆ EXP: PROBE for estimate if DK</li> </ul>	
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	<p>IF Cafeteria or large restaurant IN E2 [Type of food area] → E6 [Cafeteria square footage]  IF Large kitchen, commercial kitchen, or other large food preparation area  IN E2 [Type of food area] → E7 [Commercial kitchen square footage]  IF Some other type IN E2 [Type of food area] → E8 [Other food area]  OTHERWISE:  IF Water heating ⇒ E9 [Large amounts of hot water]  IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]  IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office  OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care;  Outpatient rehabilitation center; Other type of health care  ⇒ E16 [Medical equipment]  IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail;  OR Service ⇒ E23 [Laboratory equipment]  IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]  IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]  OTHERWISE:  IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]  OTHERWISE ⇒ E31 [Refrigeration]</p>	

<b>E6</b>	<b>Cafeteria square footage</b>	CAFSF
<b>ASK</b>	IF Cafeteria or large restaurant IN E2 [Type of food area]	
<p>What is the square footage of the cafeteria or large restaurant in this building?</p> <p>◆ EXP: [Include seating area, if any.]</p> <p>◆ EXP: PROBE for estimate if DK</p>		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	<p>IF Large kitchen, commercial kitchen, or other large food preparation area IN E2 [Type of food area] → E7 [Commercial kitchen square footage]</p> <p>IF Some other type IN E2 [Type of food area] → E8 [Other food area]</p> <p>OTHERWISE:</p> <p>IF Water heating ⇒ E9 [Large amounts of hot water]</p> <p>IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]</p> <p>IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care; Outpatient rehabilitation center; Other type of health care ⇒ E16 [Medical equipment]</p> <p>IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service ⇒ E23 [Laboratory equipment]</p> <p>IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]</p> <p>IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]</p> <p>OTHERWISE:</p> <p>IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]</p> <p>OTHERWISE ⇒ E31 [Refrigeration]</p>	

<b>E7</b>	<b>Commercial kitchen square footage</b>	<i>FDPREPSF</i>
<b>ASK</b>	IF Cafeteria or large restaurant IN E2 [Type of food area]	
<p>What is the square footage of the commercial kitchen or food preparation area in this building?</p> <p>◆ EXP: PROBE for estimate if DK</p>		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	<p>IF Some other type IN E2 [Type of food area] → E8 [Other food area]</p> <p>OTHERWISE:</p> <p>IF Water heating ⇒ E9 [Large amounts of hot water]</p> <p>IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]</p> <p>IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care; Outpatient rehabilitation center; Other type of health care ⇒ E16 [Medical equipment]</p> <p>IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service ⇒ E23 [Laboratory equipment]</p> <p>IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]</p> <p>IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]</p> <p>OTHERWISE:</p> <p>IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]</p> <p>OTHERWISE ⇒ E31 [Refrigeration]</p>	

<b>E8</b>	<b>Other food area</b>
<b>ASK</b>	IF Some other type IN E2 [Type of food area]
<p>Please describe this other type of food preparation or serving area.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Water heating ⇒ E9 [Large amounts of hot water]</p> <p>IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite]</p> <p>IF B5 [Office type] = Doctor's or dentist's office OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care; Outpatient rehabilitation center ⇒ E16 [Medical equipment]</p> <p>IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service ⇒ E23 [Laboratory equipment]</p> <p>IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment]</p> <p>IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink]</p> <p>OTHERWISE:</p> <p>IF Electricity NOT used &amp; D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity]</p> <p>OTHERWISE ⇒ E31 [Refrigeration]</p>

<b>E9</b>	<b>Large amounts of hot water</b>	<i>HWTRM</i>
<b>ASK</b>	IF Water heating	
<b>FILL</b>	<b>{Introduction}</b> IF E2 [Type of food area] was NOT asked = "Now I have some questions about energy-related space uses and equipment that may be used in this building." OTHERWISE = BLANK	
		[F1]-HELP
	{Introduction}  Is any space in this building used for any activities requiring large amounts of hot water, such as a commercial dishwasher, laundry room, heated pool, steam room, whirlpool, or showers?  1 Yes 2 No	
<b>NEXT</b>	IF CBECS Activity = Lodging; Inpatient health care; OR Nursing → E10 [Laundry onsite] IF B19 [Public order type] = Fire station ⇒ E11 [Non-fire station space] IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office OR B15 [Health care type] = Doctor's or dentist's office; Clinic or other outpatient health care; Outpatient rehabilitation center; Other type of health care ⇒ E16 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service ⇒ E23 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse ⇒ E24 [Machine equipment] IF CBECS Activity = Enclosed mall ⇒ E28 [Indoor ice rink] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E10</b>	<b>Laundry onsite</b>	<i>LAUNDR</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Lodging; Inpatient health care; OR Nursing	
	Are the linens primarily laundered in this building, in another building on-site, or by an off-site laundry service?  ◆ EXP: [Linens include sheets, bedding, towels, tablecloths, and napkins.]  1 In this building 2 In another building on-site 3 By an off-site laundry service	
<b>NEXT</b>	IF B15 [Health care type] = Inpatient rehabilitation center ⇒ E16 [Medical equipment] IF CBECS Activity = Inpatient health care ⇒ E23 [Laboratory equipment] IF CBECS Activity = Lodging & ((B18 [Lodging type] = Hotel OR Motel or inn) OR (B20 [Residential type] = Hotel OR Motel or inn) ⇒ E14 [Conference or event space] IF CBECS Activity = Lodging AND B18 [Lodging type] ≠ Motel or inn OR Hotel ⇒ E25 [Indoor pool] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E11</b>	<b>Non-fire station space</b>	<i>FSSPACE</i>
<b>ASK</b>	IF B19 [Public order type] = Fire station	
<p>Is any space in this building used for hall rental, police station, government offices, or other activities not related to the fire station?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E12 [Percent non-fire station activities] IF No OR DK/RF → E13 [Fire station living quarters]	

<b>E12</b>	<b>Percent non-fire station space</b>	<i>FSSPACEP</i>
<b>ASK</b>	IF E4a [Non-fire station space] = Yes	
<p>About what percent of the total floorspace in the building is used for these activities?</p>		
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	⇒ E13 [Fire station living quarters]	

<b>E13</b>	<b>Fire station living quarters</b>	<i>FSLIVEQ</i>
<b>ASK</b>	IF B19 [Public order type] = Fire station OR Combination police and fire station	
<p>Are there living quarters in this fire station?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E14</b>	<b>Conference or event space</b>	<i>LODGSP</i>
<b>ASK</b>	IF CBECS Activity = Lodging AND ((B18 [Lodging type] = Hotel OR Motel or inn) OR (B20 [Residential type] = Hotel OR Motel or inn)	
<p>Is there any space in this building used for conferences or social events?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E15 [Percent conference or event space] IF No OR DK/RF ⇒ E25 [Indoor pool]	

<b>E15</b>	<b>Percent conference or event space</b>	<i>LODGSP</i>
<b>ASK</b>	IF E14 [Conference or event space] = Yes	
About what percent of the total floorspace in the building is used for these events?		
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	⇒ E25 [Indoor pool]	

<b>E16</b>	<b>Medical equipment</b>	<i>MEDEQP</i>
<b>ASK</b>	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; Clinic or other outpatient health care; Outpatient rehabilitation center; Inpatient rehabilitation center; OR Other type of health care	
[F1]-HELP		
Does this building have any equipment for medical diagnosis or treatment, such as X-ray, CT scan, MRI, linear accelerator, dialysis, or ultrasound machines?		
1 Yes 2 No		
<b>NEXT</b>	IF CBECS Activity = Inpatient health care OR E16 [Medical equipment] = Yes ⇒ E17 [Number of X-ray machines] IF CBECS Activity = Outpatient health care ⇒ E22 [Outpatient surgery] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	
<b>NOTE</b>	IF the building is a Doctor's or dentist's office (from either B5 [Office type] OR B14 [Health care type]): IF E16 [Medical equipment] = Yes ⇒ CHANGE the CBECS Activity = Outpatient health care IF E16 [Medical equipment] = No ⇒ KEEP the CBECS Activity = Office	

<b>E17</b>	<b>Number of X-ray machines</b>	<i>XRAYN</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care OR E16 [Medical equipment] = Yes	
How many X-ray machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E18 [Number of CT scan machines]	



<b>E18</b>	<b>Number of CT scan machines</b>	<i>CTSCANN</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care OR E16 [Medical equipment] = Yes	
How many CT scan machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E19 [Number of MRI machines]	

<b>E19</b>	<b>Number of MRI machines</b>	<i>MRIN</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care OR E16 [Medical equipment] = Yes	
How many MRI machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E20 [Number of linear accelerators]	

<b>E20</b>	<b>Number of linear accelerators</b>	<i>LINACCN</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care OR E16 [Medical equipment] = Yes	
How many linear accelerators are used in this building?		
<p>◆ DEF: [A linear accelerator is used for external beam adiation treatments for patients with cancer.]</p>		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	IF CBECS Activity = Inpatient health care ⇒ E21 [Percent outpatient space] IF CBECS Activity = Outpatient health care ⇒ E22 [Outpatient surgery] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E21</b>	<b>Percent outpatient space</b>	<i>OUTHOSPP</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care	
<b>FILL</b>	<b>{SqFt}</b> IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage"	
What percent of the {SqFt} in this building is used for outpatient care?  ◆ DEF: [Outpatient care is medical care or treatment that does not require an overnight stay.]		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	⇒ E23 [Laboratory equipment]	

<b>E22</b>	<b>Outpatient surgery</b>	<i>OUTSURG</i>
<b>ASK</b>	IF CBECS Activity = Outpatient health care	
Are there any operating rooms used for outpatient surgery in this building?  1 Yes 2 No		
<b>NEXT</b>	⇒ E23 [Laboratory equipment]	

<b>E23</b>	<b>Laboratory equipment</b>	<i>LABEQP</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Education; Inpatient health care; Laboratory; Office; Outpatient health care; Public assembly; Retail; OR Service	
Does this building have any specialized laboratory equipment that requires extra energy consumption?  ◆ EXP: [Some examples are fume hoods, gas chromatographs, centrifuges, spectrometers, and analysis equipment.]  1 Yes 2 No		
<b>NEXT</b>	IF CBECS Activity = Education; Laboratory; Retail; OR Service ⇒ E24 [Machine equipment] IF CBECS Activity = Public Assembly OR B15 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center ⇒ E25 [Indoor pool] IF CBECS Activity = Outpatient health care OR Inpatient health care ⇒ E29 [Sterilizers or autoclaves] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E24</b>	<b>Machine equipment</b>	<i>MCHEQP</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Education; Laboratory; Nonrefrigerated warehouse; Refrigerated warehouse; Retail OR Service	
Does this building have any machine or shop equipment such as woodworking tools, metalworking tools, arc welders, or any other types of power tools?		
1 Yes 2 No		
<b>NEXT</b>	IF CBECS Activity = Education ⇒ E25 [Indoor pool] OTHERWISE: IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E25</b>	<b>Indoor pool</b>	<i>POOL</i>
<b>ASK</b>	IF Any energy used & (CBECS Activity = Education; Lodging; OR Public Assembly OR B15 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center)	
Is there an indoor swimming pool in this building?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes → E26 [Heated pool] IF No OR DK/RF: IF CBECS Activity = Education; Lodging; OR Public assembly ⇒ E28 [Indoor ice rink] IF B15 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center → E29 [Sterilizers or autoclaves]	

<b>E26</b>	<b>Heated pool</b>	<i>HTPOOL</i>
<b>ASK</b>	IF E25 [Indoor pool] =Yes	
Is it a heated pool?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes ⇒ E27 [Pool energy source] IF No OR DK/RF: IF CBECS Activity = Education; Lodging; OR Public assembly ⇒ E28 [Indoor ice rink] IF B15 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center → E29 [Sterilizers or autoclaves]	

<b>E27</b>	<b>Pool energy source</b>	<i>PLSRC</i>
<b>ASK</b>	IF E26 [Heated pool] =Yes	
<p>What energy source is used to heat the pool?</p> <p>◆ Read choices if necessary</p> <ol style="list-style-type: none"> <li>1 Electricity</li> <li>2 Natural gas</li> <li>3 Fuel oil/Diesel/Kerosene</li> <li>4 Bottled gas/LPG/Propane</li> <li>5 Solar</li> <li>6 Some other energy source</li> </ol>		
<b>NEXT</b>	IF CBECS Activity = Education; Lodging; OR Public assembly ⇒ E28 [Indoor ice rink] OTHERWISE → E29 [Sterilizers or autoclaves]	

<b>E28</b>	<b>Indoor ice rink</b>	<i>RINK</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Education; Lodging; Enclosed mall OR Public assembly	
<p>Does this building contain an indoor ice skating rink?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF CBECS Activity = Enclosed mall & Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] IF CBECS Activity = Enclosed mall & Electricity used → E31 [Refrigeration] OTHERWISE ⇒ E29 [Sterilizers or autoclaves]	

<b>E29</b>	<b>Sterilizers or autoclaves</b>	<i>STRLZR</i>
<b>ASK</b>	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	
<p>Does this building use any sterilizers or autoclaves?</p> <ul style="list-style-type: none"> <li>◆ DEF: [Sterilizers are used to sterilize containers, medical instruments, surgical tools, and trays. Sterilizers use water to produce steam, to cool steam, and in some units, to create a vacuum to accelerate drying of disinfected items.]</li> <li>◆ DEF: [Autoclaves are similar to sterilizers except that they use ethylene oxide as the sterilizing medium and a stream of pressurized water at high temperatures to draw off spent ethylene oxide. Like steam sterilizers, some autoclaves also use a continuous stream of water to create a vacuum to speed the drying process.]</li> </ul> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Electricity NOT used & D84 [Energy for generation] ≠ Yes → E30 [Verify no electricity] OTHERWISE ⇒ E31 [Refrigeration]	

<b>E30</b>	<b>Verify no electricity</b>	<i>NOELEC</i>
<b>ASK</b>	IF Any energy used & Electricity NOT used & D84 [Energy for generation] ≠ Yes	
<p>I do not have electricity recorded as being used in this building. Is it true that there is not any electricity used in this building?</p> <p>1 True, electricity is <u>not</u> used 2 False, electricity is used</p>		
<b>NEXT</b>	IF True, electricity is not used OR DK/RF → E83 [Window glass type] IF False, electricity is used → E31 [Refrigeration]	

<b>E31</b>	<b>Refrigeration</b>	<i>RFGEQP</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used	
		[F1]-HELP
Is there any refrigeration or freezer equipment used in this building, including vending machines?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes → E32 [Refrigeration types] IF No OR DK/RF & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero OR DK/RF) → E44 [Computers used] OTHERWISE: IF C29 [No operating hours] ≠ True, no operating hours & C30 [Total hours open per week] > Zero → E70 [Percent lit when open] OTHERWISE → E73 [Percent lit off hours]	

<b>E32</b>	<b>Refrigeration types</b>	<i>see below</i>
<b>ASK</b>	IF E31 [Refrigeration] = Yes	
		[F1]-HELP
<input type="checkbox"/> SHOW CARD E2  Looking at Show Card E2, please tell me which types of refrigeration or freezer equipment are found in this building.		
◆ PROBE for any others  ◆ ENTER all that apply		
1 Full-size residential-type refrigerators/freezers 2 Half-size or compact refrigerators 3 Walk-in refrigeration/freezer units 4 Open refrigerated/freezer cases or cabinets 5 Closed refrigerated/freezer cases or cabinets 6 Refrigerated vending machines 7 Commercial ice makers 8 Large cold storage areas		<i>RFGRES</i> <i>RFGCOMP</i> <i>RFGWI</i> <i>RFGOP</i> <i>RFGCL</i> <i>RFGVEN</i> <i>RFGICE</i> <i>RFGSTO</i>
<b>NEXT</b>	IF Residential-type selected → E33 [Number residential refrigerators] IF Compact size selected → E34 [Number compact size refrigerators] IF Walk-in units selected → E35 [Number walk-in units] IF Open cases or cabinets selected → E36 [Number open cases] IF Closed cases or cabinets selected → E37 [Number closed cases] IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CB ECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E33</b>	<b>Number residential refrigerators</b>	<i>RFGRSN</i>
<b>ASK</b>	IF Residential-type IN E32 [Refrigeration types]	
<p>How many residential-type refrigerators or freezers are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9999	
<b>NEXT</b>	IF Compact size selected → E34 [Number compact size refrigerators] IF Walk-in units selected → E35 [Number walk-in units] IF Open cases or cabinets selected → E36 [Number open cases] IF Closed cases or cabinets selected → E37 [Number closed cases] IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E34</b>	<b>Number compact size refrigerators</b>	<i>RFGCOMPN</i>
<b>ASK</b>	IF Compact size IN E32 [Refrigeration types]	
<p>How many half-size or compact refrigerators are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9999	
<b>NEXT</b>	IF Walk-in units selected → E35 [Number walk-in units] IF Open cases or cabinets selected → E36 [Number open cases] IF Closed cases or cabinets selected → E37 [Number closed cases] IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E35</b>	<b>Number walk-in units</b>	<i>RFGWIN</i>
<b>ASK</b>	IF Walk-in units IN E32 [Refrigeration types]	
<p>How many walk-in refrigeration or freezer units are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Open cases or cabinets selected → E36 [Number open cases] IF Closed cases or cabinets selected → E37 [Number closed cases] IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E36</b>	<b>Number open cases</b>	<i>RFGOPN</i>
<b>ASK</b>	IF Open cases or cabinets IN E32 [Refrigeration types]	
<p>How many open refrigerated or freezer cases or cabinets are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Closed cases or cabinets selected → E37 [Number closed cases] IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E37</b>	<b>Number closed cases</b>	<i>RFGCLN</i>
<b>ASK</b>	IF Closed cases or cabinets IN E32 [Refrigeration types]	
<p>How many closed refrigerated or freezer cases or cabinets are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Refrigerated vending machines selected → E38 [Number vending] IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E38</b>	<b>Number vending</b>	<i>RFGVNN</i>
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<b>ASK</b>	IF Refrigerated vending machines IN E32 [Refrigeration types]
<p>How many refrigerated vending machines are there?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	1 to 999
<b>NEXT</b>	IF Commercial ice makers selected → E39 [Number ice makers] IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]

<b>E39</b>	<b>Number ice makers</b>	<i>RFGICN</i>
<b>ASK</b>	IF Commercial ice makers IN E32 [Refrigeration types]	
<p>How many commercial ice makers are there?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Large cold storage areas selected → E40 [Percent cold storage] IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] IF DK/RF → E44 [Computers used]	

<b>E40</b>	<b>Percent cold storage</b>	<i>RFGSTP</i>
<b>ASK</b>	IF Large cold storage areas IN E32 [Refrigeration types]	
<p>About what percent of the total floorspace in the building is used for cold storage?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	IF CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel → E41 [Waste heat recovery] OTHERWISE → E44 [Computers used]	

<b>E41</b>	<b>Waste heat recovery</b>	<i>WHRECOV</i>
<b>ASK</b>	IF E31 [Refrigeration] = Yes & CBECS Activity = Food sales OR B18 [Lodging type] = Motel or inn OR Hotel OR B20 [Residential type] = Motel or inn OR Hotel	
<p>Refrigeration equipment gives off excess heat that can be used to supplement other equipment in the building. Is there such a waste heat recovery system associated with the refrigeration equipment?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E42 [Waste heat use] IF No OR DK/RF → E44 [Computers used]	

<b>E42</b>	<b>Waste heat use</b>	<i>WHUSE</i>
<b>ASK</b>	IF E41 [Waste heat recovery] = Yes	
<p>What is the waste heat used for - space heating, water heating, or some other use?</p> <p>◆ ENTER all that apply</p> <p>1 Space heating 2 Water heating 3 Some other use</p>		
<b>NEXT</b>	IF Some other use → E43 [Other waste heat use] OTHERWISE → E44 [Computers used]	

<b>E43</b>	<b>Other waste heat use</b>
<b>ASK</b>	IF E26b [Waste heat use] = Some other use
<p>What is the other use for the waste heat?</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ E44 [Computers used]

