

# 2018 Commercial Buildings Energy Consumption Survey (CBECS)

## Building Questionnaire – Form EIA-871A

VERSION 2: Last Updated April 25, 2018

OMB No.: XXXX-YYYY Expires: MM/DD/YYYY

### HOW TO USE THIS QUESTIONNAIRE

The 2018 Commercial Buildings Energy Consumption Survey (CBECS) is programmed using a software called Blaise. The purpose of this paper representation of the questionnaire is to document the question text, fills, and skip patterns within the 2018 CBECS questionnaire. All the question fills and skip patterns are handled automatically by the software and will be transparent to the interviewer and respondent.

Each question is formatted as follows:

<b>A1</b>	<b>Question name</b>	<b>SASVAR</b>
<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.

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 A6 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 (➔).

## RESPONDENT QUESTIONS

NOTE: Questions R1-R5 are asked each time a case is started and re-started (if more than one contact is necessary to complete the interview), except as specified in the ASK line.

<b>R1</b>	<b>Consent</b>	<i>R1CARI - RXCARI</i>
<b>ASK</b>	All Buildings	
<p>Some parts of this interview will be recorded for quality control purposes. I'd like to continue now unless you have any questions.</p> <p>1 Gives consent to record interview 2 Does <u>not</u> give consent to record interview</p>		
<b>NEXT</b>	IF First time case started → R2 [Respondent function] OTHERWISE → R3 [Respondent function]	

<b>R2</b>	<b>Respondent function</b>	<i>R1JOB</i>
<b>ASK</b>	Buildings starting interview	
<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> <p>1 Operations, maintenance, or engineering 2 Property management 3 Store management 4 Mall management 5 Administration or company management 6 Energy or environmental management 7 Building owner 8 Business owner 9 Accounting, finances, or payroll 10 Executive official 11 School official 12 Religious official 13 Support staff 14 Other</p>		
<b>NEXT</b>	IF Other → R4 [Other job function] OTHERWISE → R5 [Building boundaries]	

<b>R3</b>	<b>Respondent function</b>	<i>R2JOB – RXJOB</i>
<b>ASK</b>	Buildings restarting interview	
	<ul style="list-style-type: none"> <li>◆ ASK if interview is with a new respondent</li> <li>◆ If interview is with same respondent as previous interview, ENTER "0"</li> </ul> <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 → R4 [Other job function] OTHERWISE → R5 [Buildings boundaries]	

<b>R4</b>	<b>Other job function</b>	<i>R1JOBX – RXJOBX</i>
<b>ASK</b>	IF R2 [Respondent function] = Other OR R3 [Respondent function] = Other	
	What is your job function?	
<b>NEXT</b>	→ R5 [Building boundaries]	

<b>R5</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>		
<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	
<p>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?</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	IF DK/RF → A7 [Square footage category] IF 1,000 square feet or less → A8 [End of interview] OTHERWISE → A9 [Wall construction material]	


<b>A7</b>	<b>Square footage category</b>	<i>SQFTC</i>
<b>ASK</b>	IF A6 [Square footage] = DK/RF	
<p> SHOW CARD A1</p> <p>I understand that it may be difficult to give an exact figure for square footage. Please look at Show Card A1 and tell me which category best describes the total gross square footage in this building. There are examples provided to help you estimate.</p> <ol style="list-style-type: none"> <li>1 1,000 square feet or less</li> <li>2 1,001 to 5,000 square feet</li> <li>3 5,001 to 10,000 square feet</li> <li>4 10,001 to 25,000 square feet</li> <li>5 25,001 to 50,000 square feet</li> <li>6 50,001 to 100,000 square feet</li> <li>7 100,001 to 200,000 square feet</li> <li>8 200,001 to 500,000 square feet</li> <li>9 500,001 to 1 million square feet</li> <li>10 Over 1 million square feet</li> </ol>		
<b>NEXT</b>	IF 1,000 square feet or less → A8 [End of interview] OTHERWISE → A9 [Wall construction material]	

<b>A8</b>	<b>End of interview</b>
<b>ASK</b>	IF A6 [Square footage] ≤ 1000
<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.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE


NOTE: For the rest of this document, "All Buildings" refers to buildings > 1,000 square feet.


<b>A9</b>	<b>Wall construction material</b>	<i>WLCNS</i>
<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 predominant 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 materials (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 Other</li> </ol>		
<b>NEXT</b>	→ A10 [Roof construction material]	


<b>A10</b>	<b>Roof construction material</b>	<i>RFCNS</i>
<b>ASK</b>	All Buildings	
<p> 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 Other</li> </ol>		
<b>NEXT</b>	→ A11 [Cool roof materials]	

<b>A11</b>	<b>Cool roof materials</b>																		
<b>ASK</b>	All Buildings																		
 SHOW CARD A4  Please look at Show Card A4. Does the roof of this building have any of the following properties that allow it to reflect more sunlight or absorb less heat than a standard roof?  ◆ ENTER all that apply  <table border="0"> <tr> <td>1</td> <td>White or highly reflective coating or paint</td> <td><i>WTCLRF</i></td> </tr> <tr> <td>2</td> <td>Aluminum coating</td> <td><i>ALCLRF</i></td> </tr> <tr> <td>3</td> <td>Highly relective tiles or shingles</td> <td><i>TSCLRF</i></td> </tr> <tr> <td>4</td> <td>Ballasted roof system</td> <td><i>BLCLRF</i></td> </tr> <tr> <td>5</td> <td>Vegetative roof</td> <td><i>VGCLRF</i></td> </tr> <tr> <td>6</td> <td>Other</td> <td><i>OTCLRF</i></td> </tr> </table>		1	White or highly reflective coating or paint	<i>WTCLRF</i>	2	Aluminum coating	<i>ALCLRF</i>	3	Highly relective tiles or shingles	<i>TSCLRF</i>	4	Ballasted roof system	<i>BLCLRF</i>	5	Vegetative roof	<i>VGCLRF</i>	6	Other	<i>OTCLRF</i>
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5	Vegetative roof	<i>VGCLRF</i>																	
6	Other	<i>OTCLRF</i>																	
<b>NEXT</b>	IF Other selected → A12 [Other cool roof] OTHERWISE → A13 [Roof tilt]																		

<b>A12</b>	<b>Other cool roof</b>
<b>ASK</b>	IF A11 [Cool roof materials] = Other
Please describe the other property of the roof of this building.  ◆ RECORD in open box	
<b>NEXT</b>	→ A13 [Roof tilt]

<b>A13</b>	<b>Roof tilt</b>	<i>RFTILT</i>						
<b>ASK</b>	All Buildings							
 SHOW CARD A5  Looking at Show Card A5, please tell me which best describes the tilt or pitch of the roof of this building.  <table border="0"> <tr> <td>1</td> <td>Flat</td> </tr> <tr> <td>2</td> <td>Shallow pitch</td> </tr> <tr> <td>3</td> <td>Steeper pitch</td> </tr> </table>			1	Flat	2	Shallow pitch	3	Steeper pitch
1	Flat							
2	Shallow pitch							
3	Steeper pitch							
<b>NEXT</b>	→ A14 [Building shape]							

<b>A14</b>	<b>Building shape</b>	<i>BLDSHP</i>
<b>ASK</b>	All Buildings	
 SHOW CARD A6  Looking at Show Card A6, which of these shapes most resembles the floorplan of this building at ground level? This is sometimes called the "footprint" of the building. <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>	→ A15 [Percent exterior glass]	

<b>A15</b>	<b>Percent exterior glass</b>	<i>GLSSPC</i>
<b>ASK</b>	All Buildings	
 SHOW CARD A7  Which of the ranges on Show Card A7 best describes the percent of the exterior wall surface of this building that is covered with window glass or glass doors? <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>	→ A16 [Number of floors]	

<b>A16</b>	<b>Number of floors</b>	<i>NFLOOR</i>
<b>ASK</b>	All Buildings	
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>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF Only one floor OR DK/RF → A18 [Floor-to-ceiling height] OTHERWISE → A17 [Number of underground floors]	



<b>A17</b>	<b>Number of underground floors</b>	<i>BASEMNT</i>
<b>ASK</b>	IF A16 [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>	→ A18 [Floor-to-ceiling height]	

<b>A18</b>	<b>Floor-to-ceiling height</b>	<i>FLCEILHT</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<b>{Floors}</b> IF A16 [Number of floors] = 1 = "in this building" OTHERWISE = "of the majority of floors in this building"	
<p>What is the typical floor-to-ceiling height {Floors}, measured in feet?</p>		
<b>RANGE</b>	7 to 500	
<b>NEXT</b>	→ A19 [Attic]	

<b>A19</b>	<b>Attic</b>	<i>ATTIC</i>
<b>ASK</b>	All Buildings	
<p>Does this building have an attic?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF A16 [Number of floors] = 1 → A24 [Year of construction] OTHERWISE → A20 [Elevators]	