<b>E44</b>	<b>Computers used</b>	<i>PCTERM</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero OR DK/RF)	
<p>Are there any computers used in this building?</p> <ul style="list-style-type: none"> <li>◆ EXP: [Even if only laptops are used, answer Yes.]</li> <li>◆ EXP: [Do not include tablet computers or inventory, such as in retail stores.]</li> </ul> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E45 [Number of computers] IF No OR DK/RF → E55 [Dedicated servers]	

<b>E45</b>	<b>Number of computers</b>	<i>PCNUM</i>
<b>ASK</b>	IF E44 [Computers used] = Yes	
<p>Not counting any dedicated servers or laptop computers, about how many computers are used in this building?</p> <ul style="list-style-type: none"> <li>◆ EXP: [Do not include tablet computers or inventory, such as in retail stores.]</li> <li>◆ DEF: [A server is usually just the CPU, or "case," portion of a computer that manages network resources such as computer files, printers, databases, or network traffic; servers do not require much human operation, so most do not have keyboards or monitors.]</li> </ul>		
<b>RANGE</b>	0 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E46 [Computers category] IF > Zero → E47 [Multiple monitors] IF Zero → E51 [Number of laptops]	

<b>E46</b>	<b>Computers category</b>	<i>PCTRMC</i>
<b>ASK</b>	IF E45 [Number of computers] = DK/RF	
<p>□ SHOW CARD E3</p> <p>Looking at Show Card E3, which category best describes the number of computers used in this building?</p> <ol style="list-style-type: none"> <li>1 1 to 4</li> <li>2 5 to 9</li> <li>3 10 to 19</li> <li>4 20 to 49</li> <li>5 50 to 99</li> <li>6 100 to 249</li> <li>7 250 to 499</li> <li>8 500 to 999</li> <li>9 1,000 to 2,499</li> <li>10 2,500 to 4,999</li> <li>11 5,000 or more</li> </ol>		
<b>NEXT</b>	→ E47 [Multiple monitors]	

<b>E47</b>	<b>Multiple monitors</b>	<i>MLTMON</i>
<b>ASK</b>	IF E45 [Number of computers] > Zero	
<b>FILL</b>	<b>{Computers}</b> IF E45 [Number of computers] = One = Does the computer OTHERWISE = Do any of the computers	
<p>{Computers} use more than one monitor?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes & E45 [Number of computers] ≠ One → E48 [Multiple monitor category] OTHERWISE → E49 [Flat screen]	

<b>E48</b>	<b>Multiple monitor category</b>	<i>MLTMNC</i>
<b>ASK</b>	IF E47 [Multiple monitors] = Yes & E45 [Number of computers] ≠ One	
<p>Would you say that multiple monitors are used with all of the computers, most of them, some of them, or just a few?</p> <ol style="list-style-type: none"> <li>1 All</li> <li>2 Most</li> <li>3 Some</li> <li>4 A few</li> </ol>		
<b>NEXT</b>	→ E50 [Flat screen category]	

<b>E49</b>	<b>Flat screen</b>	<i>FLATG1PC</i>
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<b>ASK</b>	IF E45 [Number of computers] = One
<b>FILL</b>	<b>{FlatQuestion}</b> IF E47 [Multiple monitors] = Yes = Are any of the monitors of this type? IF E47 [Multiple monitors] ≠ Yes = Does the computer have this type of monitor?
<p>□ SHOW CARD E4</p> <p>Please look at Show Card E4 which shows a picture of a flat screen monitor. {FlatQuestion}</p> <p>◆ DEF: [A flat screen monitor, also known as a liquid crystal display or LCD, is lightweight and very thin, in contrast to most standard monitors which have bulky backs and take up a lot of desk space.]</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	→ E51 [Number of laptops]

<b>E50</b>	<b>Flat screen category</b>	<i>FLATG1PC</i>
<b>ASK</b>	IF E45 [Number of computers] ≠ One	
<p>□ SHOW CARD E4</p> <p>Please look at Show Card E4 which shows a picture of a flat screen monitor. Would you say that all of the monitors are flat screen, most of them, some of them, or just a few?</p> <p>◆ DEF: [A flat screen monitor, also known as a liquid crystal display or LCD, is lightweight and very thin, in contrast to most standard monitors which have bulky backs and take up a lot of desk space.]</p> <p>1 All 2 Most 3 Some 4 A few</p>		
<b>NEXT</b>	→ E51 [Number of laptops]	

<b>E51</b>	<b>Number of laptops</b>	<i>LAPTPN</i>
<b>ASK</b>	IF E44 [Computers used] = Yes	
<p>About how many laptop computers are used in this building?</p> <p>◆ EXP: [Do not include tablet computers or inventory, such as in retail stores.]</p>		
<b>RANGE</b>	0 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E52 [Laptops category] IF Number given → E53 [Number of printers]	

<b>E52</b>	<b>Laptops category</b>	<i>LAPTPC</i>
<b>ASK</b>	IF E51 [Number of laptops] = DK/RF	
<p>□ SHOW CARD E3</p> <p>Looking at Show Card E3, which category best describes the number of laptop computers used in this building?</p> <p>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</p>		
<b>NEXT</b>	→ E53 [Number of printers]	

<b>E53</b>	<b>Number of printers</b>	<i>PRNTRN</i>
<b>ASK</b>	IF E44 [Computers used] = Yes	
<p>About how many printers are there in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 9,999,999	
<b>NEXT</b>	IF ≥ 1 → E54 [Type of printers] IF Zero OR DK/RF → E55 [Dedicated servers]	

<b>E54</b>	<b>Type of printers</b>	<i>PRNTYP</i>
<b>ASK</b>	IF E53 [Number of printers] ≥ 1	
<b>FILL</b>	<b>{IsAre}</b> IF E53 [Number of printers] = 1 = Is this an IF E53 [Number of printers] > 1 = Are these mainly <b>{Printers}</b> IF E53 [Number of printers] = 1 = printer IF E53 [Number of printers] > 1 = printers	
		[F1]-HELP
	{IsAre} inkjet or laser {Printers}?  1 Inkjet 2 Laser 3 IF VOLUNTEERED: Some other type 4 IF VOLUNTEERED: Half inkjet, half laser	
<b>NEXT</b>	→ E55 [Dedicated servers]	

<b>E55</b>	<b>Dedicated servers</b>	<i>SERVER</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero OR DK/RF)	
	Are there any dedicated computer servers used in this building?  ◆ DEF: [A server is usually just the CPU, or "case," portion of a computer that manages network resources such as computer files, printers, databases, or network traffic; servers do not require much human operation, so most do not have keyboards or monitors.]  ◆ DEF: [Dedicated means that the server performs no other tasks besides server tasks.]  1 Yes 2 No	
<b>NEXT</b>	IF Yes → E56 [Number of servers] IF No OR DK/RF: IF E44 [Computers used] = Yes: IF E45 [Number of computers] = DK/RF OR E51 [Number of laptops] = DK/RF OR BOTH KNOWN & E45 [Number of computers] + E51 [Number of laptops] > 4 → E58 [Separate computer areas] IF CBECS Activity = Education → E61 [Interactive whiteboards] OTHERWISE → E64 [TV or video displays] IF E44 [Computers used] ≠ Yes → E64 [TV or video displays]	

<b>E56</b>	<b>Number of servers</b>	<i>SRVNUM</i>
<b>ASK</b>	IF E55 [Dedicated servers] = Yes	
About how many dedicated servers are used in this building?		
<b>RANGE</b>	1 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E57 [Servers category] IF Number given → E58 [Separate computer areas]	

<b>E57</b>	<b>Servers category</b>	<i>SRVRC</i>
<b>ASK</b>	IF E56 [Number of servers] = DK/RF	
<input type="checkbox"/> SHOW CARD E3  Looking at Show Card E3, which category best describes the number of servers used in this building?		
<ol style="list-style-type: none"> <li>1 1 to 4</li> <li>2 5 to 9</li> <li>3 10 to 19</li> <li>4 20 to 49</li> <li>5 50 to 99</li> <li>6 100 to 249</li> <li>7 250 to 499</li> <li>8 500 to 999</li> <li>9 1,000 to 2,499</li> <li>10 2,500 to 4,999</li> <li>11 5,000 or more</li> </ol>		
<b>NEXT</b>	→ E58 [Separate computer areas]	



<b>E58</b>	<b>Separate computer areas</b>	<i>see below</i>															
<b>ASK</b>	IF E44 [Computers used] = Yes OR E55 [Dedicated servers] = Yes & E45 [Number of computers] = DK/RF OR E51 [Number of laptops] = DK/RF OR BOTH KNOWN & E45 [Number of computers] + E51 [Number of laptops] > 4																
<p>☐ SHOW CARD E5</p> <p>Please look at Show Card E5 and tell me if any of these types of separate computer areas are found in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">1</td> <td style="width: 70%;">Data center or server farm</td> <td style="width: 25%; text-align: right;"><i>DATA CNTR</i></td> </tr> <tr> <td>2</td> <td>Computer-based training room</td> <td style="text-align: right;"><i>TRNGRM</i></td> </tr> <tr> <td>3</td> <td>Student or public computer center</td> <td style="text-align: right;"><i>STDNRM</i></td> </tr> <tr> <td>4</td> <td>Trading floor</td> <td style="text-align: right;"><i>TRDFLR</i></td> </tr> <tr> <td>5</td> <td>None of these types of areas</td> <td></td> </tr> </table>			1	Data center or server farm	<i>DATA CNTR</i>	2	Computer-based training room	<i>TRNGRM</i>	3	Student or public computer center	<i>STDNRM</i>	4	Trading floor	<i>TRDFLR</i>	5	None of these types of areas	
1	Data center or server farm	<i>DATA CNTR</i>															
2	Computer-based training room	<i>TRNGRM</i>															
3	Student or public computer center	<i>STDNRM</i>															
4	Trading floor	<i>TRDFLR</i>															
5	None of these types of areas																
<b>NEXT</b>	IF Data center/server farm selected → E59 [Data center square footage] IF Trading floor selected → E60 [Trading floor square footage] IF B30 [CBECS Activity] = Education OR Office → E61 [Interactive whiteboards] OTHERWISE → E63 [TV or video displays]																

<b>E59</b>	<b>Data center square footage</b>	<i>DATA CNTRSF</i>
<b>ASK</b>	IF Data center or server farm IN E58 [Separate computer areas]	
What is the square footage of the data center or server farm you just mentioned?		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	IF Trading floor IN E58 [Separate computer areas] → E60 [Trading floor square footage] OTHERWISE: IF E44 [Computers used] = Yes AND B30 [CBECS Activity] = Education → E61 [Interactive whiteboards] OTHERWISE → E63 [TV or video displays]	

<b>E60</b>	<b>Trading floor square footage</b>	<i>TRDFLRSF</i>
<b>ASK</b>	IF Trading floor IN E58 [Separate computer areas]	
What is the square footage of the trading floor you just mentioned?		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	IF E44 [Computers used] = Yes AND B30 [CBECS Activity] = Education OR Office → E61 [Interactive whiteboards] OTHERWISE → E63 [TV or video displays]	

<b>E61</b>	<b>Interactive whiteboards</b>	<i>WBOARDS</i>
<b>ASK</b>	IF E44 [Computers used] = Yes AND B30 [CBECS Activity] = Education OR Office	
<p>Are there any interactive whiteboards that connect to a computer and projector?</p> <p>◆ DEF: [An interactive whiteboard is a large interactive display that connects to a computer and a projector. The computer's desktop is projected onto the board's surface where users control the computer using a pen, finger, or other device.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E62 [Number of interactive whiteboards] IF No OR DK/RF → E63 [TV or video displays]	

<b>E62</b>	<b>Number of interactive whiteboards</b>	<i>NWBOARDS</i>
<b>ASK</b>	IF E61 [Interactive whiteboards] = Yes	
<p>How many interactive whiteboards are used in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	→ E63 [TV or video displays]	

<b>E63</b>	<b>TV or video displays</b>	<i>TVVIDEO</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero)	
<p>Are there any televisions or video displays, other than computer monitors?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E64 [Number of TV or video displays] IF No OR DK/RF → E65 [Cash registers]	

<b>E64</b>	<b>Number of TV or video displays</b>	<i>TVVIDEON</i>
<b>ASK</b>	IF E63 [TV or video displays] = Yes	
<p>How many televisions or video displays are used in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9999	
<b>NEXT</b>	→ E65 [Cash registers]	

<b>E65</b>	<b>Cash registers</b>	<i>RGSTR</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero)	
<p>Are there any cash registers or "point-of-sales" terminals used in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E66 [Number of cash registers] IF No OR DK/RF → E67 [Photocopiers]	

<b>E66</b>	<b>Number of cash registers</b>	<i>RGSTRN</i>
<b>ASK</b>	IF E65 [Cash registers] = Yes	
<p>About how many cash registers or "point-of-sales" terminals are used in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9,999	
<b>NEXT</b>	→ E67 [Photocopiers]	

<b>E67</b>	<b>Photocopiers</b>	<i>COPIER</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero)	
<p>Are there any photocopiers, other than small desktop copiers, used in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E68 [Number of photocopiers] IF No OR DK/RF → E69 [FAX machines]	

<b>E68</b>	<b>Number of photocopiers</b>	<i>COPRN</i>
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<b>ASK</b>	IF E67 [Photocopiers] = Yes
	<p>About how many photocopiers are there?</p> <p>◆ PROBE for estimate if DK</p>
<b>RANGE</b>	1 to 9,999
<b>NEXT</b>	→ E69 [FAX machines]

<b>E69</b>	<b>FAX machines</b>	<i>FAX</i>
<b>ASK</b>	IF Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used & NOT(B24 [Completely vacant] = Yes & C18 [Months in use] = Zero)	
	<p>Are there any FAX machines used in this building?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF C29 [No operating hours] ≠ True, no operating hours & C30 [Total hours open per week] > Zero → E70 [Percent lit when open] OTHERWISE → E73 [Percent lit off hours]	

<b>E70</b>	<b>Percent lit when open</b>	<i>LTOHRP</i>
<b>ASK</b>	IF C29 [No operating hours] ≠ True, no operating hours & C30 [Total hours open per week] > Zero & (Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used)	
<b>FILL</b>	<b>{SqFt}</b> IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage"	
		[F1]-HELP
<p>The next questions are about the lighting inside the building.</p> <p>What percent of the {SqFt} in this building is lit when the building is normally open?</p> <ul style="list-style-type: none"> <li>◆ DEF: ["Normally open" means the hours when the usual activities occur.]</li> <li>◆ If lit square footage is known but not the percent, RECORD square footage in comments, then code DK</li> </ul>		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF DK/RF → E71 [Lit when open category] IF Percent given: IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = 168 → E72 [Lights off during 24 hours] OTHERWISE → E73 [Percent lit off hours]	

<b>E71</b>	<b>Lit when open category</b>	<i>LOHRPC</i>
<b>ASK</b>	IF E70 [Percent lit when open] = DK/RF	
		[F1]-HELP
<p><input type="checkbox"/> SHOW CARD E6</p> <p>Looking at Show Card E6, what is your best estimate of the percent of the square feet in this building that is lit when the building is normally open?</p> <ol style="list-style-type: none"> <li>1 1 to 25 percent</li> <li>2 26 to 50 percent</li> <li>3 51 to 75 percent</li> <li>4 76 to 100 percent</li> <li>5 Not lit at all when it is normally open</li> </ol>		
<b>NEXT</b>	IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = 168 → E72 [Lights off during 24 hours] OTHERWISE → E73 [Percent lit off hours]	

<b>E72</b>	<b>Lights off during 24 hours</b>	<i>LTNR24</i>
<b>ASK</b>	IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = 168 & (Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used)	
<p>Are there any periods during a normal 24-hour day when some of the lights are turned off?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E73 [Percent lit off hours] IF No OR DK/RF: IF E70 [Percent lit when open] > 0 OR E71 [Lit when open category] ≠ Not lit → E75 [Lighting types] OTHERWISE → E80 [Percent of exterior lighted]	

<b>E73</b>	<b>Percent lit off hours</b>	<i>LTNHRP</i>
<b>ASK</b>	IF (C26 [Open 24 hours a day] ≠ Yes & C30 [Total hours open per week] ≠ 168 & C31 [Weekly hours category] ≠ 168) OR E72 [Lights off during 24 hours] = Yes & (Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used)	
<b>FILL</b>	<b>{SqFt}</b> IF A6 [Square footage] known = "A6 [Square footage] square feet" IF A6 [Square footage] = DK/RF = "square footage" <b>{OffHours}</b> IF C26 [Open 24 hours a day] = Yes OR C30 [Total hours open per week] = 168 OR C31 [Weekly hours category] = "the time during a 24-hour period when some lights are turned off" OTHERWISE = "the hours when the building is not normally open"	
		[F1]-HELP
<p>What percent of the {SqFt} is lit during off hours, that is {OffHours},? Exclude the space lit by emergency lighting.</p> <p>◆ If lit square footage is known but not the percent, RECORD square footage in comments, then code DK</p>		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF DK/RF → E74 [Lit off hours category] IF 1-100 → E75 [Lighting types] IF Zero: IF E70 [Percent lit when open] > 0 OR E71 [Lit when open category] ≠ Not lit → E75 [Lighting types] OTHERWISE → E80 [Percent of exterior lighted]	

<b>E74</b>	<b>Lit off hours category</b>	<i>LNHRPC</i>
<b>ASK</b>	IF E73 [Percent lit off hours] = DK/RF	
<p>[F1]-HELP</p> <p>[ ] SHOW CARD E6</p> <p>Looking at Show Card E6, what is your best estimate of the percent lit during off hours?</p> <ol style="list-style-type: none"> <li>1 1 to 25 percent</li> <li>2 26 to 50 percent</li> <li>3 51 to 75 percent</li> <li>4 76 to 100 percent</li> <li>5 Not lit at all during off hours</li> </ol>		
<b>NEXT</b>	IF 1 to 100 percent OR DK/RF → E75 [Lighting types] IF Not lit at all: IF E70 [Percent lit when open] > 0 OR E71 [Lit when open category] ≠ Not lit → E75 [Lighting types] OTHERWISE → E80 [Percent of exterior lighted]	

<b>E75</b>	<b>Lighting types</b>	<i>see below</i>
<b>ASK</b>	IF E70 [Percent lit when open] > 0 OR E71 [Lit when open category] = 1 to 100 OR DK/RF OR E73 [Percent lit off hours] > 0 OR E74 [Lit off hours category] = 1 to 100 OR DK/RF	
<p>[F1]-HELP</p> <p>[ ] SHOW CARD E7</p> <p>Looking at Show Card E7, what types of lighting were used to light any of the space in this building?</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <ol style="list-style-type: none"> <li>1 Fluorescent lighting other than compact fluorescent bulbs <span style="float: right;"><i>FLUOR</i></span></li> <li>2 Compact fluorescent bulbs <span style="float: right;"><i>CFLR</i></span></li> <li>3 Incandescent light bulbs, other than halogen bulbs <span style="float: right;"><i>BULB</i></span></li> <li>4 Halogen bulbs <span style="float: right;"><i>HALO</i></span></li> <li>5 High intensity discharge (HID) lights such as high pressure sodium, metal halide or mercury vapor <span style="float: right;"><i>HID</i></span></li> <li>6 Light-emitting diode (LED) lights <span style="float: right;"><i>LED</i></span></li> <li>7 Other type of lighting <span style="float: right;"><i>OTLT</i></span></li> </ol>		
<b>NEXT</b>	IF Other type of lighting selected → E76 [Other bulb type] OTHERWISE: IF More than one type selected → E77 [Percent lit by bulb type] IF Only one type selected: IF D66 [Building automation system] = Yes → E78 [BAS controls lighting] OTHERWISE → E79 [Lighting controls]	