<b>A20</b>	<b>Elevators</b>	<i>ELEVTR</i>
<b>ASK</b>	IF A16 [Number of floors] ≠ 1	
<p>Are there any elevators in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → A21 [Number of elevators] OTHERWISE → A22 [Escalators]	

<b>A21</b>	<b>Number of elevators</b>	<i>NELVTR</i>
<b>ASK</b>	IF A20 [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>	→ A22 [Escalators]	

<b>A22</b>	<b>Escalators</b>	<i>ESCLTR</i>
<b>ASK</b>	IF A16 [Number of floors] ≠ 1	
<p>Are there any escalators in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → A23 [Number of escalators] OTHERWISE → A24 [Year of construction]	

<b>A23</b>	<b>Number of escalators</b>	<i>NESLTR</i>
<b>ASK</b>	IF A22 [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. "Moving sidewalks" should be counted as escalators.</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 99	
<b>NEXT</b>	→ A24 [Year of construction]	


<b>A24</b>	<b>Year of construction</b>	YRCON
<b>ASK</b>	All Buildings	
<p>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.</p>		
<b>RANGE</b>	1600 to 2019	
<b>NEXT</b>	IF DK/RF → A25 [Year of construction category] IF 2018 → A27 [Month ready for occupancy] IF 2019 → A26 [End of interview] IF 2012 or earlier → A28 [Renovations] IF 2013 to 2017 → B1 [One activity in building]	

<b>A25</b>	<b>Year of construction category</b>	YRCONC
<b>ASK</b>	IF A24 [Year of construction] = DK/RF	
<p> SHOW CARD A8</p> <p>Please look at Show Card A8 and tell me which range best describes when this building was constructed.</p> <ol style="list-style-type: none"> <li>1 Before 1920</li> <li>2 1920 to 1945</li> <li>3 1946 to 1959</li> <li>4 1960 to 1969</li> <li>5 1970 to 1979</li> <li>6 1980 to 1989</li> <li>7 1990 to 1999</li> <li>8 2000 to 2009</li> <li>9 2010 to 2012</li> <li>10 2013 to 2018</li> <li>12 2019</li> </ol>		
<b>NEXT</b>	IF 2019 → A26 [End of interview] IF Any category (OR DK/RF) except 2013 to 2018 → A28 [Renovations] IF 2013 to 2018 → B1 [One activity in building]	

<b>A26</b>	<b>End of interview</b>	
<b>ASK</b>	IF A24 [Year of construction] OR A25 [Year of construction category] = 2019	
<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, 2019.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>		
<b>NEXT</b>	TERMINATE	


<b>A27</b>	<b>Month ready for occupancy</b>	<i>MONCON</i>
<b>ASK</b>	IF A24 [Year of construction] = 2018	
<p>In what month of 2018 was this building first ready for occupancy?</p> <p>1 January  2 February  3 March  4 April  5 May  6 June  7 July  8 August  9 September  10 October  11 November  12 December</p>		
<b>NEXT</b>	→ B1 [One activity in building]	


<b>A28</b>	<b>Renovations</b>	<i>RENOV</i>
<b>ASK</b>	IF A24 [Year of construction] = 2012 or earlier OR A25 [Year of construction category] = Any category (OR DK/RF) except 2013 to 2018	
<b>FILL</b>	<b>{Since2000orConstructed}</b> IF A24 [Year of construction] = 2000 or later OR A25 [Year of construction category] = 2000 to 2009 OR 2010 to 2012 = "since it was constructed" OTHERWISE = "since 2000"	
<p>Has any portion of this building undergone renovations {Since2000orConstructed}?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Yes → A29 [What renovations] OTHERWISE → B1 [One activity in building]	


<b>A29</b>	<b>What renovations</b>	<i>see below</i>																																										
<b>ASK</b>	IF A28 [Renovations] = Yes																																											
<b>FILL</b>	<b>{Since2000orConstructed}</b> IF A24 [Year of construction] = 2000 or later OR A25 [Year of construction category] = 2000 to 2009 OR 2010 to 2012 = "since it was constructed" OTHERWISE = "since 2000"																																											
 SHOW CARD A9  Please look at Show Card A9 and tell me which types of renovations have been done {Since2000orConstructed}.																																												
<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: 15%;">1</td> <td style="width: 70%;">Cosmetic improvements (interior or exterior)</td> <td style="width: 15%; text-align: right;"><i>RENCOS</i></td> </tr> <tr> <td>2</td> <td>Addition or annex</td> <td style="text-align: right;"><i>RENADD</i></td> </tr> <tr> <td>3</td> <td>Reduction of enclosed floorspace</td> <td style="text-align: right;"><i>RENRDC</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>Window replacement</td> <td style="text-align: right;"><i>RENWIN</i></td> </tr> <tr> <td>7</td> <td>HVAC equipment upgrade</td> <td style="text-align: right;"><i>RENHVC</i></td> </tr> <tr> <td>8</td> <td>Lighting upgrade</td> <td style="text-align: right;"><i>RENLGT</i></td> </tr> <tr> <td>9</td> <td>Plumbing system upgrade</td> <td style="text-align: right;"><i>RENPLB</i></td> </tr> <tr> <td>10</td> <td>Electrical upgrade</td> <td style="text-align: right;"><i>RENELC</i></td> </tr> <tr> <td>11</td> <td>Insulation upgrade</td> <td style="text-align: right;"><i>RENINS</i></td> </tr> <tr> <td>12</td> <td>Fire, safety, or security upgrade</td> <td style="text-align: right;"><i>RENSAF</i></td> </tr> <tr> <td>13</td> <td>Structural upgrade</td> <td style="text-align: right;"><i>RENSTR</i></td> </tr> <tr> <td>14</td> <td>Other</td> <td style="text-align: right;"><i>RENOTH</i></td> </tr> </table>			1	Cosmetic improvements (interior or exterior)	<i>RENCOS</i>	2	Addition or annex	<i>RENADD</i>	3	Reduction of enclosed floorspace	<i>RENRDC</i>	4	Interior wall re-configuration	<i>RENINT</i>	5	Roof replacement	<i>RENFFF</i>	6	Window replacement	<i>RENWIN</i>	7	HVAC equipment upgrade	<i>RENHVC</i>	8	Lighting upgrade	<i>RENLGT</i>	9	Plumbing system upgrade	<i>RENPLB</i>	10	Electrical upgrade	<i>RENELC</i>	11	Insulation upgrade	<i>RENINS</i>	12	Fire, safety, or security upgrade	<i>RENSAF</i>	13	Structural upgrade	<i>RENSTR</i>	14	Other	<i>RENOTH</i>
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13	Structural upgrade	<i>RENSTR</i>																																										
14	Other	<i>RENOTH</i>																																										
<b>NEXT</b>	IF Other → A30 [Other renovation] OTHERWISE → B1 [One activity in building]																																											

<b>A30</b>	<b>Other renovation</b>
<b>ASK</b>	IF A29 [What renovations] = Other
Please describe the other type of renovation.	
<ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<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> 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>		
<b>NEXT</b>	IF Yes → B2 [Primary activity] OTHERWISE → B3 [Activities in building]	

<b>B2</b>	<b>Primary activity</b>	<i>ACT</i>
<b>ASK</b>	IF B1 [One activity in building] = Yes	
<p> SHOW CARD B1</p> <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</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>	<p>IF Office/Professional → B5 [Office type]  IF Data center → B6 [Verify data center]  IF Warehouse/Storage → B9 [Warehouse type]  IF Food sales or service → B10 [Food sales or service type]  IF Enclosed mall → B32 [Assign CBECS Activity = Enclosed mall]  IF Retail → B11 [Retail type]  IF Education → B12 [Education type]  IF Religious worship → B32 [Assign CBECS Activity = Religious worship]  IF Public assembly → B13 [Assembly type]  IF Health care → B14 [Health care type]  IF Service → B15 [Service type]  IF Lodging → B19 [Lodging type]  IF Public order and safety → B20 [Public order type]  IF Residential → B21 [Residential type]  IF Industrial → B8 [Used as warehouse]  IF Agricultural → B23 [Space for retail sales]  IF Vacant → B24 [Vacant for noncommercial]  IF Other → B26 [Other type]  IF DK/RF → B41 [On a multibuilding complex]</p>	