<b>E76</b>	<b>Other bulb type</b>	<i>OTLTX</i>
<b>ASK</b>	IF Other type of lighting IN E75 [Lighting types]	
<p>What type of bulb is the other type of lighting?</p> <p>◆ RECORD in space below</p>		
<b>NEXT</b>	IF More than one type selected → E77 [Percent lit by bulb type] IF Only one type selected: IF D66 [Building automation system] = Yes → E78 [BAS controls lighting] OTHERWISE → E79 [Lighting controls]	

<b>E77</b>	<b>Percent lit by bulb type</b>	<i>FLUORP, CFLRP, BULBP, HALOP, HIDP, LEDP, OTLTP</i>
<b>ASK</b>	For each lighting type given in E75 [Lighting types]	
<b>FILL</b>	<p><b>{Introduction}</b>          IF First lighting type = “The next questions are about the percent of floorspace lit by the types of lighting you just mentioned. Please keep in mind: “          OTHERWISE = BLANK</p> <p><b>{Explanation}</b>          IF First lighting type and E70 [Percent lit when open] ≠ 100 = “We are talking only about the <u>lighted portion</u> of the floorspace, so these percents 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 <u>more</u> than 100.”          IF First lighting type and E70 [Percent lit when open] = 100 = “These percents 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 <u>more</u> than 100.”          OTHERWISE = BLANK</p> <p><b>{BulbType}</b>          IF Fluorescent IN E75 [Lighting types] = “fluorescent lighting”          IF Compact fluorescent bulbs IN E75 [Lighting types] = “compact fluorescent bulbs”          IF Incandescent light bulbs IN E75 [Lighting types] = “incandescent bulbs”          IF Halogen bulbs IN E75 [Lighting types] = “halogen lighting”          IF High intensity discharge (HID) lights IN E75 [Lighting types] = “high intensity discharge lights”          IF Light-emitting diode (LED) lights IN E75 [Lighting types] = “LED lights”          IF Other type of lighting IN E75 [Lighting types] = “other lighting type”</p>	
<p>□ SHOW CARD E8</p> <p>{Introduction}</p> <p>{Explanation}</p> <p>Please look at Show Card E8. What percent of the lighted area in this building is lit by the {BulbType}?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF D66 [Building automation system] = Yes → E78 [BAS controls lighting] OTHERWISE → E79 [Lighting controls]	



<b>E78</b>	<b>BAS controls lighting</b>	<i>EMCSLT</i>
<b>ASK</b>	IF (E70 [Percent lit when open] > 0 OR E71 [Lit when open category] ≠ Not lit OR E73 [Percent lit off hours] > 0 OR E74 [Lit off hours category] ≠ Not lit) & D66 [Building automation system] = Yes	
		[F1]-HELP
Does the Building Automation System, or BAS, that you mentioned earlier also control the interior lighting system?		
<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>		
<b>NEXT</b>	→ E79 [Lighting controls]	

<b>E79</b>	<b>Lighting controls</b>	<i>see below</i>																		
<b>ASK</b>	IF (E70 [Percent lit when open] > 0 OR E71 [Lit when open category] ≠ Not lit OR E73 [Percent lit off hours] > 0 OR E74 [Lit off hours category] ≠ Not lit)																			
<input type="checkbox"/> SHOW CARD E9																				
Looking at Show Card E9, please tell me which of these lighting controls or lighting control strategies, if any, are used in this building.																				
<ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul>																				
<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">1 Scheduling</td> <td style="width: 40%; text-align: right;"><i>SCHED</i></td> </tr> <tr> <td>2 Occupancy sensors that reduce lighting when rooms are unoccupied</td> <td style="text-align: right;"><i>OCSN</i></td> </tr> <tr> <td>3 Multi-level lighting or dimming</td> <td style="text-align: right;"><i>DIM</i></td> </tr> <tr> <td>4 Daylight harvesting</td> <td style="text-align: right;"><i>DAYHARV</i></td> </tr> <tr> <td>5 High-end trimming or light-level tuning</td> <td style="text-align: right;"><i>TRIM</i></td> </tr> <tr> <td>6 Personal light control</td> <td style="text-align: right;"><i>PRCTRL</i></td> </tr> <tr> <td>7 Plug-load control</td> <td style="text-align: right;"><i>PLGCTRL</i></td> </tr> <tr> <td>8 Demand responsive lighting</td> <td style="text-align: right;"><i>DRLGHT</i></td> </tr> <tr> <td>9 None of these</td> <td></td> </tr> </table>			1 Scheduling	<i>SCHED</i>	2 Occupancy sensors that reduce lighting when rooms are unoccupied	<i>OCSN</i>	3 Multi-level lighting or dimming	<i>DIM</i>	4 Daylight harvesting	<i>DAYHARV</i>	5 High-end trimming or light-level tuning	<i>TRIM</i>	6 Personal light control	<i>PRCTRL</i>	7 Plug-load control	<i>PLGCTRL</i>	8 Demand responsive lighting	<i>DRLGHT</i>	9 None of these	
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7 Plug-load control	<i>PLGCTRL</i>																			
8 Demand responsive lighting	<i>DRLGHT</i>																			
9 None of these																				
<b>NEXT</b>	→ E80 [Percent of exterior lighted]																			

<b>E80</b>	<b>Percent of exterior lighted</b>	<i>LTEXPC</i>
<b>ASK</b>	IF (Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used)	
<p>What percentage of all the exterior building wall surfaces is lighted? Would you say less than 10 percent, 10 to 25, 25 to 50, or more than 50 percent of the total building façade is lighted?</p> <p>1 Less than 10 percent  2 10 to 25 percent  3 25 to 50 percent  4 More than 50 percent</p>		
<b>NEXT</b>	→ E81 [Lighted parking area]	

<b>E81</b>	<b>Lighted parking area</b>	<i>PKLTT</i>
<b>ASK</b>	IF (Electricity used OR D84 [Energy for generation] = Yes OR E30 [Verify no electricity] = False, electricity is used)	
<p>Is there a parking area associated with the building that is lighted with fixtures powered through the building's electrical service?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → E82 [Vehicle parking capacity] IF No → E83 [Window glass type]	

<b>E82</b>	<b>Vehicle parking capacity</b>	<i>PKLTN</i>
<b>ASK</b>	IF E81 [Lighted parking area] = Yes	
<p>What is the vehicle capacity of the parking area, that is, the number of parking spaces?</p>		
<b>RANGE</b>	1 to 999,999	
<b>NEXT</b>	→ E83 [Window glass type]	

<b>E83</b>	<b>Window glass type</b>	<i>WINTYP</i>
<b>ASK</b>	All Buildings	
<input type="checkbox"/> SHOW CARD E10 <p>The picture on Show Card E10 shows a window with multi-layer glass. Do the exterior windows in this building contain single layer glass, multi-layer glass, or a combination of both of these types?</p> <ol style="list-style-type: none"> <li>1 Single layer glass</li> <li>2 Multi-layer glass</li> <li>3 Combination of both</li> <li>4 IF VOLUNTEERED: No windows</li> </ol>		
<b>NEXT</b>	IF Single layer, Multi-layer, OR Combination → E84 [Daylighting features] IF No windows OR DK/RF → F1 [Section F Routing]	

<b>E84</b>	<b>Daylighting features</b>	<i>see below</i>
<b>ASK</b>	IF E83 [Window glass type] ≠ (No windows OR DK/RF)	
<input type="checkbox"/> SHOW CARD E10 <p>Looking at the list at the bottom of Show Card E10, please tell me which of these daylighting or conservation features are present in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <ol style="list-style-type: none"> <li>1 Tinted window glass <span style="float: right;"><i>TINT</i></span></li> <li>2 Reflective window glass <span style="float: right;"><i>REFL</i></span></li> <li>3 External overhangs or awnings <span style="float: right;"><i>AWN</i></span></li> <li>4 Skylights or atriums designed to provide light <span style="float: right;"><i>SKYLT</i></span></li> <li>5 IF VOLUNTEERED: None of these</li> </ol>		
<b>NEXT</b>	→ E85 [Percent daylight]	

<b>E85</b>	<b>Percent daylight</b>	<i>DAYLTP</i>
<b>ASK</b>	IF E83 [Window glass type] ≠ (No windows OR DK/RF)	
<p>What percent of the building receives enough outside light so that the interior lights do not need to be turned on?</p> <ul style="list-style-type: none"> <li>◆ If none, ENTER "0"</li> <li>◆ PROBE for estimate if DK</li> </ul>		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	→ F1 [Section F Routing]	

**SECTION F. ELECTRICITY**

<b>F1</b>	<b>Section F Routing</b>
<b>NEXT</b>	IF Electricity used → F2 [WS2 electricity filled out] OTHERWISE → G1 [Section G Routing]

<b>F2</b>	<b>WS2 electricity filled out</b>	<i>WS2ELCE</i>
<b>ASK</b>	IF Electricity used	
<p>Do you have Worksheet 2 with you and filled out for electricity?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No OR DK/RF → F3 [Provide electricity figures] IF Yes → F4 [Electricity consumption]	

<b>F3</b>	<b>Provide electricity figures</b>	<i>ELFIGS</i>
<b>ASK</b>	IF F2 [WS2 electricity filled out] = No OR DK/RF	
<p>The next questions are about electricity usage in the building during calendar year 2012. Would you be able to give me an approximate figure of how much electricity was used or how much was spent on it?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → F4 [Electricity consumption] IF No OR DK/RF → F30 [Number electricity suppliers]	

<b>F4</b>	<b>Electricity consumption</b>	<i>ELCNS</i>
<b>ASK</b>	IF F2 [WS2 electricity filled out] = Yes OR F3 [Provide electricity figures] = Yes	
		[F1]-HELP
	Please give me the total number of kilowatthours of electricity used in calendar year 2012.	
	<ul style="list-style-type: none"> <li>◆ EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.]</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	1 to 99,999,999,999,999	
<b>NEXT</b>	→ F5 [Electricity expenditures]	

<b>F5</b>	<b>Electricity expenditures</b>	<i>ELEXP</i>
<b>ASK</b>	IF F2 [WS2 electricity filled out] = Yes OR F3 [Provide electricity figures] = Yes	
		[F1]-HELP
	Please give me the total dollars spent on electricity in calendar year 2012. This should include state and local taxes and the following charges: fuel adjustment, system, distribution, and demand.	
	<ul style="list-style-type: none"> <li>◆ Do <u>not</u> enter cents</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	IF F4 [Electricity consumption] = DK/RF & F5 [Electricity expenditures] = DK/RF → F30 [Number electricity suppliers] OTHERWISE → F6 [Starting date for electricity figures]	

<b>F6</b>	<b>Starting date for electricity figures</b>	<i>ELSTDAT</i>
<b>ASK</b>	IF F4 [Electricity consumption] given OR F5 [Electricity expenditures] given	
		[F1]-HELP
	What is the starting date for these electricity usage figures?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	→ F7 [Ending date for electricity figures]	

<b>F7</b>	<b>Ending date for electricity figures</b>	<i>ELENDAT</i>
<b>ASK</b>	IF F4 [Electricity consumption] given OR F5 [Electricity expenditures] given	
		[F1]-HELP
	<p>What is the ending date [for these electricity usage figures]?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li><input type="checkbox"/> <ul style="list-style-type: none"> <li>◆ VERIFY that this is the <u>last</u> day of the last billing period</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul> </li> </ul>	
<b>NEXT</b>	IF CBECS Activity ≠ Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One) → F8 [All occupants electricity included] IF CBECS Activity = Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One) → F10 [Electricity covers whole mall] OTHERWISE → F14 [Other bldgs electricity included]	

<b>F8</b>	<b>All occupants electricity included</b>	<i>ELALL</i>
<b>ASK</b>	IF CBECS Activity ≠ Enclosed mall & (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given & C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One)	
	Do these figures include the electricity for all of the businesses or organizations in this building?  1 Yes 2 No	
<b>NEXT</b>	IF No → F9 [Sq ft not included] OTHERWISE → F14 [Other bldgs electricity included]	

<b>F9</b>	<b>Sq ft not included</b>	<i>ELNISF</i>
<b>ASK</b>	IF F8 [All occupants electricity included] = No	
	<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <ul style="list-style-type: none"> <li>◆ PROBE for estimate if DK</li> </ul>	
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ F14 [Other bldgs electricity included]	

<b>F10</b>	<b>Electricity covers whole mall</b>	<i>ELMALLINC</i>
<b>ASK</b>	IF (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given) & CBECS Activity = Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One)	
<b>FILL</b>	<b>{FoodCourt}</b> IF B41 [Food court] = Yes = "food court," OTHERWISE = BLANK	
<p>Do these figures include the energy for the entire mall building, including the anchor stores, {FoodCourt} common areas, and individual stores?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No → F11 [Not included in mall electricity] OTHERWISE → F14 [Other bldgs electricity included]	

<b>F11</b>	<b>Not included in mall electricity</b>	<i>see below</i>										
<b>ASK</b>	IF F10 [Electricity covers whole mall] = No											
<p>Which of these is <u>not</u> included?</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Anchor stores</td> <td style="width: 50%;"><i>ELMALLANC</i></td> </tr> <tr> <td>2 Food court</td> <td><i>ELMALLFC</i></td> </tr> <tr> <td>3 Common areas</td> <td><i>ELMALLCOM</i></td> </tr> <tr> <td>4 Individual stores</td> <td><i>ELMALLST</i></td> </tr> <tr> <td>5 Other</td> <td><i>ELMALLLOT</i></td> </tr> </table>			1 Anchor stores	<i>ELMALLANC</i>	2 Food court	<i>ELMALLFC</i>	3 Common areas	<i>ELMALLCOM</i>	4 Individual stores	<i>ELMALLST</i>	5 Other	<i>ELMALLLOT</i>
1 Anchor stores	<i>ELMALLANC</i>											
2 Food court	<i>ELMALLFC</i>											
3 Common areas	<i>ELMALLCOM</i>											
4 Individual stores	<i>ELMALLST</i>											
5 Other	<i>ELMALLLOT</i>											
<b>NEXT</b>	IF Other selected → F12 [Other not included in mall electricity] OTHERWISE → F13 [Mall sq ft not included]											

<b>F12</b>	<b>Other not included in mall electricity</b>
<b>ASK</b>	IF Other IN F11 [Not included in mall electricity]
<p>Please describe the other type of area that is not included.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	→ F13 [Mall sq ft not included]

<b>F13</b>	<b>Mall sq ft not included</b>	<i>ELNIMALLSF</i>
<b>ASK</b>	IF F10 [Electricity covers whole mall] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ F14 [Other bldgs electricity included]	

<b>F14</b>	<b>Other bldgs electricity included</b>	<i>ELOTBD</i>
<b>ASK</b>	IF F4 [Electricity consumption] given OR F5 [Electricity expenditures] given	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → F15 [Sq ft of other included]</p> <p>IF No OR DK/RF:          B48 [Central physical plant] = Yes &amp; B51 [Plant produces chilled water] = Yes          &amp; B53 [Central plant in building] = No → F16 [Central plant electricity included]          OTHERWISE → F17 [Include other major electricity]</p>	

<b>F15</b>	<b>Sq ft of other included</b>	<i>ELOTSF</i>
<b>ASK</b>	IF F14 [Other bldgs electricity included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	<p>IF B48 [Central physical plant] = Yes &amp; B51 [Plant produces chilled water] = Yes          &amp; B53 [Central plant in building] = No → F16 [Central plant electricity included]          OTHERWISE → F17 [Include other major electricity]</p>	



<b>F16</b>	<b>Central plant electricity included</b>	<i>PLTNGINC</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes & B51 [Plant produces chilled water] = Yes & B53 [Central plant in building] = No	
<p>Earlier you mentioned that there is a central plant on this campus. Do these figures include any electricity that was used in the central plant?</p> <p>◆ EXP: [We do not want the energy used in the central plant. This question is for verification purposes.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ F17 [Include other major electricity]	

<b>F17</b>	<b>Include other major electricity</b>	<i>ELOTUS</i>
<b>ASK</b>	IF F4 [Electricity consumption] given OR F5 [Electricity expenditures] given	
<p>Do these figures include charges for any <u>other</u> major electricity usage outside the building, such as parking lot lights, exterior lights, signs or billboards, large pumps, or swimming pools?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → F18 [Outside uses included in electricity]</p> <p>OTHERWISE:</p> <p>IF D87 [Use of generated electricity] = Whenever electricity was used → F20 [Generated electricity included]</p> <p>IF Independent power producer or non-local utility OR Bought from someone else IN D94 [How purchase electricity] → F21 [Include all non-local electricity]</p> <p>IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check]</p> <p>OTHERWISE:</p> <p>IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included]</p> <p>IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]</p>	

<b>F18</b>	<b>Outside uses included in electricity</b>	<i>see below</i>																		
<b>ASK</b>	IF F17 [Include other major electricity] = Yes																			
<p>Which of these outside uses is included?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Parking lot lights</td> <td><i>ELOUTPRK</i></td> </tr> <tr> <td>2</td> <td>Exterior lights</td> <td><i>ELOUTLTS</i></td> </tr> <tr> <td>3</td> <td>Signs or billboards</td> <td><i>ELOUTSGN</i></td> </tr> <tr> <td>4</td> <td>Large pumps</td> <td><i>ELOUTPMP</i></td> </tr> <tr> <td>5</td> <td>Swimming pools</td> <td><i>ELOUTSWM</i></td> </tr> <tr> <td>6</td> <td>Other</td> <td><i>ELOUTOT</i></td> </tr> </table>			1	Parking lot lights	<i>ELOUTPRK</i>	2	Exterior lights	<i>ELOUTLTS</i>	3	Signs or billboards	<i>ELOUTSGN</i>	4	Large pumps	<i>ELOUTPMP</i>	5	Swimming pools	<i>ELOUTSWM</i>	6	Other	<i>ELOUTOT</i>
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5	Swimming pools	<i>ELOUTSWM</i>																		
6	Other	<i>ELOUTOT</i>																		
<b>NEXT</b>	<p>IF Other selected → F19 [Other type of outside electricity use]  OTHERWISE  IF D87 [Use of generated electricity] = Whenever electricity was used  → F20 [Generated electricity included]  IF Independent power producer or non-local utility OR Bought from someone else  IN D94 [How purchase electricity] → F21 [Include all non-local electricity]  IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF  &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check]  OTHERWISE:  IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included]  IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]</p>																			

<b>F19</b>	<b>Other type of outside electricity use</b>
<b>ASK</b>	IF Other IN F18 [Outside uses included in electricity]
<p>Please describe this other type of outside electricity use.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	<p>IF D87 [Use of generated electricity] = Whenever electricity was used  → F20 [Generated electricity included]  IF Independent power producer or non-local utility OR Bought from someone else  IN D94 [How purchase electricity] → F21 [Include all non-local electricity]  IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF  &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check]  OTHERWISE:  IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included]  IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]</p>

<b>F20</b>	<b>Generated electricity included</b>	<i>ELGENINC</i>
<b>ASK</b>	IF F4 [Electricity consumption] given & D87 [Use of generated electricity] = Whenever electricity was used	
<b>FILL</b>	{EICons} = F4 [Electricity consumption]	
<p>Earlier you mentioned that the building generates electricity whenever electricity is used. Does the {EICons} kilowatthours include just the purchased electricity or does it also include the electricity that was generated on-site?</p> <ol style="list-style-type: none"> <li>1 Figures cover only purchased electricity</li> <li>2 Figures include purchased and generated electricity</li> </ol>		
<b>NEXT</b>	IF Independent power producer or non-local utility OR Bought from someone else IN D94 [How purchase electricity] → F21 [Include all non-local electricity] IF (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check] OTHERWISE: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]	

<b>F21</b>	<b>Include all non-local electricity</b>	<i>ELNONU</i>
<b>ASK</b>	IF (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given) & (Independent power producer or non-local utility OR Bought from someone else IN D94 [How purchase electricity])	
<p>Do these figures include all the electricity from the independent power producer, non-local utility, or broker?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF No → F22 [What not included] IF Yes OR DK/RF: IF (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check] OTHERWISE: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]	

<b>F22</b>	<b>What not included</b>	
<b>ASK</b>	IF F21 [Include all non-local electricity] = No	
<p>What was not included?</p> <p>◆ RECORD the additional charges in the open box</p>		
<b>NEXT</b>	IF (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF → F23 [Electricity regression check] OTHERWISE: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]	