<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	
<p> SHOW CARD B1</p> <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</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 → B41 [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 = “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 2012 CBECS data, in this order: <i>Data center, Food sales or service, Health care, Other, Lodging, Public order and safety, Public assembly, Office/Professional, Education, Enclosed mall, Retail, Service, Religious worship, Warehouse/Storage, Vacant</i>).</p> <p>THEN, follow here based on the assigned primary activity:</p> <p>IF Office/Professional → B5 [Office type]</p> <p>IF Data center → 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 → B32 [Assign CBECS Activity = Enclosed mall]</p> <p>IF Retail → B11 [Retail type]</p> <p>IF Education → B12 [Education type]</p> <p>IF Religious worship → B32 [Assign CBECS Activity = Religious worship]</p> <p>IF Public assembly → B13 [Assembly type]</p> <p>IF Health care → B14 [Health care type]</p> <p>IF Service → B15 [Service type]</p> <p>IF Lodging → B19 [Lodging type]</p> <p>IF Public order and safety → B20 [Public order type]</p> <p>IF Residential → B21 [Residential type]</p> <p>IF Industrial → B8 [Used as warehouse]</p> <p>IF Agricultural → B23 [Space for retail sales]</p> <p>IF Vacant → B24 [Vacant for noncommercial]</p> <p>IF Other → B26 [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>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, this building will be included in the general category of office.”  OTHERWISE = BLANK</p>	
<p> SHOW CARD B3</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B3, what type of office is this?</p> <ol style="list-style-type: none"> <li>1 Administrative or professional office building</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</li> <li>7 Contractor's office</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 Veterinarian's office</li> <li>15 Vacant</li> <li>16 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 → B32 [Assign CBECS Activity = Office] IF Courthouse or probation office → B32 [Assign CBECS Activity = Public order and safety] IF Veterinarian's office → B32 [Assign CBECS Activity = Outpatient health] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of office → B27 [Specify other activity]	


<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	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, this building will be included in the general category of data center.”  OTHERWISE = BLANK</p> <p>{ActivityExplanation}</p> <p>A data center is a group of networked computer servers that are housed in one location, usually a secure area. The servers perform functions such as data storage and processing.</p> <p>There are usually many servers stacked in rows of racks and they operate continuously, day and night. Data centers are generally kept very cool and require a dedicated uninterrupted power supply.</p> <p>Does this accurately describe this building?</p> <p>1 Yes  2 No</p>	
<b>NEXT</b>	IF Yes → B32 [Assign CBECS Activity = Data center] OTHERWISE → 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	
	<p>Then, for the purposes of this study, this building will be classified as an office.</p> <p>◆ ENTER "1" to continue</p>	
<b>NEXT</b>	→ B32 [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	
	<p>Is this building used primarily as a warehouse or distribution center?</p> <p>1 Yes  2 No</p>	
<b>NEXT</b>	IF Yes → B9 [Warehouse type] OTHERWISE → B23 [Space for retail sales]	

<b>B9</b>	<b>Warehouse type</b>	WARESP
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] assigned activity = Warehouse/Storage	
<b>FILL</b>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = “For the purposes of this survey, this building will be included in the general category of warehouse.”  OTHERWISE = BLANK</p>	
<p> SHOW CARD B4</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B4, what type of warehouse is this?</p> <ol style="list-style-type: none"> <li>1 Non-refrigerated warehouse or storage building</li> <li>2 Refrigerated warehouse</li> <li>3 Distribution or shipping center</li> <li>4 Public rental storage units</li> <li>5 Vehicle storage and/or maintenance (car barn)</li> <li>6 Airplane hangar</li> <li>7 Vacant</li> <li>8 Other type of warehouse</li> </ol>		
<b>NEXT</b>	IF Non-refrigerated warehouse; Distribution or shipping center; OR Public rental storage units → B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Refrigerated warehouse → B32 [Assign CBECS Activity = Refrigerated warehouse] IF Vehicle storage and/or maintenance → B32 [Assign CBECS Activity = Service] IF Airplane hangar → B32 [Assign CBECS Activity = Other] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of warehouse → B27 [Specify other activity]	


<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, this building will be included in the general category of food sales or service.”  OTHERWISE = BLANK</p>	
 SHOW CARD B5  {ActivityExplanation}  Looking at list on Show Card B5, what type of food sales or service is this?  1 Restaurant or cafeteria 2 Fast food 3 Bar, pub, or lounge 4 Grocery store or food market 5 Gas station with a convenience store 6 Convenience store 7 Beer, wine, or liquor store 8 Reception hall 9 Catering service 10 Coffee, doughnut, or bagel shop 11 Ice cream or frozen yogurt shop 12 Bakery 13 Vacant 14 Other type of food sales or service		
<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 → B32 [Assign CBECS Activity = Food service] IF Grocery store or food market; Gas station with a convenience store; Convenience store; OR Bakery → B32 [Assign CBECS Activity = Food sales] IF Beer, wine, or liquor store → B32 [Assign CBECS Activity = Retail] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of food sales or service → B27 [Specify other activity]	