<b>F23</b>	<b>Electricity regression check</b>
<b>ASK</b>	IF (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given) & (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF
<p>Based on various characteristics of the structure, Blaise will use a detailed equation to compute predicted consumption and expenditures estimates. The electricity consumption and/or expenditures given will be ratio adjusted if other square footage was either included or excluded in the figures, and then will either PASS or FAIL this regression check, based on the following formula:</p> <p>IF F4 [Electricity consumption] &gt; [Predicted consumption] × 8  OR F5 [Electricity expenditures] &gt; [Predicted expenditures] × 8 → FAIL (HIGH)  IF F4 [Electricity consumption] &lt; [Predicted consumption] ÷ 13  OR F5 [Electricity expenditures] &lt; [Predicted expenditures] ÷ 13 → FAIL (LOW)  OTHERWISE → PASS</p>	
<b>NEXT</b>	IF FAIL (HIGH) → F24 [Anything unusual high] IF FAIL (LOW) → F25 [Anything unusual low] IF PASS: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]

<b>F24</b>	<b>Anything unusual high</b>	<i>ELHIGH</i>
<b>ASK</b>	IF F23 [Electricity regression check] = FAIL (HIGH)	
<p>These usage figures seem high for what you have told me about this building. Is there anything unusual that might explain this high usage?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → F26 [What is unusual] IF No OR DK/RF: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]	

<b>F25</b>	<b>Anything unusual low</b>	<i>ELLOW</i>
<b>ASK</b>	IF F23 [Electricity regression check] = FAIL (LOW)	
<p>These usage figures seem low for what you have told me about this building. Is there anything unusual that might explain this low usage?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → F26 [What is unusual] IF No OR DK/RF: IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]	

<b>F26</b>	<b>What is unusual</b>
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<b>ASK</b>	IF F24 [Anything unusual high] = Yes OR F25 [Anything unusual low] = Yes
Please tell me [what is out of the ordinary about this building].	
◆ RECORD in open box	
<b>NEXT</b>	IF F2 [WS2 electricity filled out] = Yes → F27 [Monthly electricity included] IF F2 [WS2 electricity filled out] = No OR DK/RF → F28 [Monthly electricity available]

<b>F27</b>	<b>Monthly electricity included</b>	<i>ELINC12</i>
<b>ASK</b>	IF (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given) & F2 [WS2 electricity filled out] = Yes	
Did you include your monthly electricity usage on Worksheet 2?		
1 Yes 2 No		
<b>NEXT</b>	IF No OR DK/RF → F28 [Monthly electricity available] IF Yes: IF F23 [Electricity regression check] = FAIL (HIGH) OR FAIL (LOW) OR F9 [Sq ft not included] / A6 [Square footage] > 0.25 → F30 [Number electricity suppliers] IF F23 [Electricity regression check] = PASS → F29 [Electricity bill available]	

<b>F28</b>	<b>Monthly electricity available</b>	<i>ELHAV12</i>
<b>ASK</b>	IF (F4 [Electricity consumption] given OR F5 [Electricity expenditures] given) & (F2 [WS2 electricity filled out] = No OR DK/RF OR F27 [Monthly electricity included] = No OR DK/RF)	
Do you have a record of the monthly electricity use that I could have to help us better understand the seasonal patterns of electricity use?		
◆ If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here		
1 Yes, monthly electricity available 2 No, will not be able to provide monthly electricity		
<b>NEXT</b>	IF ((A6 [Square footage] = DK/RF & A12 [Square footage category] = DK/RF) OR D1 [Heating] = DK/RF OR D2 [Cooling] = DK/RF OR D3 [Water heating] = DK/RF) OR F23 [Electricity regression check] = FAIL (HIGH) OR FAIL (LOW) OR F9 [Sq ft not included] / A6 [Square footage] > 0.25 → F30 [Number electricity suppliers] OTHERWISE → F29 [Electricity bill available]	

<b>F29</b>	<b>Electricity bill available</b>	<i>ELBILL</i>
<b>ASK</b>	IF F4 [Electricity consumption] given OR F5 [Electricity expenditures] given & F23 [Electricity regression check] = PASS	
<p>Would it be possible for me to scan one of your electricity bills? There is information on some utility bills that may help energy researchers who use these data.</p> <ul style="list-style-type: none"> <li>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</li> <li>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</li> </ul> <ol style="list-style-type: none"> <li>1 Yes, bill available</li> <li>2 No, will not be able to provide bill</li> </ol>		
<b>NEXT</b>	→ G1 [Section G Routing]	

<b>F30</b>	<b>Number electricity suppliers</b>	<i>ELNUMSP</i>
<b>ASK</b>	IF F3 [Provide electricity figures] = No OR DK/RF OR F4 [Electricity consumption] = DK/RF & F5 [Electricity expenditures] = DK/RF OR F23 [Electricity regression check] = FAIL (HIGH) OR FAIL (LOW) OR (A6 [Square footage] = DK/RF & A12 [Square footage category]) OR D1 [Heating] = DK/RF OR D2 [Cooling] = DK/RF OR D3 [Water heating] = DK/RF OR F9 [Sq ft not included] / A6 [Square footage] > 0.25	
<b>FILL</b>	<b>{SuppliersIntro}</b> IF (F3 [Provide electricity figures] = No OR DK/RF) OR (F4 [Electricity consumption] = DK/RF & F5 [Electricity expenditures] = DK/RF) = "We should be able to obtain this information directly from your electricity supplier, so I just need to collect some information about your electricity accounts." OTHERWISE = "We may need to go to your supplier to verify some information, so I need to ask you some questions about your electricity supplier or suppliers."	
{SuppliersIntro}  In some parts of the country, customers can purchase energy from more than one supplier. How many different companies supplied electricity to this building during calendar year 2012?		
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	Number given → F31 [Electricity suppliers] DK/RF → G1 [Section G Routing]	

<b>F31</b>	<b>Electricity suppliers</b>	<i>EL1LK—EL4LK</i>
<b>ASK</b>	IF F30 [Number electricity suppliers] given	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one supplier = BLANK IF First supplier given = "first" OTHERWISE = "next"	
<p>What is the name of the {FirstNext} supplier that provided electricity in calendar year 2012?</p> <ul style="list-style-type: none"> <li>◆ Start typing the name of the supplier or use [BACKSPACE] to bring up the look-up table</li> <li>◆ Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match</li> <li>◆ If you find a match, make sure the correct line is highlighted (blue) and press [ENTER]</li> <li>◆ If you don't find a match, use [BACKSPACE] to clear the Search line, which will bring you back to the top of the look-up table where ** NOT ON LIST will be highlighted, then press [ENTER] two times</li> </ul>		
<b>NEXT</b>	IF NOT ON LIST selected → F33 [Supplier name] IF Supplier found in look-up table → F32 [Verify electricity supplier] IF DK/RF: IF Only one supplier or last supplier → G1 [Section G Routing] IF More suppliers left to answer for → Ask F31 [Electricity suppliers] again for next supplier	

<b>F32</b>	<b>Verify electricity supplier</b>
<b>ASK</b>	IF Supplier found in F31 [Electricity suppliers] look-up table
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table
<p>Just to verify, I have selected that your electricity supplier is {Supplier}. Is that correct?</p> <ul style="list-style-type: none"> <li>◆ If No, you will be taken back to the previous screen to select again</li> </ul> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>	
<b>NEXT</b>	IF Yes → F39 [Number electricity accounts] IF No → F31 [Electricity suppliers]

<b>F33</b>	<b>Supplier name</b>	<i>EL1NEW—EL4NEW</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
◆ ENTER the name of the supplier		
<b>NEXT</b>	IF Name given → F34 [Street address] IF DK/RF: IF Only one supplier or last supplier → G1 [Section G Routing] IF More suppliers left to answer for → Back to F31 [Electricity suppliers] for next supplier	

<b>F34</b>	<b>Street address</b>	<i>EL1AD1—EL4AD1</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
<b>FILL</b>	{Supplier} = "F33 [Supplier name]"	
What is the address for {Supplier}, beginning with the street?		
<b>NEXT</b>	→ F35 [P.O. Box or Suite]	

<b>F35</b>	<b>P.O. Box or Suite</b>	<i>EL1AD2—EL4AD2</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
Is there a post office box or suite number?		
◆ If not, press [ENTER]		
<b>NEXT</b>	→ F36 [City]	

<b>F36</b>	<b>City</b>	<i>EL1CTY—EL4CTY</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
What is the city?		
<b>NEXT</b>	→ F37 [State abbreviation]	



<b>F37</b>	<b>State abbreviation</b>	<i>EL1STA—EL4STA</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>		
<b>NEXT</b>	→ F38 [ZIP code]	

<b>F38</b>	<b>ZIP code</b>	<i>EL1ZIP—EL4ZIP</i>
<b>ASK</b>	IF NOT ON LIST selected in F31 [Electricity suppliers]	
<p>And what is the ZIP code?</p>		
<b>NEXT</b>	→ F39 [Number electricity accounts]	

<b>F39</b>	<b>Number electricity accounts</b>	<i>EL1NAC—EL4NAC</i>
<b>ASK</b>	IF Supplier found in F31 [Electricity suppliers] look-up table OR F33 [Supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table OR F33 [Supplier name]	
<p>How many different electricity accounts does this building have with {Supplier}?</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → F40 [Electricity account number] IF More than 10 accounts OR DK/RF ⇒ F45 [Electricity bill available]	

<b>F40</b>	<b>Electricity account number</b>	<i>EL1AC1—EL4AC10</i>
<b>ASK</b>	IF F39 [Number electricity accounts] = 1 to 10 Ask as many times as account numbers given, or until DK/RF	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one account = BLANK IF First account given = "first" OTHERWISE = "next" <b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table OR F33 [Supplier name]	
<p>Please give me the {FirstNext} electricity account number for {Supplier}.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>NEXT</b>	IF Independent power producer or non-local utility OR Bought from someone else IN D94 [How purchase electricity] → F41 [Supplier is non-local utility] OTHERWISE → F42 [Bills cover only building]	

<b>F41</b>	<b>Supplier is non-local utility</b> <span style="float: right;"><i>EL1NONU—EL4NONU</i></span>
<b>ASK</b>	IF (Supplier found in F31 [Electricity suppliers] look-up table OR F33 [Supplier name] given) & (Independent power producer or non-local utility OR Bought from someone else IN D94 [How purchase electricity])
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table OR F33 [Supplier name]
<p>You mentioned earlier that you purchase electricity from an independent power producer, non-local utility, or broker. Is {Supplier} one of those companies?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	→ F42 [Bills cover only building]

<b>F42</b>	<b>Bills cover only building</b> <span style="float: right;"><i>EL1OTB—EL4OTB</i></span>
<b>ASK</b>	IF Supplier found in F31 [Electricity suppliers] look-up table OR F33 [Supplier name] given
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements” <b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table OR F33 [Supplier name]
<p>{Bills} from {Supplier} cover just this building or are other buildings covered as well?</p> <p>1 Just this building 2 Other building(s)</p>	
<b>NEXT</b>	IF Other buildings → F43 [Sq ft of others included] IF Just this building OR DK/RF → F44 [Include other major electricity]

<b>F43</b>	<b>Sq ft of others included</b> <span style="float: right;"><i>EL1OTS—EL4OTS</i></span>
<b>ASK</b>	IF F42 [Bills cover only building] = Other buildings
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements”
<p>What is the approximate square footage of the <u>other</u> buildings included on the {Bills}?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	1 to 999,999,999
<b>NEXT</b>	→ F44 [Include other major electricity]

<b>F44</b>	<b>Include other major electricity</b>	<i>EL10TU—EL40TU</i>
<b>ASK</b>	IF Supplier found in F31 [Electricity suppliers] look-up table OR F33 [Supplier name] given	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements”	
{Bills} include charges for any <u>other</u> major electricity usage outside the building, such as parking lot lights, exterior lights, signs or billboards, large pumps or swimming pools?  1 Yes 2 No		
<b>NEXT</b>	→ F45 [Electricity bill available]	

<b>F45</b>	<b>Electricity bill available</b>	<i>EL1BILL—EL4BILL</i>
<b>ASK</b>	IF (Supplier found in F31 [Electricity suppliers] look-up table OR F33 [Supplier name] given)	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F31 [Electricity suppliers] look-up table OR F33 [Supplier name]	
Would it be possible for me to scan one electricity bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.  ◆ EXP: [Examples of these items include other miscellaneous charges, past months data, and units of measure.]  ◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here  1 Yes, bill available 2 No, will not be able to provide bill		
<b>NEXT</b>	IF More suppliers left to answer for → Back to F31 [Electricity suppliers] for next supplier OTHERWISE → G1 [Section G Routing]	

## SECTION G. NATURAL GAS

<b>G1</b>	<b>Section G Routing</b>
<b>NEXT</b>	IF Natural gas used → G2 [WS2 natural gas filled out] OTHERWISE → H1 [Section H Routing]

<b>G2</b>	<b>WS2 natural gas filled out</b>	<i>WS2NGCE</i>
<b>ASK</b>	IF Natural gas used	
Do you have Worksheet 2 with you and filled out for natural gas?		
<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF No OR DK/RF → G3 [Provide natural gas figures] IF Yes → G4 [Units for natural gas]	

<b>G3</b>	<b>Provide natural gas figures</b>	<i>NGFIGS</i>
<b>ASK</b>	IF G2 [WS2 natural gas filled out] = No OR DK/RF	
The next questions are about natural gas usage in this building during calendar year 2012. Would you be able to give me an approximate figure of how much natural gas was used or how much was spent on it?		
<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → G4 [Units for natural gas] IF No OR DK/RF → G31 [Number natural gas suppliers]	

<b>G4</b>	<b>Units for natural gas</b>	<i>NGUNIT</i>
<b>ASK</b>	IF G2 [WS2 natural gas filled out] = Yes OR G3 [Provide natural gas figures] = Yes	
<input type="checkbox"/> SHOW CARD G1  Please look at Show Card G1 and tell me the units in which your natural gas is measured.		
<ol style="list-style-type: none"> <li>1 Hundred cubic feet (Ccf)</li> <li>2 Therms</li> <li>3 Thousand cubic feet (Mcf)</li> <li>4 Dekatherms</li> <li>5 Cubic feet (cf)</li> <li>6 IF VOLUNTEERED: Some other units</li> </ol>		
<b>NEXT</b>	IF Some other units → G5 [Other natural gas units] IF Anything else OR DK/RF → G6 [Natural gas consumption]	

<b>G5</b>	<b>Other natural gas units</b>	<i>NGUNITX</i>
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<b>ASK</b>	IF G4 [Units for natural gas] = Some other units
What are the other units?	
<b>NEXT</b>	→ G6 [Natural gas consumption]

<b>G6</b>	<b>Natural gas consumption</b>	<i>NGCNS</i>
<b>ASK</b>	IF G2 [WS2 natural gas filled out] = Yes OR G3 [Provide natural gas figures] = Yes	
Please give me the total amount of natural gas used in calendar year 2012.		[F1]-HELP
<ul style="list-style-type: none"> <li>◆ EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.]</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>		
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	→ G7 [Natural gas expenditures]	

<b>G7</b>	<b>Natural gas expenditures</b>	<i>NGEXP</i>
<b>ASK</b>	IF G2 [WS2 natural gas filled out] = Yes OR G3 [Provide natural gas figures] = Yes	
Please give me the total dollars spent on natural gas in calendar year 2012. This should include state and local taxes and the following charges: fuel adjustment, system, demand, and distribution.		[F1]-HELP
<ul style="list-style-type: none"> <li>◆ Do <u>not</u> enter cents</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>		
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	IF G6 [Natural gas consumption] = DK/RF & G7 [Natural gas expenditures] = DK/RF → G31 [Number natural gas suppliers] OTHERWISE → G8 [Starting date for natural gas figures]	

<b>G8</b>	<b>Starting date for natural gas figures</b>	<i>NGSTDAT</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given	
		[F1]-HELP
	What is the starting date for these natural gas usage figures?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	⇒ G9 [Ending date for natural gas figures]	

<b>G9</b>	<b>Ending date for natural gas figures</b>	<i>NGENDAT</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given	
		[F1]-HELP
	What is the ending date [for these natural gas usage figures]?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li><input type="checkbox"/> ◆ VERIFY that this is the <u>last</u> day of the last billing period</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	IF CBECS Activity ≠ Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One) → G10 [All occupants natural gas included] IF CBECS Activity = Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One) → G12 [Natural gas covers whole mall] OTHERWISE → G16 [Other bldgs natural gas included]	

<b>G10</b>	<b>All occupants natural gas included</b>	<i>NGALL</i>
<b>ASK</b>	IF CBECS Activity ≠ Enclosed mall & G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given & C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One	
	Do these figures include the natural gas for all of the businesses or organizations in this building?	
	1 Yes 2 No	
<b>NEXT</b>	IF No → G11 [Sq ft not included] IF CBECS Activity = Enclosed mall & B41 [Food court] = Yes & Natural gas IN D80 [Sources for cooking] → G12 [Natural gas covers food court] OTHERWISE → G16 [Other bldgs natural gas included]	

<b>G11</b>	<b>Sq ft not included</b>	<i>NGNISF</i>
<b>ASK</b>	IF G10 [All occupants natural gas included] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	IF CBECS Activity = Enclosed mall & B41 [Food court] = Yes & Natural gas IN D80 [Sources for cooking] → G12 [Natural gas covers food court] OTHERWISE → G16 [Other bldgs natural gas included]	

<b>G12</b>	<b>Natural gas covers whole mall</b>	<i>NGMALLINC</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given) & CBECS Activity = Enclosed mall & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One)	
<b>FILL</b>	<b>{FoodCourt}</b> IF B41 [Food court] = Yes = "food court," OTHERWISE = BLANK	
<p>Do these figures include the energy for the entire mall building, including the anchor stores, {food court} common areas, and individual stores?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No → G13 [Not included in mall natural gas] OTHERWISE → G16 [Other bldgs natural gas included]	

<b>G13</b>	<b>Not included in mall natural gas</b>	<i>NGMALLEXC</i>										
<b>ASK</b>	IF G12 [Natural gas covers whole mall] = No											
<p>Which of these is <u>not</u> included?</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Anchor stores</td> <td style="width: 50%; text-align: right;"><i>NGMALLANC</i></td> </tr> <tr> <td>2 Food court</td> <td style="text-align: right;"><i>NGMALLFC</i></td> </tr> <tr> <td>3 Common areas</td> <td style="text-align: right;"><i>NGMALLCOM</i></td> </tr> <tr> <td>4 Individual stores</td> <td style="text-align: right;"><i>NGMALLST</i></td> </tr> <tr> <td>5 Other</td> <td style="text-align: right;"><i>NGMALLLOT</i></td> </tr> </table>			1 Anchor stores	<i>NGMALLANC</i>	2 Food court	<i>NGMALLFC</i>	3 Common areas	<i>NGMALLCOM</i>	4 Individual stores	<i>NGMALLST</i>	5 Other	<i>NGMALLLOT</i>
1 Anchor stores	<i>NGMALLANC</i>											
2 Food court	<i>NGMALLFC</i>											
3 Common areas	<i>NGMALLCOM</i>											
4 Individual stores	<i>NGMALLST</i>											
5 Other	<i>NGMALLLOT</i>											
<b>NEXT</b>	IF Other selected → G14 [Other not included in mall natural gas] OTHERWISE → G15 [Mall sq ft not included]											

<b>G14</b>	<b>Other not included in mall natural gas</b>
<b>ASK</b>	IF Other IN G13 [Not included in mall natural gas]
<p>Please describe the other type of area that is not included.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	→ G15 [Mall sq ft not included]

<b>G15</b>	<b>Mall sq ft not included</b>	<i>NGNIMALLSF</i>
<b>ASK</b>	IF G12 [Natural gas covers whole mall] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ G16 [Other bldgs natural gas included]	

<b>G16</b>	<b>Other bldgs natural gas included</b>	<i>NGOTBD</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → G17 [Sq ft of other included] IF No OR DK/RF: IF B48 [Central physical plant] = Yes & B53 [Central plant in building] = No → G18 [Central plant natural gas included] OTHERWISE ⇒ G19 [Include other major natural gas]	

<b>G17</b>	<b>Sq ft of other included</b>	<i>NGOTSF</i>
<b>ASK</b>	IF G16 [Other bldgs natural gas included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	IF B48 [Central physical plant] = Yes & B53 [Central plant in building] = No → G18 [Central plant natural gas included] OTHERWISE ⇒ G19 [Include other major natural gas]	

<b>G18</b>	<b>Central plant natural gas included</b>	<i>PLTNGINC</i>
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<b>ASK</b>	IF B48 [Central physical plant] = Yes & B53 [Central plant in building] = No
<b>FILL</b>	{Supplier} = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]
<p>Earlier you mentioned that there is a central plant on this campus. Do these figures include any natural gas that was used in the central plant?</p> <p>◆ EXP: [We do not want the energy used in the central plant. This question is for verification purposes.]</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	⇒ G19 [Include other major natural gas]

<b>G19</b>	<b>Include other major natural gas</b>	<i>NGOTUS</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given	
<p>Do these figures include charges for any <u>other</u> major natural gas usage outside the building, such as for kilns, gas space heaters, exterior or decorative lighting, compressed natural gas vehicles, or pumps not used in the building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → G20 [Outside uses included in natural gas]</p> <p>OTHERWISE</p> <p>IF D96 [How purchase natural gas] = Bought from someone else OR Bought both ways → G22 [Include all non-local natural gas]</p> <p>IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF &amp; D17 [Source for main heating] ≠ DK/RF → G24 [Natural gas regression check]</p> <p>OTHERWISE:</p> <p>IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included]</p> <p>IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]</p>	

<b>G20</b>	<b>Outside uses included in natural gas</b>	<i>see below</i>																		
<b>ASK</b>	IF G19 [Include other major natural gas] = Yes																			
<p>Which of these outside uses is included?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Kilns</td> <td>NGOUTKLN</td> </tr> <tr> <td>2</td> <td>Gas space heaters</td> <td>NGOUTHTR</td> </tr> <tr> <td>3</td> <td>Exterior decorative lights</td> <td>NGOUTLTS</td> </tr> <tr> <td>4</td> <td>Compressed natural gas vehicles</td> <td>NGOUTVEH</td> </tr> <tr> <td>5</td> <td>Pumps not used in the building</td> <td>NGOUTPMP</td> </tr> <tr> <td>6</td> <td>Other</td> <td>NGOUTOT</td> </tr> </table>			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
1	Kilns	NGOUTKLN																		
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4	Compressed natural gas vehicles	NGOUTVEH																		
5	Pumps not used in the building	NGOUTPMP																		
6	Other	NGOUTOT																		
<b>NEXT</b>	<p>IF Other selected → G21 [Other type of outside natural gas use]  OTHERWISE  IF D96 [How purchase natural gas] = Bought from someone else OR Bought both ways  → G22 [Include all non-local natural gas]  IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF  &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF &amp; D17 [Source for main heating] ≠ DK/RF  → G24 [Natural gas regression check]  OTHERWISE:  IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included]  IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]</p>																			

<b>G21</b>	<b>Other type of outside natural gas use</b>	
<b>ASK</b>	IF Other IN G20 [Outside uses included in natural gas]	
<p>Please describe this other type of outside natural gas use.</p> <p>◆ RECORD in space below</p>		
<b>NEXT</b>	<p>IF D96 [How purchase natural gas] = Bought from someone else OR Bought both ways  → G22 [Include all non-local natural gas]  IF (A6 [Square footage] known OR A12 [Square footage category] known) &amp; D1 [Heating] ≠ DK/RF  &amp; D2 [Cooling] ≠ DK/RF &amp; D3 [Water heating] ≠ DK/RF &amp; D17 [Source for main heating] ≠ DK/RF  → G24 [Natural gas regression check]  OTHERWISE:  IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included]  IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]</p>	

<b>G22</b>	<b>Include all non-local natural gas</b>	<i>NGNONU</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given) & (D96 [How purchase natural gas] = Bought from someone else OR Bought both ways)	
Do these figures include all the natural gas from the non-utility or broker?		
1 Yes 2 No		
<b>NEXT</b>	IF No → G23 [What not included] IF Yes OR DK/RF: IF (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF & D17 [Source for main heating] ≠ DK/RF → G24 [Natural gas regression check] OTHERWISE: IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]	

<b>G23</b>	<b>What not included</b>	
<b>ASK</b>	IF G22 [Include all non-local natural gas] = No	
What was not included?		
◆ RECORD the additional charges in the open box		
<b>NEXT</b>	IF (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF & D17 [Source for main heating] ≠ DK/RF → G24 [Natural gas regression check] OTHERWISE: IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]	

<b>G24</b>	<b>Natural gas regression check</b>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given) & (A6 [Square footage] known OR A12 [Square footage category] known) & D1 [Heating] ≠ DK/RF & D2 [Cooling] ≠ DK/RF & D3 [Water heating] ≠ DK/RF & D17 [Source for main heating] ≠ DK/RF
<p>Based on various characteristics of the structure, Blaise will use a detailed equation to compute predicted consumption and expenditures estimates. The natural gas consumption and/or expenditures given will be adjusted based on the units for natural gas, and ratio adjusted if other square footage was either included or excluded in the figures, and then will either PASS or FAIL this regression check, based on the following formula:</p> <p>IF G6 [Natural gas consumption] &gt; [Predicted consumption] × 8  OR G7 [Natural gas expenditures] &gt; [Predicted expenditures] × 8 → FAIL (HIGH)  IF G6 [Natural gas consumption] &lt; [Predicted consumption] ÷ 13  OR G7 [Natural gas expenditures] &lt; [Predicted expenditures] ÷ 13 → FAIL (LOW)  OTHERWISE → PASS</p>	
<b>NEXT</b>	IF FAIL (HIGH) → G25 [Anything unusual high] IF FAIL (LOW) → G26 [Anything unusual low] IF PASS: IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]

<b>G25</b>	<b>Anything unusual high</b>	<i>NGHIGH</i>
<b>ASK</b>	IF G24 [Natural gas regression check] = FAIL (HIGH)	
<p>These usage figures seem high for what you have told me about this building. Is there anything unusual that might explain this high usage?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → G27 [What is unusual] IF No OR DK/RF: IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]	

<b>G26</b>	<b>Anything unusual low</b>	<i>NGLOW</i>
<b>ASK</b>	IF G24 [Natural gas regression check] = FAIL (LOW)	
<p>These usage figures seem low for what you have told me about this building. Is there anything unusual that might explain this low usage?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → G27 [What is unusual] IF No OR DK/RF: IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]	

<b>G27</b>	<b>What is unusual</b>
<b>ASK</b>	IF G25 [Anything unusual high] = Yes OR G26 [Anything unusual low] = Yes
<p>Please tell me [what is out of the ordinary about this building].</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	IF G2 [WS2 natural gas filled out] = Yes → G28 [Monthly natural gas included] IF G2 [WS2 natural gas filled out] = No OR DK/RF → G29 [Monthly natural gas available]

<b>G28</b>	<b>Monthly natural gas included</b>	<i>NGINC12</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given) & G2 [WS2 natural gas filled out] = Yes	
<p>Did you include your monthly natural gas usage on Worksheet 2?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No OR DK/RF → G29 [Monthly natural gas available] IF Yes: IF G24 [Natural gas regression check] = PASS → G30 [Natural gas bill available] IF G24 [Natural gas regression check] = FAIL (HIGH) OR FAIL (LOW) → G31 [Number natural gas suppliers]	

<b>G29</b>	<b>Monthly natural gas available</b>	<i>NGHAV12</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given) & (G2 [WS2 natural gas filled out] = No OR DK/RF OR G28 [Monthly natural gas included] = No OR DK/RF)	
<p>Do you have a record of the monthly natural gas use that I could have to help us better understand the seasonal patterns of natural gas use?</p> <p>◆ If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here</p> <p>1 Yes, monthly natural gas available 2 No, will not be able to provide monthly natural gas</p>		
<b>NEXT</b>	IF ((A6 [Square footage] = DK/RF & A12 [Square footage category] = DK/RF) OR D1 [Heating] = DK/RF OR D2 [Cooling] = DK/RF OR D3 [Water heating] = DK/RF OR D17 [Source for main heating] = DK/RF) OR G24 [Natural gas regression check] = FAIL (HIGH) OR FAIL (LOW) OR G11 [Sq ft not included] / A6 [Square footage] > 0.25 → G31 [Number natural gas suppliers] OTHERWISE → G30 [Natural gas bill available]	

<b>G30</b>	<b>Natural gas bill available</b>	<i>NGBILL</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G7 [Natural gas expenditures] given & G24 [Natural gas regression check] = PASS	
<p>Would it be possible for me to scan one of your natural gas bills? (There is information on some utility bills that may help energy researchers who use these data.)</p> <p>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</p> <p>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</p> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	→ H1 [Section H Routing]	

<b>G31</b>	<b>Number natural gas suppliers</b>	<i>NGNUMSP</i>
<b>ASK</b>	IF G3 [Provide natural gas figures] = No OR DK/RF OR G6 [Natural gas consumption] = DK/RF & G7 [Natural gas expenditures] = DK/RF OR G24 [Natural gas regression check] = FAIL (HIGH) OR FAIL (LOW) OR ((A6 [Square footage] = DK/RF & A12 [Square footage category]) OR D1 [Heating] = DK/RF OR D2 [Cooling] = DK/RF OR D3 [Water heating] = DK/RF OR D17 [Source for main heating] = DK/RF) OR G11 [Sq ft not included] / A6 [Square footage] > 0.25	
<b>FILL</b>	<b>{SuppliersIntro}</b> IF (G3 [Provide natural gas figures] = No OR DK/RF) OR (G6 [Natural gas consumption] = DK/RF & G7 [Natural gas expenditures] = DK/RF) = "We should be able to obtain this information directly from your natural gas supplier, so I just need to collect some information about your natural gas accounts." OTHERWISE = "We may need to go to your supplier to verify some information, so I need to ask you some questions about your natural gas supplier or suppliers."	
{SuppliersIntro}  In some parts of the country, customers can purchase energy from more than one supplier. How many different companies supplied natural gas to this building during calendar year 2012?		
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	Number given → G32 [Natural gas suppliers] DK/RF → H1 [Section H Routing]	

<b>G32</b>	<b>Natural gas suppliers</b>	<i>NG1LKP—NG2LKP</i>
<b>ASK</b>	IF G31 [Number natural gas suppliers] given	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one supplier = BLANK IF First supplier given = "first" OTHERWISE = "next"	
<p>What is the name of the {FirstNext} supplier that provided natural gas in calendar year 2012?</p> <ul style="list-style-type: none"> <li>◆ Start typing the name of the supplier or use [BACKSPACE] to bring up the look-up table</li> <li>◆ Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match</li> <li>◆ If you find a match, make sure the correct line is highlighted (blue) and press [ENTER]</li> <li>◆ If you don't find a match, use [BACKSPACE] to clear the Search line, which will bring you back to the top of the look-up table where ** NOT ON LIST will be highlighted, then press [ENTER] two times</li> </ul>		
<b>NEXT</b>	IF NOT ON LIST selected → G34 [Supplier name] IF Supplier found in look-up table → G33 [Verify natural gas supplier] IF DK/RF: IF Only one supplier or last supplier → H1 [Section H Routing] IF More suppliers left to answer for → Ask G32 [Natural gas suppliers] again for next supplier	

<b>G33</b>	<b>Verify natural gas supplier</b>
<b>ASK</b>	IF Supplier found in G32 [Natural gas suppliers] look-up table
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table
<p>Just to verify, I have selected that your natural gas supplier is {Supplier}. Is that correct?</p> <ul style="list-style-type: none"> <li>◆ If No, you will be taken back to the previous screen to select again</li> </ul> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>	
<b>NEXT</b>	IF Yes → G40 [Number natural gas accounts] IF No → G32 [Natural gas suppliers]



<b>G34</b>	<b>Supplier name</b>	<i>NG1NEW—NG4NEW</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
◆ ENTER the name of the supplier		
<b>NEXT</b>	IF Name given → G35 [Street address] IF DK/RF: IF Only one supplier or last supplier → H1 [Section H Routing] IF More suppliers left to answer for → Back to G32 [Natural gas suppliers] for next supplier	

<b>G35</b>	<b>Street address</b>	<i>NG1AD1—NG4AD1</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
<b>FILL</b>	{Supplier} = "G34 [Supplier name]"	
What is the address for {Supplier}, beginning with the street?		
<b>NEXT</b>	⇒ G36 [P.O. Box or Suite]	

<b>G36</b>	<b>P.O. Box or Suite</b>	<i>NG1AD2—NG4AD2</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
Is there a post office box or suite number?		
◆ If not, press [ENTER]		
<b>NEXT</b>	⇒ G37 [City]	

<b>G37</b>	<b>City</b>	<i>NG1CTY—NG4CTY</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
What is the city?		
<b>NEXT</b>	⇒ G38 [State abbreviation]	

<b>G38</b>	<b>State abbreviation</b>	<i>NG1STA—NG4STA</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>		
<b>NEXT</b>	⇒ G39 [Zip code]	

<b>G39</b>	<b>ZIP code</b>	<i>NG1ZIP—NG4ZIP</i>
<b>ASK</b>	IF NOT ON LIST selected in G32 [Natural gas suppliers]	
<p>And what is the ZIP code?</p>		
<b>NEXT</b>	⇒ G40 [Number natural gas accounts]	

<b>G40</b>	<b>Number natural gas accounts</b>	<i>NG1NAC—NG4NAC</i>
<b>ASK</b>	IF Supplier found in G32 [Natural gas suppliers] look-up table OR G34 [Supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]	
<p>How many different natural gas accounts does this building have with {Supplier}?</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → G41 [Natural gas account number] IF More than 10 accounts OR DK/RF ⇒ G46 [Natural gas bill available]	

<b>G41</b>	<b>Natural gas account number</b>	<i>NG1AC1—NG4AC10</i>
<b>ASK</b>	IF G40 [Number natural gas accounts] = 1 to 10 Ask as many times as account numbers given, or until DK/RF	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one account = BLANK IF First account given = "first" OTHERWISE = "next" <b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]	
<p>Please give me the {FirstNext} natural gas account number for {Supplier}.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>NEXT</b>	IF D96 [How purchase natural gas] = Bought from someone else OR Bought both ways → G42 [Supplier is non-local utility] OTHERWISE → G43 [Bills cover only building]	

<b>G42</b>	<b>Supplier is non-local utility</b>	<i>NG1NONU—NG4NONU</i>
<b>ASK</b>	IF (Supplier found in G32 [Natural gas suppliers] look-up table OR G34 [Supplier name] given) & (D96 [How purchase natural gas] = Bought from someone else OR Bought both ways)	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]	
<p>You mentioned earlier that you purchase natural gas from a non-utility or broker. Is {Supplier} one of those companies?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ G43 [Bills cover only building]	

<b>G43</b>	<b>Bills cover only building</b>	<i>NG1OTB—NG4OTB</i>
<b>ASK</b>	IF Supplier found in G32 [Natural gas suppliers] look-up table OR G34 [Supplier name] given	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements” <b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]	
<p>{Bills} from {Supplier} cover just this building or are other buildings covered as well?</p> <p>1 Just this building 2 Other building(s)</p>		
<b>NEXT</b>	IF Other buildings → G44 [Sq ft of others included] IF Just this building OR DK/RF → G45 [Include other major natural gas]	

<b>G44</b>	<b>Sq ft of others included</b>	<i>NG1OTS—NG4OTS</i>
<b>ASK</b>	IF G43 [Bills cover only building] = Other buildings	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements”	
<p>What is the approximate square footage of the <u>other</u> buildings included on the {Bills}?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	⇒ G45 [Include other major natural gas]	

<b>G45</b>	<b>Include other major natural gas</b>	<i>NG10TU—NG40TU</i>
<b>ASK</b>	IF Supplier found in G32 [Natural gas suppliers] look-up table OR G34 [Supplier name] given	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements”	
<p>{Bills} include charges for any <u>other</u> major natural gas usage outside the building, such as for kilns, gas space heaters, exterior or decorative lighting, compressed natural gas vehicles, or pumps not used in the building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ G46 [Natural gas bill available]	

<b>G46</b>	<b>Natural gas bill available</b>	<i>NG1BILL—NG4BILL</i>
<b>ASK</b>	IF (Supplier found in G32 [Natural gas suppliers] look-up table OR G34 [Supplier name] given)	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from G32 [Natural gas suppliers] look-up table OR G34 [Supplier name]	
<p>Would it be possible for me to scan one of your natural gas bills from {Supplier}? (There is information on some utility bills that may help energy researchers who use these data.)</p> <ul style="list-style-type: none"> <li>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</li> <li>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</li> </ul> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	IF More suppliers left to answer for → Back to G32 [Natural gas suppliers] for next supplier OTHERWISE → H1 [Section H Routing]	

## SECTION H. FUEL OIL/DIESEL/KEROSENE

**NOTE:** In ASK and NEXT instructions in this section, "Fuel oil" refers to fuel oil, diesel, or kerosene.

<b>H1</b>	<b>Section H Routing</b>
<b>NEXT</b>	IF Fuel oil used → H2 [WS2 fuel oil filled out] OTHERWISE → I1 [Section I Routing]

<b>H2</b>	<b>WS2 fuel oil filled out</b>	<i>WS2FKCE</i>
<b>ASK</b>	IF Fuel oil used	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
	Do you have Worksheet 2 with you and filled out for {FuelOilType}?	
	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>	
<b>NEXT</b>	IF No OR DK/RF → H3 [Provide fuel oil figures] IF Yes → H4 [Fuel oil purchases]	

<b>H3</b>	<b>Provide fuel oil figures</b>	<i>FKFIGS</i>
<b>ASK</b>	IF H2 [WS2 fuel oil filled out] = No OR DK/RF	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
	The next questions are about {FuelOilType} purchases in this building during calendar year 2012. Would you be able to give me an approximate figure of how much {FuelOilType} was purchased or how much was spent on it?	
	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>	
<b>NEXT</b>	IF Yes → H4 [Fuel oil purchases] IF No OR DK/RF: IF D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil OR D75 [Sources for water heating] = Fuel oil OR D76 [Other water heating source] = Fuel oil OR (D85 [Sources for electricity generation] = Fuel oil → H20 [Number fuel oil suppliers] OTHERWISE → I1 [Section I Routing]	

<b>H4</b>	<b>Fuel oil purchases</b>	<i>FKCNSP</i>
<b>ASK</b>	IF H2 [WS2 fuel oil filled out] = Yes OR H3 [Provide fuel oil figures] = Yes	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
		[F1]-HELP
	Please give me the total number of gallons of {FuelOilType} purchased in calendar year 2012.	
	<ul style="list-style-type: none"> <li>◆ EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.]</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	0 to 99,999,999,999,999	
<b>NEXT</b>	⇒ H5 [Fuel oil expenditures]	

<b>H5</b>	<b>Fuel oil expenditures</b>	<i>FKEXP</i>
<b>ASK</b>	IF H2 [WS2 fuel oil filled out] = Yes OR H3 [Provide fuel oil figures] = Yes	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
		[F1]-HELP
	Please give me the total dollars spent on {FuelOilType} in calendar year 2012, including state and local taxes.	
	<ul style="list-style-type: none"> <li>◆ Do <u>not</u> enter cents</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	IF H4 [Fuel oil purchases] = Zero & H5 [Fuel oil expenditures] = Zero (OR one is Zero and one is DK/RF) ⇒ H6 [Purchased before 2012] IF H4 [Fuel oil purchases] = DK/RF & H5 [Fuel oil expenditures] = DK/RF → I1 [Section I Routing] OTHERWISE → H7 [Starting date for fuel oil figures]	