<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, this building will be included in the general category of retail."  OTHERWISE = BLANK</p>	
 SHOW CARD B6  {ActivityExplanation}  Looking at the list on Show Card B6, what type of retail is this?  1 Retail store 2 Bank or other financial institution 3 Convenience store 4 Beer, wine, or liquor store 5 Rental center 6 Dealership or showroom for vehicles or boats 7 Auto service or auto repair shop 8 Studio or gallery 9 Grocery store or food market 10 Copy center or printing service 11 Distribution or shipping center 12 Gas station with a convenience store 13 Gas station 14 Post office or postal center 15 Recreation 16 Repair shop 17 Vacant 18 Other type of retail		
<b>NEXT</b>	IF Gas station → B18 [Gas station building use] IF Retail store; Beer, wine, or liquor store; Rental center; Dealership or showroom; OR Studio or gallery → B32 [Assign CBECS Activity = Retail] IF Bank or other financial institution → B32 [Assign CBECS Activity = Office] IF Convenience store; Grocery store or food market; OR Gas station with a convenience store → B32 [Assign CBECS Activity = Food sales] IF Auto service or auto repair shop; Copy center or printing service; Post office or postal center; OR Repair shop → B32 [Assign CBECS Activity = Service] IF Distribution or shipping center → B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Recreation → B32 [Assign CBECS Activity = Public assembly] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of retail → B27 [Specify other activity]	

<b>B12</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, this building will be included in the general category of education.”  OTHERWISE = BLANK</p>	
<p> SHOW CARD B7</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B7, 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 Recreation</li> <li>10 Entertainment and culture</li> <li>11 Laboratory</li> <li>12 Vacant</li> <li>13 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 → B32 [Assign CBECS Activity = Education] IF Library; Recreation; OR Entertainment or culture → B32 [Assign CBECS Activity = Public assembly] IF Laboratory → B32 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of classroom education → B27 [Specify other activity]	

<b>B13</b>	<b>Assembly type</b>	ASSMSP
<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, this building will be included in the general category of public assembly.”  OTHERWISE = BLANK</p>	
 SHOW CARD B8  {ActivityExplanation}  Looking at the list on Show Card B8, what type of public assembly is this?  1 Social or meeting 2 Recreation 3 Entertainment or culture 4 Library 5 Religious worship 6 Funeral home 7 Student activities center 8 Armory 9 Exhibition hall 10 Transportation terminal 11 Bar, pub, or lounge 12 Vacant 13 Other type of public assembly		
<b>NEXT</b>	IF Social or meeting; Recreation; Entertainment or culture; Library; Funeral home; Student activities center; Armory; Exhibition hall; OR Transportation terminal → B32 [Assign CBECS Activity = Public assembly] IF Religious worship → B32 [Assign CBECS Activity = Religious worship] IF Bar, pub, or lounge → B32 [Assign CBECS Activity = Food service] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of public assembly → B27 [Specify other activity]	



<b>B14</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, this building will be included in the general category of health care.”  OTHERWISE = BLANK</p>	
<p> SHOW CARD B9</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B9, 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 → B32 [Assign CBECS Activity = Outpatient health care] IF Hospital (inpatient); OR Inpatient rehabilitation → B32 [Assign CBECS Activity = Inpatient health care] IF Doctor's or dentist's office → B32 [Assign CBECS Activity = Office] IF Nursing home, assisted living center, or other residential care building → B32 [Assign CBECS Activity = Nursing] IF Retirement home → B32 [Assign CBECS Activity = Lodging] IF Laboratory → B32 [Assign CBECS Activity = Laboratory] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of health care → B27 [Specify other activity]	

<b>B15</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, this building will be included in the general category of service.” OTHERWISE = BLANK	

 SHOW CARD B10

{ActivityExplanation}

Looking at the list on Show Card B10, what type of service is this?


- 1 Auto service or auto repair shop
- 2 Vehicle storage and/or maintenance (car barn)
- 3 Airplane hangar
- 4 Car wash
- 5 Gas station with a convenience store
- 6 Gas station
- 7 Building and grounds maintenance shop
- 8 Contractor's office
- 9 Kennel
- 10 Repair shop
- 11 Dry cleaner or laundromat
- 12 Copy center or printing shop
- 13 Post office, postal center, or mail sorting
- 14 Distribution or shipping center
- 15 Bank or other financial institution
- 16 Salon, spa, or barber shop
- 17 Bar, pub, or lounge
- 18 Transportation terminal
- 19 Recreation
- 20 Social or meeting
- 21 Student activities center
- 22 Library
- 23 Non-profit or social services office
- 24 Funeral home
- 25 Rental center
- 26 Vacant
- 27 Other type of service