<b>H6</b>	<b>Purchased before 2012</b>	<i>FKSTORD</i>
<b>ASK</b>	IF H4 [Fuel oil purchases] = Zero & H5 [Fuel oil expenditures] = Zero (OR one is Zero and one is DK/RF)	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
	Was any {FuelOilType} used in 2012 that was purchased or delivered in 2011 or before?	
	1 Yes 2 No	
<b>NEXT</b>	⇒ I1 [Section I Routing]	

<b>H7</b>	<b>Starting date for fuel oil figures</b>	<i>FKSTDAT</i>
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<b>ASK</b>	IF (H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given) & Not both zero
<b>FILL</b>	{FuelOilType} = Type or types specified in D10 [Fuel oil, diesel, or kerosene]
[F1]-HELP	
<p>What is the first delivery date for these {FuelOilType} purchases?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	⇒ H8 [Ending date for fuel oil figures]

<b>H8</b>	<b>Ending date for fuel oil figures</b>	<i>FKENDAT</i>
<b>ASK</b>	IF (H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given) & Not both zero	
<b>FILL</b>	{FuelOilType} = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
		[F1]-HELP
<p>What is the last delivery date [for these {FuelOilType} purchases]?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>		
<b>NEXT</b>	IF (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One) → H9 [All occupants fuel oil included] OTHERWISE → H11 [Other bldgs fuel oil included]	

<b>H9</b>	<b>All occupants fuel oil included</b>	<i>FKALL</i>
<b>ASK</b>	IF (H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given & (C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One)	
<b>FILL</b>	{FuelOilType} = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<p>Do these figures include the {FuelOilType} for all of the businesses or organizations in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No → H10 [Sq ft not included] IF Yes OR DK/RF → H11 [Other bldgs fuel oil included]	

<b>H10</b>	<b>Sq ft not included</b>	<i>FKNISF</i>
<b>ASK</b>	IF H9 [All occupants fuel oil included] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ H11 [Other bldgs fuel oil included]	

<b>H11</b>	<b>Other bldgs fuel oil included</b>	<i>FKOTBD</i>
<b>ASK</b>	IF H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → H12 [Sq ft of other included]</p> <p>IF No OR DK/RF: IF B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ H13 [Central plant fuel oil included]</p> <p>OTHERWISE → H14 [Include other major fuel oil]</p>	

<b>H12</b>	<b>Sq ft of other included</b>	<i>FKOTSF</i>
<b>ASK</b>	IF H11 [Other bldgs fuel oil included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	<p>IF B48 [Central physical plant] = Yes &amp; B53 [Central plant in building] = No ⇒ H13 [Central plant fuel oil included]</p> <p>OTHERWISE ⇒ H14 [Include other major fuel oil]</p>	



<b>H13</b>	<b>Central plant fuel oil included</b>	<i>PLTNGINC</i>
<b>ASK</b>	IF B48 [Central physical plant] = Yes & B53 [Central plant in building] = No	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<p>Earlier you mentioned that there is a central plant on this campus. Do these figures include any {FuelOilType} that was used in the central plant?</p> <p>◆ EXP: [We do not want the energy used in the central plant. This question is for verification purposes.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ H14 [Include other major fuel oil]	

<b>H14</b>	<b>Include other major fuel oil</b>	<i>FKOTUS</i>
<b>ASK</b>	IF H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<p>Do these figures include charges for any <u>other</u> major {FuelOilType} usage outside the building, such as for kilns, welding, pumps, or motors?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF H4 [Fuel oil purchases] given &amp; A12 [Square footage category] given &amp; D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil OR D75 [Sources for water heating] = Fuel oil OR D76 [Other water heating source] = Fuel oil OR (D85 [Sources for electricity generation] = Fuel oil &amp; D3 [Water heating] ≠ DK/RF → H15 [Fuel oil regression check]) OTHERWISE: IF D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil OR D75 [Sources for water heating] = Fuel oil OR D76 [Other water heating source] = Fuel oil OR (D85 [Sources for electricity generation] = Fuel oil &amp; (H10 [Sq ft not included] / A6 [Square footage] &gt; 0.25 OR A12 [Square footage category] = DK/RF OR D3 [Water heating] = DK/RF) → H20 [Number fuel oil suppliers] OTHERWISE → H19 [Fuel oil bill available]</p>	

<b>H15</b>	<b>Fuel oil regression check</b>
<b>DO</b>	IF H4 [Fuel oil purchases] given & A12 [Square footage category] given & D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil & D3 [Water heating] ≠ DK/RF
<p>Based on various characteristics of the structure, Blaise will use a detailed equation to compute predicted consumption and expenditures estimates. The fuel oil consumption given will either PASS or FAIL this regression check, based on the following formula:</p> <p>IF H4 [Fuel oil purchases] &gt; (Predicted consumption × 10) → FAIL (HIGH)  IF H4 [Fuel oil purchases] &lt; (Predicted consumption ÷ 20) → FAIL (LOW)  OTHERWISE → PASS</p>	
<b>NEXT</b>	IF FAIL (HIGH) → H16 [Anything unusual high] IF FAIL (LOW) → H17 [Anything unusual low] IF PASS & H10 [Sq ft not included] / A6 [Square footage] > 0.25 → H20 [Number fuel oil suppliers] OTHERWISE → H19 [Fuel oil bill available]

<b>H16</b>	<b>Anything unusual high</b>	<i>FKHIGH</i>
<b>ASK</b>	IF H15 [Fuel oil regression check] = FAIL (HIGH)	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<p>These {FuelOilType} usage figures seem high for what you have told me about this building. Is there anything unusual that might explain this high usage?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → H18 [What is unusual] IF No OR DK/RF → H20 [Number fuel oil suppliers]	

<b>H17</b>	<b>Anything unusual low</b>	<i>FKLOW</i>
<b>ASK</b>	IF H15 [Fuel oil regression check] = FAIL (LOW)	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<p>These {FuelOilType} usage figures seem low for what you have told me about this building. Is there anything unusual that might explain this low usage?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → H18 [What is unusual] IF No OR DK/RF → H20 [Number fuel oil suppliers]	

<b>H18</b>	<b>What is unusual</b>
<b>ASK</b>	IF H16 [Anything unusual high] = Yes OR H17 [Anything unusual low] = Yes
<p>Please tell me [what is out of the ordinary about this building].</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ H20 [Number fuel oil suppliers]

<b>H19</b>	<b>Fuel oil bill available</b>	<i>FKBILL</i>
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
<b>ASK</b>	<p>IF (H4 [Fuel oil purchases] given OR H5 [Fuel oil expenditures] given &amp; ((D17 [Source for main heating] ≠ Fuel oil &amp; D18 [Other source for main heating] ≠ Fuel oil) OR ((D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil) &amp; H10 [Sq ft not included] / A6 [Square footage] ≤ 0.25 &amp; A12 [Square footage category] ≠ DK &amp; D3 [Water heating] ≠ DK) OR (H4 [Fuel oil purchases] given &amp; H15 [Fuel oil regression check] = PASS &amp; H10 [Sq ft not included] / A6 [Square footage] ≤ 0.25)</p>	
<p>Would it be possible for me to scan one of your {FuelOilType} bills? (There is information on some utility bills that may help energy researchers who use these data.)</p> <p>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</p> <p>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</p> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	→ I1 [Section I Routing]	

<b>H20</b>	<b>Number fuel oil suppliers</b>	<i>FKNUMSP</i>
<b>ASK</b>	IF D17 [Source for main heating] = Fuel oil OR D18 [Other source for main heating] = Fuel oil OR D75 [Sources for water heating] = Fuel oil OR D76 [Other water heating source] = Fuel oil OR (D85 [Sources for electricity generation] = Fuel oil & D87 [Use of generated electricity] = Whenever electricity was used) & (H3 [Provide fuel oil figures] = No OR DK/RF OR H4 [Fuel oil purchases] = DK/RF & H5 [Fuel oil expenditures] = DK/RF OR A12 [Square footage category] = DK OR D3 [Water heating] = DK OR H15 [Fuel oil regression check] = FAIL (LOW) OR FAIL (HIGH) OR H10 [Sq ft not included] / A6 [Square footage] > 0.25)	
<b>FILL</b>	<b>{SuppliersIntro}</b> IF H3 [Provide fuel oil figures] = No OR DK/RF OR (H4 [Fuel oil purchases = DK/RF] & H5 [Fuel oil expenditures = DK/RF] = "We should be able to obtain this information directly from your supplier, so I just need to collect some information about your accounts." OTHERWISE = "We may need to go to your supplier to verify some information, so I need to ask you some questions about your supplier or suppliers." <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
	{SuppliersIntro}  How many different companies supplied {FuelOilType} to building during calendar year 2012?	
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	Number given → H21 [Fuel oil supplier name] DK/RF → I1 [Section I Routing]	

<b>H21</b>	<b>Fuel oil supplier name</b>	<i>FK1SUP—FK4SUP</i>
<b>ASK</b>	IF H20 [Number fuel oil suppliers] given	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one supplier = BLANK IF First supplier given = "first" OTHERWISE = "next" <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene]	
	What is the name of the {FirstNext} supplier that provided {FuelOilType} during 2012?  ◆ ENTER the name of the supplier	
<b>NEXT</b>	IF Name given → H22 [Street address] IF DK/RF: IF Only one supplier or last supplier → I1 [Section I Routing] IF More suppliers left to answer for → Ask H21 [Fuel oil supplier name] again for next supplier	

<b>H22</b>	<b>Street address</b>	<i>FK1AD1—FK4AD1</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
<b>FILL</b>	<b>{Supplier}</b> = H21 [Fuel oil supplier name]	
What is the address for {Supplier}, beginning with the street?		
<b>NEXT</b>	⇒ H23 [P.O. Box or Suite]	

<b>H23</b>	<b>P.O. Box or Suite</b>	<i>FK1AD2—FK4AD2</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
Is there a post office box or suite number?		
◆ If not, press [ENTER]		
<b>NEXT</b>	⇒ H24 [City]	

<b>H24</b>	<b>City</b>	<i>FK1CTY—FK4CTY</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
What is the city?		
<b>NEXT</b>	⇒ H25 [State abbreviation]	

<b>H25</b>	<b>State abbreviation</b>	<i>FK1STA—FK4STA</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
What is the state?		
◆ ENTER the two letter abbreviation		
<b>NEXT</b>	⇒ H26 [ZIP code]	

<b>H26</b>	<b>ZIP code</b>	<i>FK1ZIP—FK4ZIP</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
And what is the zip code?		
<b>NEXT</b>	⇒ H27 [Number fuel oil accounts]	

<b>H27</b>	<b>Number fuel oil accounts</b>	<i>FK1NAC—FK4NAC</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene] <b>{Supplier}</b> = H21 [Fuel oil supplier name]	
How many different {FuelOilType} accounts does this building have with {Supplier}?		
<b>NEXT</b>	IF 1 to 10 accounts → H28 [Fuel oil account number] IF More than 10 accounts OR DK/RF → H32 [Fuel oil bill available]	

<b>H28</b>	<b>Fuel oil account number</b>	<i>FK1AC1—FK4AC10</i>
<b>ASK</b>	IF H27 [Number fuel oil accounts] = 1 to 10 Ask as many times as account numbers given, or until DK/RF	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one account = BLANK IF First account given = “first” OTHERWISE = “next” <b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene] <b>{Supplier}</b> = H21 [Fuel oil supplier name]	
Please give me the {FirstNext} {FuelOilType} account number for {Supplier}.		
◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	→ H29 [Bills cover only building]	

<b>H29</b>	<b>Bills cover only building</b>	<i>FK1OTB—FK4OTB</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements” <b>{Supplier}</b> = H21 [Fuel oil supplier name]	
{Bills} from {Supplier} cover just this building or are other buildings covered as well?		
1 Just this building 2 Other building(s)		
<b>NEXT</b>	IF Other buildings → H30 [Sq ft of others included] IF Just this building OR DK/RF → H31 [Include other major fuel oil]	

<b>H30</b>	<b>Sq ft of others included</b>	<i>FK10TS—FK40TS</i>
<b>ASK</b>	IF H29 [Bills cover only building] = Other buildings	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “bill or statement” IF 2 to 10 accounts = “bills or statements”	
What is the approximate square footage of the <u>other</u> buildings included on the {Bills}?  ◆ PROBE for estimate if DK		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ H31 [Include other major fuel oil]	

<b>H31</b>	<b>Include other major fuel oil</b>	<i>FK10TU—FK40TU</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements”	
{Bills} include charges for any <u>other</u> major fuel oil usage outside the building, such as for kilns, welding, pumps, or motors?  1 Yes 2 No		
<b>NEXT</b>	⇒ H32 [Fuel oil bill available]	

<b>H32</b>	<b>Fuel oil bill available</b>	<i>FK1BILL—FK4BILL</i>
<b>ASK</b>	IF Name given in H21 [Fuel oil supplier name]	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D10 [Fuel oil, diesel, or kerosene] <b>{Supplier}</b> = H21 [Fuel oil supplier name]	
Would it be possible for me to scan one {FuelOilType} bill from {Supplier}? (There is information on some utility bills that may help energy researchers who use these data.)  ◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]  ◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here  1 Yes, bill available 2 No, will not be able to provide bill		
<b>NEXT</b>	IF More suppliers left to answer for → Back to H21 [Fuel oil supplier name] for next supplier OTHERWISE → I1 [Section I Routing]	

## SECTION I. DISTRICT STEAM

<b>I1</b>	<b>Section I Routing</b>	
<b>NEXT</b>	IF District steam used → I2 [WS2 district steam filled out] OTHERWISE → J1 [Section J Routing]	

<b>I2</b>	<b>WS2 district steam filled out</b>	<i>WS2STCE</i>
<b>ASK</b>	IF District steam used	
Do you have Worksheet 2 with you and filled out for district steam?		
<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF No OR DK/RF → I3 [Provide district steam figures] IF Yes → I4 [Units for district steam]	

<b>I3</b>	<b>Provide district steam figures</b>	<i>STFIGS</i>
<b>ASK</b>	IF I2 [WS2 district steam filled out] = No OR DK/RF	
The next questions are about district steam usage in this building during calendar year 2012. Would you be able to give me an approximate figure of how much district steam was used or how much was spent on it?		
<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → I4 [Units for district steam] IF No OR DK/RF: IF D15 [From central plant] = No OR D16 [Purchase from offsite] = Yes → I15 [District steam supplier name] OTHERWISE → J1 [Section J Routing]	

<b>I4</b>	<b>Units for district steam</b>	<i>STUNIT</i>
<b>ASK</b>	IF I2 [WS2 district steam filled out] = Yes OR I3 [Provide district steam figures] = Yes	
<input type="checkbox"/> SHOW CARD I1 Please look at Show Card I1 and tell me the units in which your district steam is measured.		
<ol style="list-style-type: none"> <li>1 Thousand pounds</li> <li>2 Pounds</li> <li>3 Million Btu</li> <li>4 IF VOLUNTEERED: Some other units</li> </ol>		
<b>NEXT</b>	IF Some other units → I5 [Other district steam units] OTHERWISE → I6 [District steam consumption]	

<b>I5</b>	<b>Other district steam units</b>	<i>STUNITX</i>
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<b>ASK</b>	IF I4 [Units for district steam] = Some other units
What are the other units?	
<b>NEXT</b>	⇒ I6 [District steam consumption]

<b>I6</b>	<b>District steam consumption</b>	<i>STCNS</i>
<b>ASK</b>	IF I2 [WS2 district steam filled out] = Yes OR I3 [Provide district steam figures] = Yes	
Please give me the total amount of district steam used in calendar year 2012.		[F1]-HELP
<ul style="list-style-type: none"> <li>◆ EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.]</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>		
<b>RANGE</b>	1 to 99,999,999,999,999	
<b>NEXT</b>	⇒ I7 [District steam expenditures]	

<b>I7</b>	<b>District steam expenditures</b>	<i>STEXP</i>
<b>ASK</b>	IF I2 [WS2 district steam filled out] = Yes OR I3 [Provide district steam figures] = Yes	
Please give me the total dollars spent on district steam in calendar year 2012, including state and local taxes.		[F1]-HELP
<ul style="list-style-type: none"> <li>◆ Do <u>not</u> enter cents</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>		
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	IF I6 [District steam consumption] = DK/RF & I7 [District steam expenditures] = DK/RF: IF D15 [From central plant] = No OR D16 [Purchase from offsite] = Yes → I15 [District steam supplier name] OTHERWISE → J1 [Section J Routing] OTHERWISE → I8 [Starting date for district steam figures]	

<b>I8</b>	<b>Starting date for district steam figures</b>	<i>STSTDAT</i>
<b>ASK</b>	IF I6 [District steam consumption] given OR I7 [District steam expenditures] given	
		[F1]-HELP
	<p>What is the starting date for these district steam usage figures?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	⇒ I9 [Ending date for district steam figures]	

<b>I9</b>	<b>Ending date for district steam figures</b>	<i>STENDAT</i>
<b>ASK</b>	IF I6 [District steam consumption] given OR I7 [District steam expenditures] given	
		[F1]-HELP
	<p>What is the ending date [for these district steam usage figures]?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li><input type="checkbox"/> ◆ VERIFY that this is the <u>last</u> day of the last billing period</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	IF C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One → I10 [All occupants steam included] OTHERWISE → I12 [Other bldgs steam included]	

<b>I10</b>	<b>All occupants steam included</b>	<i>STALL</i>
<b>ASK</b>	IF I6 [District steam consumption] given OR I7 [District steam expenditures] given & C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One	
	<p>Do these figures include the district steam from all of the businesses or organizations in this building?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF No → I11 [Sq ft not included] OTHERWISE → I12 [Other bldgs steam included]	

<b>I11</b>	<b>Sq ft not included</b>	<i>STNISF</i>
<b>ASK</b>	IF I10 [All occupants steam included] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ I12 [Other bldgs steam included]	

<b>I12</b>	<b>Other bldgs steam included</b>	<i>STOTBD</i>
<b>ASK</b>	IF I6 [District steam consumption] given OR I7 [District steam expenditures] given	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → I13 [Sq ft of other included] IF No OR DK/RF → I14 [District steam bill available]	

<b>I13</b>	<b>Sq ft of other included</b>	<i>STOTSF</i>
<b>ASK</b>	IF I12 [Other bldgs steam included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	⇒ I14 [District steam bill available]	

<b>I14</b>	<b>District steam bill available</b>	<i>STBILL</i>
<b>ASK</b>	IF I6 [District steam consumption] given OR I7 [District steam expenditures] given	
<p>Would it be possible for me to scan one of your district steam bills? (There is information on some utility bills that may help energy researchers who use these data.)</p> <ul style="list-style-type: none"> <li>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</li> <li>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</li> </ul> <ol style="list-style-type: none"> <li>1 Yes, bill available</li> <li>2 No, will not be able to provide bill</li> </ol>		
<b>NEXT</b>	→ J1 [Section J Routing]	

<b>I15</b>	<b>District steam supplier name</b>	<i>STSUP</i>
<b>ASK</b>	IF D15 [From central plant] = No OR D15 [Purchase from offsite = Yes] & (I3 [Provide district steam figures] = No OR DK/RF OR I6 [District steam consumption] = DK/RF & I7 [District steam expenditures] = DK/RF)	
<p>We should be able to obtain this information directly from your district steam supplier, so I just need to collect some information about your district steam accounts.</p> <p>What is the name of the supplier that provided district steam in calendar year 2012?</p> <ul style="list-style-type: none"> <li>◆ ENTER the name of the supplier</li> </ul>		
<b>NEXT</b>	IF Name given → I16 [Street address] IF DK/RF → J1 [Section J Routing]	

<b>I16</b>	<b>Street address</b>	<i>STAD1</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<b>FILL</b>	{Supplier} = I15 [District steam supplier name]	
<p>What is the address for {Supplier}, beginning with the street?</p>		
<b>NEXT</b>	⇒ I17 [P.O. Box or Suite]	

<b>I17</b>	<b>P.O. Box or Suite</b>	<i>STAD2</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<p>Is there a post office box or suite number?</p> <p>◆ If not, press [ENTER]</p>		
<b>NEXT</b>	⇒ I18 [City]	