<b>NEXT</b>	<p>IF Dry cleaner or laundromat → B16 [Dry cleaning onsite]  IF Gas station → B17 [Gas station building use]  IF Auto service or auto repair shop; Building and grounds maintenance shop; Vehicle storage and/or maintenance; Repair shop; Post office or postal center; Car wash; Spa, salon, or barber shop; Copy center or printing shop; OR Kennel → B32 [Assign CBECS Activity = Service]  IF Contractor's office; Bank or other financial institution; OR Non-profit or social services office → B32 [Assign CBECS Activity = Office]  IF Bar, pub, or lounge → B32 [Assign CBECS Activity = Food service]  IF Gas station with convenience store → B32 [Assign CBECS Activity = Food sales]  IF Airplane hangar → B32 [Assign CBECS Activity = Other]  IF Distribution or shipping center → B32 [Assign CBECS Activity = Nonrefrigerated warehouse]  IF Funeral home; Library; Recreation; Social or meeting; Student activities center; OR Transportation terminal → B32 [Assign CBECS Activity = Public assembly]  IF Rental center → B32 [Assign CBECS Activity = Retail]  IF Vacant:  IF More than one activity → B32 [Assign CBECS Activity = Vacant]  IF Only one activity → B25 [Completely vacant]  IF Other type of service → B27 [Specify other activity]</p>
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<b>B16</b>	<b>Dry cleaning onsite</b>	<i>DRYCL</i>
<b>ASK</b>	IF B15 [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  2 Off-site</p>		
<b>NEXT</b>	→ B32 [Assign CBECS Activity = Service]	

<b>B17</b>	<b>Gas station building use</b>	<i>GASBLDG</i>
<b>ASK</b>	IF B11 [Retail type] = Gas station OR B15 [Service type] = Gas station	
<p>Which activity accounts for most of the space in the building that is associated with this gas station: convenience store, auto service, car wash, or something else?</p> <p>1 Convenience store  2 Auto service  3 Car wash  4 Something else</p>		
<b>NEXT</b>	IF Something else → B18 [Other gas station bldg use] IF Convenience store → B32 [Assign CBECS Activity = Food sales] OTHERWISE → B32 [Assign CBECS Activity = Service]	

<b>B18</b>	<b>Other gas station bldg use</b>	<i>OTGASBLDG</i>
<b>ASK</b>	IF B17 [Gas station building use] = Something else	
<p>What is the other activity in the building that is associated with this gas station?</p> <p>◆ RECORD in open box</p>		
<b>NEXT</b>	→ B32 [Assign CBECS Activity = Service]	

<b>B19</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, this building will be included in the general category of lodging."  OTHERWISE = BLANK</p>	
<p> SHOW CARD B11</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B11, what type of lodging is this?</p> <ol style="list-style-type: none"> <li>1 Hotel</li> <li>2 Motel, inn, or bed and breakfast</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, group home, 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>	<p>IF Hotel; Motel, inn, or bed and breakfast; Dormitory, fraternity, or sorority; Retirement home; Convent or monastery; Shelter, group home, or children's home; OR Halfway house  → B32 [Assign CBECS Activity = Lodging]</p> <p>IF Nursing home, assisted living center, or other residential care building  → B32 [Assign CBECS Activity = Nursing]</p> <p>IF Jail, reformatory, or penitentiary → B32 [Assign CBECS Activity = Public order and safety]</p> <p>IF Vacant:  IF More than one activity → B32 [Assign CBECS Activity = Vacant]  IF Only one activity → B25 [Completely vacant]</p> <p>IF Other type of lodging → B27 [Specify other activity]</p>	

<b>B20</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, this building will be included in the general category of public order and safety.”  OTHERWISE = BLANK</p>	
 SHOW CARD B12  {ActivityExplanation}  Looking at the list on Show Card B12, what type of public order and safety is this?  1 Police station 2 Fire station 3 Combination police and fire station 4 Jail, reformatory, or penitentiary 5 Courthouse or probation office 6 Halfway house 7 Armory 8 City hall or city center 9 Vacant 10 Other type of public order and safety		
<b>NEXT</b>	IF Police station; Fire station; Combination police and fire station; Jail, reformatory, or penitentiary; OR Courthouse or probation office → B32 [Assign CBECS Activity = Public order and safety] IF Halfway house → B32 [Assign CBECS Activity = Lodging] IF Armory → B32 [Assign CBECS Activity = Public assembly] IF City hall or city center → B32 [Assign CBECS Activity = Office] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Other type of public order and safety → B27 [Specify other activity]	