<b>I18</b>	<b>City</b>	<i>STCTY</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<p>What is the city?</p>		
<b>NEXT</b>	⇒ I19 [State abbreviation]	

<b>I19</b>	<b>State abbreviation</b>	<i>STSTA</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>		
<b>NEXT</b>	⇒ I20 [ZIP code]	

<b>I20</b>	<b>ZIP code</b>	<i>STZIP</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<p>And what is the ZIP code?</p>		
<b>NEXT</b>	⇒ I21 [Number district steam accounts]	

<b>I21</b>	<b>Number district steam accounts</b>	<i>STNAC</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<b>FILL</b>	<b>{Supplier}</b> = I15 [District steam supplier name]	
How many different district steam accounts does this building have with {Supplier}?		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → I22 [District steam account number] IF More than 10 accounts OR DK/RF → I25 [District steam bill available]	

<b>I22</b>	<b>District steam account number</b>	<i>STAC1—STAC10</i>
<b>ASK</b>	IF I21 [Number district steam accounts] = 1 to 10 Ask as many times as account numbers given, or until DK/RF	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one account = BLANK IF First account given = “first” OTHERWISE = “next” <b>{Supplier}</b> = I15 [District steam supplier name]	
Please give me the {FirstNext} district steam account number for {Supplier}.		
◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	→ I23 [Bills cover only building]	

<b>I23</b>	<b>Bills cover only building</b>	<i>STOTB</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = “Does the bill or statement” IF 2 to 10 accounts = “Do the bills or statements” <b>{Supplier}</b> = I15 [District steam supplier name]	
{Bills} from {Supplier} cover just this building or are other buildings covered as well?		
<ol style="list-style-type: none"> <li>1 Just this building</li> <li>2 Other building(s)</li> </ol>		
<b>NEXT</b>	IF Other buildings → I24 [Sq ft of others included] IF Just this building OR DK/RF ⇨ I25 [District steam bill available]	

<b>I24</b>	<b>Sq ft of others included</b>	<i>STOTS</i>
<b>ASK</b>	IF I23 [Bills cover only building] = Other buildings	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = "bill or statement" IF 2 to 10 accounts = "bills or statements"	
<p>What is the approximate square footage of the <u>other</u> buildings included on the {Bills}?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	⇒ I25 [District steam bill available]	

<b>I25</b>	<b>District steam bill available</b>	<i>STBILL2</i>
<b>ASK</b>	IF Name given in I15 [District steam supplier name]	
<p>Would it be possible for me to scan one district steam bill from {Supplier}? (There is information on some utility bills that may help energy researchers who use these data.)</p> <p>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</p> <p>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</p> <p>1 Yes, bill available  2 No, will not be able to provide bill</p>		
<b>NEXT</b>	→ J1 [Section J Routing]	

## SECTION J. DISTRICT HOT WATER AND CHILLED WATER

<b>J1</b>	<b>Section J Routing</b>
<b>NEXT</b>	<p>IF District hot water used → J2 [WS2 district hot water filled out]            IF District chilled water used &amp; B51 [Plant produces district chilled water] = Yes                → J24 [District chilled water from plant]            IF District chilled water used &amp; B51 [Plant produces district chilled water] ≠ Yes                → J26 [District chilled water from utility]            OTHERWISE → K1 [Section K Routing]</p>

<b>J2</b>	<b>WS2 district hot water filled out</b>	<i>WS2HWCE</i>
<b>ASK</b>	IF District hot water used	
<p>Do you have Worksheet 2 with you and filled out for district hot water?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF No OR DK/RF → J3 [Provide district hot water figures]            IF Yes → J4 [District hot water consumption]</p>	

<b>J3</b>	<b>Provide district hot water figures</b>	<i>HWFIGS</i>
<b>ASK</b>	IF J2 [WS2 district hot water filled out] = No OR DK/RF	
<p>The next questions are about district hot water usage in this building during calendar year 2012. Would you be able to give me an approximate figure of how much district hot water was used or how much was spent on it?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → J4 [District hot water consumption]            IF No OR DK/RF:                IF D15 [From central plant] = No OR D16 [Purchase from offsite] = Yes                    → J13 [District hot water supplier name]                IF District chilled water used &amp; B51 [Plant produces district chilled water] = Yes                    → J24 [District chilled water from plant]                IF District chilled water used &amp; B51 [Plant produces district chilled water] ≠ Yes                    → J26 [District chilled water from utility]            OTHERWISE → K1 [Section K Routing]</p>	



<b>J4</b>	<b>District hot water consumption</b>	<i>HWCNS</i>
<b>ASK</b>	IF J2 [WS2 district hot water filled out] = Yes OR J3 [Provide district hot water figures] = Yes	
		[F1]-HELP
	Please give me the total amount, in million Btu, of district hot water used in calendar year 2012.	
	<ul style="list-style-type: none"> <li>◆ EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.]</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	⇒ J5 [District hot water expenditures]	

<b>J5</b>	<b>District hot water expenditures</b>	<i>HWEXP</i>
<b>ASK</b>	IF J2 [WS2 district hot water filled out] = Yes OR J3 [Provide district hot water figures] = Yes	
		[F1]-HELP
	Please give me the total dollars spent on district hot water in calendar year 2012, including state and local taxes.	
	<ul style="list-style-type: none"> <li>◆ Do <u>not</u> enter cents</li> <li>◆ VERIFY number <u>digit by digit</u></li> </ul>	
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	IF J4 [District hot water consumption] = DK/RF & J5 [District hot water expenditures] = DK/RF: IF D15 [From central plant] = No OR D16 [Purchase from offsite] = Yes → J13 [District hot water supplier name] IF District chilled water used & B51 [Plant produces district chilled water] = Yes → J24 [District chilled water from plant] IF District chilled water used & B51 [Plant produces district chilled water] ≠ Yes → J26 [District chilled water from utility] OTHERWISE → K1 [Section K Routing] OTHERWISE → J6 [Starting date for district hot water figures]	

<b>J6</b>	<b>Starting date for district hot water figures</b>	<i>HWSTDAT</i>
<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given	
		[F1]-HELP
	What is the starting date for these district hot water usage figures?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	⇒ J7 [Ending date for district hot water figures]	

<b>J7</b>	<b>Ending date for district hot water figures</b>	<i>HWENDAT</i>
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<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given
	[F1]-HELP
	<p>What is the ending date [for these district hot water usage figures]?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>□ <ul style="list-style-type: none"> <li>◆ VERIFY that this is the <u>last</u> day of the last billing period</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul> </li> </ul>
<b>NEXT</b>	IF C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One → J8 [All occupants hot water included] OTHERWISE → J10 [Other bldgs hot water included]

<b>J8</b>	<b>All occupants hot water included</b>	<i>HWALL</i>
<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given & C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One	
	<p>Do these figures include the district hot water for all of the businesses or organizations in this building?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF No → J9 [Sq ft not included] OTHERWISE → J10 [Other bldgs hot water included]	

<b>J9</b>	<b>Sq ft not included</b>	<i>HWNISF</i>
<b>ASK</b>	IF J8 [All occupants hot water included] = No	
	<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <ul style="list-style-type: none"> <li>◆ PROBE for estimate if DK</li> </ul>	
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ J10 [Other bldgs hot water included]	

<b>J10</b>	<b>Other bldgs hot water included</b>	<i>HWOTBD</i>
<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → J11 [Sq ft of other included] IF No OR DK/RF → J12 [District hot water bill available]	

<b>J11</b>	<b>Sq ft of other included</b>	<i>HWOTSF</i>
<b>ASK</b>	IF J10 [Other bldgs hot water included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	⇒ J12 [District hot water bill available]	

<b>J12</b>	<b>District hot water bill available</b>	<i>HWBILL</i>
<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given	
<p>Would it be possible for me to scan one of your district hot water bills? (There is information on some utility bills that may help energy researchers who use these data.)</p> <p>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</p> <p>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</p> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	IF District chilled water used & B51 [Plant produces district chilled water] = Yes → J24 [District chilled water from plant] IF District chilled water used & B51 [Plant produces district chilled water] ≠ Yes → J26 [District chilled water from utility] OTHERWISE → K1 [Section K Routing]	

<b>J13</b>	<b>District hot water supplier name</b>	<i>HWSUP</i>
<b>ASK</b>	IF D15 [From central plant] = No OR D15 [Purchase from offsite = Yes] & (J3 [Provide district hot water figures] = No OR DK/RF OR J4 [District hot water consumption] = DK/RF & J5 [District hot water expenditures] = DK/RF)	
<p>We should be able to obtain this information directly from your district hot water supplier, so I just need to collect some information about your district hot water accounts.</p> <p>What is the name of the supplier that provided district hot water in calendar year 2012?</p> <p>◆ ENTER the name of the supplier</p>		
<b>NEXT</b>	IF Name given → J14 [Street address] IF DK/RF: IF District chilled water used & B51 [Plant produces district chilled water] = Yes → J24 [District chilled water from plant] IF District chilled water used & B51 [Plant produces district chilled water] ≠ Yes → J26 [District chilled water from utility] OTHERWISE → K1 [Section K Routing]	

<b>J14</b>	<b>Street address</b>	<i>HWAD1</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<b>FILL</b>	<b>{Supplier}</b> = J13 [District hot water supplier name]	
<p>What is the address for {Supplier}, beginning with the street?</p>		
<b>NEXT</b>	→ J15 [P.O. Box or Suite]	

<b>J15</b>	<b>P.O. Box or Suite</b>	<i>HWAD2</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<p>Is there a post office box or suite number?</p> <p>◆ If not, press [ENTER]</p>		
<b>NEXT</b>	→ J16 [City]	

<b>J16</b>	<b>City</b>	<i>HWCTY</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<p>What is the city?</p>		
<b>NEXT</b>	→ J17 [State abbreviation]	

<b>J17</b>	<b>State abbreviation</b>	<i>HWSTA</i>
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<b>ASK</b>	IF Name given in J13 [District hot water supplier name]
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>	
<b>NEXT</b>	→ J18 [ZIP code]

<b>J18</b>	<b>ZIP code</b>	<i>HWZIP</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<p>And what is the ZIP code?</p>		
<b>NEXT</b>	→ J19 [Number district hot water accounts]	

<b>J19</b>	<b>Number district hot water accounts</b>	<i>HWNAC</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<b>FILL</b>	<b>{Supplier}</b> = J13 [District hot water supplier name]	
<p>How many different district hot water accounts does this building have with {Supplier}?</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → J20 [District hot water account number] IF More than 10 accounts OR DK/RF → J23 [District hot water bill available]	

<b>J20</b>	<b>District hot water account number</b>	<i>HWAC1—HWAC10</i>
<b>ASK</b>	IF J19 [Number district hot water accounts] = 1 to 10 Ask as many times as account numbers given, or until DK/RF	
<b>FILL</b>	<b>{FirstNext}</b> IF Only one account = BLANK IF First account given = "first" OTHERWISE = "next" <b>{Supplier}</b> = J13 [District hot water supplier name]	
<p>Please give me the {FirstNext} district hot water account number for {Supplier}.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>NEXT</b>	→ J21 [Bills cover only building]	

<b>J21</b>	<b>Bills cover only building</b>	<i>HWOTB</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = "Does the bill or statement" IF 2 to 10 accounts = "Do the bills or statements" <b>{Supplier}</b> = J13 [District hot water supplier name]	
	{Bills} from {Supplier} cover just this building or are other buildings covered as well?  1 Just this building 2 Other building(s)	
<b>NEXT</b>	IF Other buildings → J22 [Sq ft of others included] IF Just this building OR DK/RF → J23 [District hot water bill available]	

<b>J22</b>	<b>Sq ft of others included</b>	<i>HWOTS</i>
<b>ASK</b>	IF J21 [Bills cover only building] = Other buildings	
<b>FILL</b>	<b>{Bills}</b> IF Only one account = "bill or statement" IF 2 to 10 accounts = "bills or statements"	
	What is the approximate square footage of the <u>other</u> buildings included on the {Bills}?  ◆ PROBE for estimate if DK	
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ J23 [District hot water bill available]	

<b>J23</b>	<b>District hot water bill available</b>	<i>HWBILL2</i>
<b>ASK</b>	IF Name given in J13 [District hot water supplier name]	
	Would it be possible for me to scan one district hot water bill from {Supplier}? (There is information on some utility bills that may help energy researchers who use these data.)  ◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]  ◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here  1 Yes, bill available 2 No, will not be able to provide bill	
<b>NEXT</b>	IF District chilled water used & B51 [Plant produces district chilled water] = Yes → J24 [District chilled water from plant] IF District chilled water used & B51 [Plant produces district chilled water] ≠ Yes → J26 [District chilled water from utility] OTHERWISE → K1 [Section K Routing]	

<b>J24</b>	<b>District chilled water from plant</b>	<i>CWPLANT</i>
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<b>ASK</b>	IF District chilled water used & B51 [Plant produces district chilled water] = Yes
<p>The next questions are about district chilled water. I will <u>not</u> be asking you for any usage figures, just a couple basic questions.</p> <p>Earlier I recorded that there is a central plant on this campus or complex that produces chilled water. Is the district chilled water used in this building provided by the central plant?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → J25 [District chilled water metered] OTHERWISE → J26 [District chilled water from utility]

<b>J25</b>	<b>District chilled water metered</b>	<i>CWMETER</i>
<b>ASK</b>	IF J24 [District chilled water from plant] = Yes	
<p>Is the district chilled water metered so that you would be able to report the amount used only in <u>this building</u>?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → J27 [District chilled water bill available] OTHERWISE → K1 [Section K Routing]	

<b>J26</b>	<b>District chilled water from utility</b>	<i>CWUTIL</i>
<b>ASK</b>	IF District chilled water used & B51 [Plant produces district chilled water] ≠ Yes OR J24 [District chilled water from plant] ≠ Yes	
<b>FILL</b>	{CWIntro} IF B51 [Plant produces district chilled water] ≠ Yes = "The next questions are about district chilled water. I will <u>not</u> be asking you for any usage figures, just a couple basic questions." OTHERWISE = BLANK	
<p>{CWIntro}</p> <p>Is the district chilled water used in this building provided by a district chilled water utility?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → J27 [District chilled water bill available] IF No → J28 [District chilled water from where] OTHERWISE → K1 [Section K Routing]	

<b>J27</b>	<b>District chilled water bill available</b>	<i>CWBILL</i>
<b>ASK</b>	IF J25 [District chilled water metered] = Yes OR J26 [District chilled water from utility] = Yes	
<p>Would it be possible for me to scan one of your district chilled water bills or statements? (The information will be used to help plan for the next CBECS.)</p> <p>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</p> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	→ K1 [Section K Routing]	

<b>J28</b>	<b>District chilled water from where</b>
<b>ASK</b>	IF J4 [District hot water consumption] given OR J5 [District hot water expenditures] given
<p>Where does this building get its district chilled water from?</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ K1 [Section K Routing]





## SECTION K. TOTAL WATER

<b>K1</b>	<b>Water used</b>
<b>ASK</b>	All Buildings
<p>The next questions are about water supplied to the building for everyday use, such as for restrooms, kitchens, laundries, showers, building heating and cooling, and landscape irrigation.</p> <p>Did this building use any water in 2012?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	IF Yes → K2 [Provide water figures] IF No OR DK/RF → SECTION L

<b>K2</b>	<b>Provide water figures</b>
<b>ASK</b>	IF K1 [Water used] = Yes
<p>Would you be able to give me the amount of water used in calendar year 2012? (These questions are found on the third page of Worksheet 2.)</p> <p>◆ EXP: [If water is supplied from multiple sources, provide the total from all sources, including municipally supplied potable, municipally supplied reclaimed, and other sources of freshwater, including wells.]</p> <p>1 Yes 2 No 3 IF VOLUNTEERED: No, because the water comes from a well</p>	
<b>NEXT</b>	IF Yes → K3 [Units for water] OTHERWISE IF K1a [Total water use] = Yes & 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 → K7 [Sewer flow metered] OTHERWISE → K20 [Heard of WaterSense]

<b>K3</b>	<b>Units for water</b>
<b>ASK</b>	IF K2 [Provide water figures] = Yes
<p>☐ SHOW CARD K1</p> <p>Please look at Show Card K1 and tell me the units in which your water is measured.</p> <ol style="list-style-type: none"> <li>1 Gallons</li> <li>2 Thousand gallons</li> <li>3 Million Gallons</li> <li>4 Cubic feet (cf)</li> <li>5 Hundred cubic feet (ccf, HCF)</li> <li>6 Thousand cubic feet (Mcf)</li> <li>7 IF VOLUNTEERED: Some other units</li> </ol>	
<b>NEXT</b>	IF Some other units → K4 [Other water units] OTHERWISE → K5 [Total water consumption]

<b>K4</b>	<b>Other water units</b>
<b>ASK</b>	IF K3 [Units for water] = Some other units
<p>What are the other units?</p>	
<b>NEXT</b>	⇒ K5 [Total water consumption]

<b>K5</b>	<b>Total water consumption</b>	<i>WTRCNS</i>
<b>ASK</b>	IF K2 [Provide water figures] = Yes	
<p>Please give me the total volume of water used in 2012.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		[F1]-HELP
<b>RANGE</b>	1 to 99,999,999,999,999	
<b>NEXT</b>	IF Amount given ⇒ K6 [How water volume determined] OTHERWISE → K19 [Water bill available]	

<b>K6</b>	<b>How water volume determined</b>	<i>WTRMET</i>
<b>ASK</b>	IF Amount given in K5 [Total water consumption]	
<p>How is the annual water volume determined? Is it metered, estimated, both metered and estimated, or measured in some other way?</p> <p>1 Metered 2 Estimated 3 Both metered and estimated 4 Other</p>		
<b>NEXT</b>	→ K7 [Sewer flow metered]	

<b>K7</b>	<b>Sewer flow metered</b>	<i>SWRMET</i>
<b>ASK</b>	IF Amount given in K5 [Total water consumption]	
<p>Is the sewer flow metered for this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	⇒ K8 [Water used outside]	

<b>K8</b>	<b>Water used outside</b>	<i>WTOUT</i>
<b>ASK</b>	IF Amount given in K5 [Total water consumption]	
<p>Was any of this water used outside the building for a landscape irrigation system?</p> <ul style="list-style-type: none"> <li>◆ EXP: [Do not include water used <u>inside</u> other buildings.]</li> <li>◆ DEF: [Irrigation systems are used to water outdoor landscape plantings. They consist of a circuit of equipment controlled by a central valve that can include: pipes, sprinkler heads, rotors and drip or bubble emitters. The central valve can be operated either manually or by an automatic controller.]</li> </ul> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K9 [Outside water metered] IF No OR DK/RF: IF D73 [Cooling tower] = Yes → K11 [Cooling tower water metered] OTHERWISE → K13 [Starting date for water figures]	

<b>K9</b>	<b>Outside water metered</b>	<i>WTOUTMET</i>
<b>ASK</b>	IF Amount given in K5 [Total water consumption]	
<p>Is the water used outside metered separately?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K10 [Outside water consumption] IF No OR DK/RF: IF D73 [Cooling tower] = Yes → K11 [Cooling tower water metered] OTHERWISE → K13 [Starting date for water figures]	

<b>K10</b>	<b>Outside water consumption</b>	<i>WTOUTCNS</i>
<b>ASK</b>	IF K9 [Outside water metered] = Yes	
<p>In the same units, how much of this water was used outside the building?</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	0 to 99,999,999,999,999	
<b>NEXT</b>	IF D73 [Cooling tower] = Yes → K11 [Cooling tower water metered] OTHERWISE → K13 [Starting date for water figures]	

<b>K11</b>	<b>Cooling tower water metered</b>	<i>WTCTMET</i>
<b>ASK</b>	IF Amount given in K5 [Total water consumption] & D73 [Cooling tower] = Yes	
<p>Is the water used for the cooling tower metered separately?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K12 [Cooling tower water consumption] OTHERWISE → K13 [Starting date for water figures]	

<b>K12</b>	<b>Cooling tower water consumption</b>	<i>WTCTCNS</i>
<b>ASK</b>	IF K11 [Cooling tower water metered] = Yes	
<p>In the same units, how much of this water was used for the cooling tower?</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	0 to 99,999,999,999,999	
<b>NEXT</b>	→ K13 [Starting date for water figures]	

<b>K13</b>	<b>Starting date for water figures</b>	<i>WTSTDAT</i>
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<b>ASK</b>	K5 [Total water consumption] given	
		[F1]-HELP
	What is the starting date for these water usage figures?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	⇒ K14 [Ending date for water figures]	

<b>K14</b>	<b>Ending date for water figures</b>	<i>WTENDAT</i>
<b>ASK</b>	K5 [Total water consumption] given	
		[F1]-HELP
	What is the ending date [for these water usage figures]?	
	<ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</li> <li>□</li> <li>◆ VERIFY that this is the <u>last</u> day of the last billing period</li> <li>◆ If the day is not known, ENTER "15" for DD</li> </ul>	
<b>NEXT</b>	IF C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One → K15 [All occupants water included] OTHERWISE → K17 [Other bldgs water included]	

<b>K15</b>	<b>All occupants water included</b>	<i>WTALLOCC</i>
<b>ASK</b>	IF K5 [Total water consumption] given & C5 [Number of businesses] >1 OR C7 [Re-ask number of businesses] > 1 OR C8 [Number of businesses category] ≠ Zero OR One	
	Do these figures include the water for all of the businesses or organizations in this building?	
	<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>	
<b>NEXT</b>	IF No → K16 [Sq ft not included] OTHERWISE → K17 [Other bldgs water included]	

<b>K16</b>	<b>Sq ft not included</b>	<i>WTEXCLSF</i>
<b>ASK</b>	IF K15 [All occupants water included] = No	
<p>What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ K17 [Other bldgs water included]	

<b>K17</b>	<b>Other bldgs water included</b>	<i>WTOTBD</i>
<b>ASK</b>	IF K5 [Total water consumption] given	
<p>Is any water use for other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K18 [Sq ft of other included] IF No OR DK/RF → K19 [Water bill available]	

<b>K18</b>	<b>Sq ft of other included</b>	<i>WTOTSF</i>
<b>ASK</b>	IF K17 [Other bldgs water included] = Yes	
<p>What is the approximate square footage of the <u>other</u> buildings that are included in these figures?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	⇒ K19 [Water bill available]	

<b>K19</b>	<b>Water bill available</b>	<i>WTBILL</i>
<b>ASK</b>	IF K2 [Provide water figures] = Yes	
<p>Would it be possible for me to scan one of your water bills? (There is information on some utility bills that may help energy researchers who use these data.)</p> <ul style="list-style-type: none"> <li>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</li> <li>◆ If available, you will be prompted to scan the bill at the end of the interview, so it is not necessary to stop the interview here</li> </ul> <ol style="list-style-type: none"> <li>1 Yes, bill available</li> <li>2 No, will not be able to provide bill</li> </ol>		
<b>NEXT</b>	→ K20 [Heard of WaterSense]	

<b>K20</b>	<b>Heard of WaterSense</b>	<i>WTRSENS</i>
<b>ASK</b>	All Buildings	
<p>Have you heard of the U.S. Environmental Protection Agency WaterSense program?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	→ SECTION L	





## SECTION L. COLLECT MATERIALS

<b>L1</b>	<b>Collect materials</b>
<b>ASK</b>	<p>IF WS2 was reported to be filled out for any of the energy sources  OR  F28 [Monthly electricity available] = Yes OR G29 [Monthly natural gas available] = Yes  OR  F29 [Electricity bill available]=Yes OR F45 [Electricity bill available]=Yes  OR G30 [Natural gas bill available]=Yes OR G46 [Natural gas bill available]=Yes  OR H19 [Fuel oil bill available]=Yes OR H32 [Fuel oil bill available]=Yes  OR I14 [District steam bill available]=Yes OR I25 [District steam bill available]=Yes  OR J12 [District hot water bill available]=Yes OR J23 [District hot water bill available]=Yes  OR K19 [Water bill available] = Yes  OR  Supplier information was provided for any energy source</p>
<p>Now, I just need to collect some of the forms that you filled out ahead of time or that we talked about during this interview.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	➔ L2 [Collect Worksheet 2]

<b>L2</b>	<b>Collect Worksheet 2</b>
<b>ASK</b>	IF WS2 was reported to be filled out for any of the energy sources
<p>May I please have Worksheet 2? [This is the "Energy Amounts Used and Dollars Spent" worksheet that you filled out before this interview.]</p> <ol style="list-style-type: none"> <li>1 Collected WS 2</li> <li>2 Did not collect WS2</li> <li>3 Respondent will FAX, mail, or e-mail</li> </ol>	
<b>NEXT</b>	<p>IF F28 [Monthly electricity available] = Yes OR G29 [Monthly natural gas available] = Yes  ➔ L3 [Collect monthly records]</p> <p>IF F29 [Electricity bill available]=Yes OR F45 [Electricity bill available]=Yes  OR G30 [Natural gas bill available]=Yes OR G46 [Natural gas bill available]=Yes  OR H19 [Fuel oil bill available]=Yes OR H32 [Fuel oil bill available]=Yes  OR I14 [District steam bill available]=Yes OR I25 [District steam bill available]=Yes  OR J12 [District hot water bill available]=Yes OR J23 [District hot water bill available]=Yes  OR K19 [Water bill available] = Yes ➔ L4 [Scan energy bills]</p> <p>IF Supplier information was provided for any energy source ➔ L5 [Who signs authorization]</p>

<b>L3</b>	<b>Collect monthly records</b>
<b>ASK</b>	IF F28 [Monthly electricity available] = Yes OR G29 [Monthly natural gas available] = Yes
<b>FILL</b>	<p><b>{ElectricityNaturalGas}</b></p> <p>IF28 [Monthly electricity available] = Yes &amp; G29 [Monthly natural gas available] ≠ Yes = “electricity”</p> <p>IF28 [Monthly electricity available] ≠ Yes &amp; G29 [Monthly natural gas available] = Yes = “natural gas”</p> <p>IF28 [Monthly electricity available] =Yes &amp; G29 [Monthly natural gas available] = Yes = “electricity and natural gas”</p>
<p>May I please have the monthly {ElectricityNaturalGas} records that we talked about a few minutes ago?</p> <ol style="list-style-type: none"> <li>1 Collected monthly records</li> <li>2 Did not collect monthly records</li> <li>3 Respondent will FAX, mail, or e-mail</li> </ol>	
<b>NEXT</b>	<p>IF F29 [Electricity bill available]=Yes OR F45 [Electricity bill available]=Yes OR G30 [Natural gas bill available]=Yes OR G46 [Natural gas bill available]=Yes OR H19 [Fuel oil bill available]=Yes OR H32 [Fuel oil bill available]=Yes OR I14 [District steam bill available]=Yes OR I25 [District steam bill available]=Yes OR J12 [District hot water bill available]=Yes OR J23 [District hot water bill available]=Yes OR K19 [Water bill available] = Yes → L4 [Scan energy bills]</p> <p>IF Supplier information was provided for any energy source → L5 [Who signs authorization]</p>

<b>L4</b>	<b>Scan energy bills</b>
<b>ASK</b>	<p>IF F29 [Electricity bill available]=Yes OR F45 [Electricity bill available]=Yes OR G30 [Natural gas bill available]=Yes OR G46 [Natural gas bill available]=Yes OR H19 [Fuel oil bill available]=Yes OR H32 [Fuel oil bill available]=Yes OR I14 [District steam bill available]=Yes OR I25 [District steam bill available]=Yes OR J12 [District hot water bill available]=Yes OR J23 [District hot water bill available]=Yes OR K19 [Water bill available] = Yes</p>
<p>May I please scan the energy and/or water bill(s) that we talked about a few minutes ago?</p> <ol style="list-style-type: none"> <li>1 Scanned bill(s)</li> <li>2 Did not scan bill(s)</li> <li>3 Respondent will FAX, mail, or e-mail</li> </ol>	
<b>NEXT</b>	<p>IF Supplier information was provided for any energy source → L5 [Who signs authorization] OTHERWISE → L14 [Response effort]</p>

<b>L5</b>	<b>Who signs authorization</b>
<b>ASK</b>	IF Supplier information was provided for any energy source
<p>As I mentioned earlier, we may need to contact your energy supplier to obtain the energy consumption. In order for the energy companies to release this information to us, we need to have an authorization form signed by you, or by some other representative of your company.</p> <p>Should the authorization form be signed by you or someone else?</p> <ol style="list-style-type: none"> <li>1 Signed by respondent</li> <li>2 Signed by someone else</li> <li>3 IF VOLUNTEERED: Respondent refuses to sign or have anyone else sign</li> </ol>	
<b>NEXT</b>	IF Signed by respondent OR Signed by someone else OR DK/RF → L6 [Prepare authorization form] IF Respondent refuses to sign or have anyone else sign → L14 [Response effort]

<b>L6</b>	<b>Prepare authorization form</b>
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign
<p>Please give me a moment to fill in the energy supplier names on this form.</p> <ul style="list-style-type: none"> <li>◆ Begin preparing the Authorization Form by recording the information shown below in the box near the top of the form</li> <li>◆ VERIFY with respondent as you record</li> </ul> <p>Establishment address: {Address}  City: {City}  State: {State} ZIP code: {ZIP}  Case ID: {CaseID}</p> <ul style="list-style-type: none"> <li>◆ ENTER "1" when finished</li> </ul>	
<b>NEXT</b>	IF Electricity supplier information was provided → L7 [Electricity suppliers] IF Natural gas supplier information was provided → L8 [Natural gas suppliers] IF Fuel oil supplier information was provided → L9 [Fuel oil suppliers] IF District steam supplier information was provided → L10 [District steam suppliers] IF District hot water supplier information was provided → L11 [District hot water suppliers] OTHERWISE → L12 [Authorization form signed]

<b>L7</b>	<b>Electricity suppliers</b>										
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign & Electricity supplier information was provided										
<b>FILL</b>	{Electricity} = "Electricity" for each supplier name that has been provided {SupplierName} = Supplier names given in F31 [Electricity suppliers] OR F33 [Supplier name]										
	<p>◆ Continue preparing the Authorization Form by filling in "Electricity" on the line(s) for "Energy Source" and copying the supplier name(s) shown below in the adjacent box(es)</p> <table border="0"> <thead> <tr> <th><u>Energy Source</u></th> <th><u>Supplier</u></th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td>{SupplierName}</td> </tr> <tr> <td>{Electricity}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Electricity}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Electricity}</td> <td>{SupplierName}</td> </tr> </tbody> </table> <p>◆ ENTER "1" when finished</p>	<u>Energy Source</u>	<u>Supplier</u>	Electricity	{SupplierName}	{Electricity}	{SupplierName}	{Electricity}	{SupplierName}	{Electricity}	{SupplierName}
<u>Energy Source</u>	<u>Supplier</u>										
Electricity	{SupplierName}										
{Electricity}	{SupplierName}										
{Electricity}	{SupplierName}										
{Electricity}	{SupplierName}										
<b>NEXT</b>	IF Natural gas supplier information was provided → L8 [Natural gas suppliers] IF Fuel oil supplier information was provided → L9 [Fuel oil suppliers] IF District steam supplier information was provided → L10 [District steam suppliers] IF District hot water supplier information was provided → L11 [District hot water suppliers] OTHERWISE → L12 [Authorization form signed]										

<b>L8</b>	<b>Natural gas suppliers</b>										
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign & Natural gas supplier information was provided										
<b>FILL</b>	{Natural gas} = "Natural gas" for each supplier name that has been provided {SupplierName} = Supplier names given in G32 [Natural gas suppliers] OR G34 [Supplier name]										
	<p>◆ Continue preparing the Authorization Form by filling in "Natural gas" on the line(s) for "Energy Source" and copying the supplier name(s) shown below in the adjacent box(es)</p> <table border="0"> <thead> <tr> <th><u>Energy Source</u></th> <th><u>Supplier</u></th> </tr> </thead> <tbody> <tr> <td>Natural gas</td> <td>{SupplierName}</td> </tr> <tr> <td>{Natural gas}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Natural gas}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Natural gas}</td> <td>{SupplierName}</td> </tr> </tbody> </table> <p>◆ ENTER "1" when finished</p>	<u>Energy Source</u>	<u>Supplier</u>	Natural gas	{SupplierName}	{Natural gas}	{SupplierName}	{Natural gas}	{SupplierName}	{Natural gas}	{SupplierName}
<u>Energy Source</u>	<u>Supplier</u>										
Natural gas	{SupplierName}										
{Natural gas}	{SupplierName}										
{Natural gas}	{SupplierName}										
{Natural gas}	{SupplierName}										
<b>NEXT</b>	IF Fuel oil supplier information was provided → L9 [Fuel oil suppliers] IF District steam supplier information was provided → L10 [District steam suppliers] IF District hot water supplier information was provided → L11 [District hot water suppliers] OTHERWISE → L12 [Authorization form signed]										

<b>L9</b>	<b>Fuel oil suppliers</b>										
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign & Fuel oil supplier information was provided										
<b>FILL</b>	{Fuel oil/Diesel/Kerosene} = "Fuel oil/Diesel/Kerosene" for each supplier name that has been provided {SupplierName} = Supplier names given in H21 [Fuel oil supplier name]										
<p>◆ Continue preparing the Authorization Form by filling in "Fuel oil/Diesel/Kerosene" on the line(s) for "Energy Source" and copying the supplier name(s) shown below in the adjacent box(es)</p> <table border="0"> <thead> <tr> <th><u>Energy Source</u></th> <th><u>Supplier</u></th> </tr> </thead> <tbody> <tr> <td>Fuel oil/Diesel/Kerosene</td> <td>{SupplierName}</td> </tr> <tr> <td>{Fuel oil/Diesel/Kerosene}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Fuel oil/Diesel/Kerosene}</td> <td>{SupplierName}</td> </tr> <tr> <td>{Fuel oil/Diesel/Kerosene}</td> <td>{SupplierName}</td> </tr> </tbody> </table> <p>◆ ENTER "1" when finished</p>		<u>Energy Source</u>	<u>Supplier</u>	Fuel oil/Diesel/Kerosene	{SupplierName}	{Fuel oil/Diesel/Kerosene}	{SupplierName}	{Fuel oil/Diesel/Kerosene}	{SupplierName}	{Fuel oil/Diesel/Kerosene}	{SupplierName}
<u>Energy Source</u>	<u>Supplier</u>										
Fuel oil/Diesel/Kerosene	{SupplierName}										
{Fuel oil/Diesel/Kerosene}	{SupplierName}										
{Fuel oil/Diesel/Kerosene}	{SupplierName}										
{Fuel oil/Diesel/Kerosene}	{SupplierName}										
<b>NEXT</b>	IF District steam supplier information was provided → L10 [District steam suppliers] IF District hot water supplier information was provided → L11 [District hot water suppliers] OTHERWISE → L12 [Authorization form signed]										

<b>L10</b>	<b>District steam suppliers</b>				
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign & District steam supplier information was provided				
<b>FILL</b>	{SupplierName} = Supplier name given in I15 [District steam supplier name]				
<p>◆ Continue preparing the Authorization Form by filling in "District steam" on the line(s) for "Energy Source" and copying the supplier name(s) shown below in the adjacent box(es)</p> <table border="0"> <thead> <tr> <th><u>Energy Source</u></th> <th><u>Supplier</u></th> </tr> </thead> <tbody> <tr> <td>District steam</td> <td>{SupplierName}</td> </tr> </tbody> </table> <p>◆ ENTER "1" when finished</p>		<u>Energy Source</u>	<u>Supplier</u>	District steam	{SupplierName}
<u>Energy Source</u>	<u>Supplier</u>				
District steam	{SupplierName}				
<b>NEXT</b>	IF District hot water supplier information was provided → L11 [District hot water suppliers] OTHERWISE → L12 [Authorization form signed]				

<b>L11</b>	<b>District hot water suppliers</b>
<b>ASK</b>	IF L5 [Who signs authorization form] ≠ Respondent refuses to sign or have anyone else sign & District hot water supplier information was provided
<b>FILL</b>	{SupplierName} = Supplier name given in J13 [District hot water supplier name]
<p>◆ Continue preparing the Authorization Form by filling in "District hot water" on the line(s) for "Energy Source" and copying the supplier name(s) shown below in the adjacent box(es)</p> <p><u>Energy Source</u>                      <u>Supplier</u></p> <p>District hot water                      {SupplierName}</p> <p>◆ ENTER "1" when finished</p>	
<b>NEXT</b>	→ L12 [Authorization form signed]

<b>L12</b>	<b>Authorization form signed</b>
<b>ASK</b>	IF L5 [Who signs authorization form] = Signed by respondent & Supplier information was provided for any energy source
<p>◆ Give respondent the Authorization Form and have them record their information and signature in the middle portion of the form</p> <p>Please fill out the rest of this information and sign this form.</p> <ol style="list-style-type: none"> <li>1 Collected signed authorization form</li> <li>2 Did not collect signed authorization form</li> <li>3 Respondent will FAX, mail, or e-mail</li> </ol>	
<b>NEXT</b>	→ L14 [Response effort]



<b>L13</b>	<b>Contact for authorization</b>
<b>ASK</b>	IF L5 [Who signs authorization] = Signed by someone else & Supplier information was provided was provided for any energy source
<p>Please give me the name, address, and telephone number of the person who should sign the authorization form.</p> <ul style="list-style-type: none"> <li>◆ RECORD contact information on the Case Assignment Folder</li> <li>◆ ENTER "1" when completed</li> </ul>	
<b>NEXT</b>	→ L14 [Response effort]

<b>L14</b>	<b>Response effort</b>	<i>REFFORT</i>
<b>ASK</b>	All Buildings	
<p>Including yourself, please tell me how many people were needed to compile the information for this interview.</p>		
<b>RANGE</b>	1 to 99	
<b>NEXT</b>	→ L15 [Green building certification]	

<b>L15</b>	<b>Green building certification</b>	<i>GRNCRT</i>
<b>ASK</b>	All Buildings	
<p>In the past 3 years, has this building been certified as a "green building," such as Energy Star, LEED, or Green Globes?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → L16 [Type of green certification] OTHERWISE → L18 [Thank you]	

<b>L16</b>	<b>Type of green certification</b>	<i>see below</i>												
<b>ASK</b>	IF L15 [Green building certification] = Yes													
<p>Which type of certification did the building receive? Was it Energy Star, LEED, Green Globes, or did it receive some other green building recognition?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Energy Star</td> <td><i>ENGYSTR</i></td> </tr> <tr> <td>2</td> <td>LEED</td> <td><i>LEED</i></td> </tr> <tr> <td>3</td> <td>Green Globes</td> <td><i>GRNGLBS</i></td> </tr> <tr> <td>4</td> <td>Other</td> <td><i>OTCERT</i></td> </tr> </table>			1	Energy Star	<i>ENGYSTR</i>	2	LEED	<i>LEED</i>	3	Green Globes	<i>GRNGLBS</i>	4	Other	<i>OTCERT</i>
1	Energy Star	<i>ENGYSTR</i>												
2	LEED	<i>LEED</i>												
3	Green Globes	<i>GRNGLBS</i>												
4	Other	<i>OTCERT</i>												
<b>NEXT</b>	IF Other selected → L17 [Other certification] OTHERWISE → L18 [Thank you]													

<b>L17</b>	<b>Other certification</b>	<i>GRNCRTX</i>
<b>ASK</b>	IF Other IN L16 [Type of green certification]	
<p>What was the other type of recognition received by this building?</p> <p>◆ ENTER the type of certification</p>		
<b>NEXT</b>	→ L18 [Thank you]	

<b>L18</b>	<b>Thank you</b>
<b>ASK</b>	All Buildings
<p>That completes our interview. Thank you so much for your time and help.</p> <p>◆ ENTER "1", [ENTER], then [F10] to Exit</p>	
<b>NEXT</b>	INTERVIEW COMPLETE