<b>B21</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, this building will be included in the general category of residential." OTHERWISE = BLANK	
 SHOW CARD B13  {ActivityExplanation}  Looking at the list on Show Card B13, what type of residential is this?  1 Hotel 2 Motel, inn, or bed and breakfast 3 Dormitory, fraternity, or sorority 4 Retirement home 5 Nursing home, assisted living center, or other residential care building 6 Convent or monastery 7 Shelter, group home, or children's home 8 Halfway house 9 Jail, reformatory, or penitentiary 11 Other type of residential		
<b>NEXT</b>	IF Hotel; Motel, inn, or bed and breakfast; Dormitory, fraternity, or sorority; Retirement home; Convent or monastery; Shelter, group home, or children's home; OR Halfway house → B32 [Assign CBECS Activity = Lodging] IF Nursing home, assisted living center, or other residential care building → B32 [Assign CBECS Activity = Nursing] IF Jail, reformatory, or penitentiary → B32 [Assign CBECS Activity = Public order and safety] IF Other type of residential → B28 [End of interview]	

<b>B22</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	
Is any of the space in this building used for retail sales of the products that are made here?  1 Yes 2 No		
<b>NEXT</b>	IF Yes → B32 [Assign CBECS Activity = Other] IF No OR DK/RF → B29 [End of interview]	

<b>B23</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	
<p>Is any of the space in this building used for retail sales of the products that are grown here?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → B32 [Assign CBECS Activity = Other] IF No OR DK/RF → B29 [End of interview]	

<b>B24</b>	<b>Vacant for noncommercial</b>	<i>VACUSE</i>
<b>ASK</b>	IF B2 [Primary activity] OR B4 [Percents for activities] Assigned activity = Vacant	
<p>Was the vacant space used for or intended to be used for either agricultural, industrial, manufacturing, or residential purposes or as a parking garage?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → B31 [End of interview] IF No OR DK/RF: IF B1 [One activity in building] ≠ Yes → B32 [Assign CBECS Activity = Vacant] OTHERWISE → B25 [Completely vacant]	

<b>B25</b>	<b>Completely vacant</b>	<i>VACANT</i>
<b>ASK</b>	IF B1 [One activity in building] = Yes & B2 [Primary activity] = Vacant	
<p>Is this building <u>completely</u> vacant?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B32 [Assign CBECS Activity = Vacant]	

<b>B26</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>	<p><b>{ActivityExplanation}</b>  IF (B1 [One activity in building] ≠ Yes) = "For the purposes of this survey, this building will be included in the general category of other types of buildings."  OTHERWISE = BLANK</p>	
<p> SHOW CARD B14</p> <p>{ActivityExplanation}</p> <p>Looking at the list on Show Card B14, what type of other activity is this?</p> <ol style="list-style-type: none"> <li>1 Laboratory</li> <li>2 Airplane hangar</li> <li>3 Broadcasting studio</li> <li>4 Telephone switching facilities</li> <li>5 Funeral home</li> <li>6 Crematorium</li> <li>7 Vehicle storage and/or maintenance (car barn)</li> <li>8 Public restroom, locker room, or changing area</li> <li>9 Indoor parking garage</li> <li>10 Library</li> <li>11 Post office, postal center, or mail sorting</li> <li>12 Distribution or shipping center</li> <li>13 Entertainment or culture</li> <li>14 Recreation</li> <li>15 Transportation terminal</li> <li>16 Veterinarian's office</li> <li>17 Vacant</li> <li>18 Agricultural building with some retail space</li> <li>19 Manufacturing or industrial building with some retail space</li> <li>20 Other type of building</li> <li>21 50 percent commercial (for coding use only)</li> </ol>		
<b>NEXT</b>	IF Airplane hangar; Crematorium; Public restroom, locker room, or changing area; Telephone switching facilities; Agricultural building with some retail space; Manufacturing or industrial building with some retail space; OR 50 percent commercial → B32 [Assign CBECS Activity = Other] IF Broadcasting studio; Entertainment or culture; Funeral home; Library; Recreation; OR Transportation terminal → B32 [Assign CBECS Activity = Public assembly] IF Laboratory → B32 [Assign CBECS Activity = Laboratory] IF Vehicle storage and/or maintenance OR Post office, postal center, or mail sorting → B32 [Assign CBECS Activity = Service] IF Distribution or shipping center → B32 [Assign CBECS Activity = Nonrefrigerated warehouse] IF Veterinarian's office → B32 [Assign CBECS Activity = Outpatient health care] IF Vacant: IF More than one activity → B32 [Assign CBECS Activity = Vacant] IF Only one activity → B25 [Completely vacant] IF Indoor parking garage: IF B1 [One activity in building] = Yes → B30 [End of interview] IF B1 [One activity in building] ≠ Yes → B32 [Assign CBECS Activity = Other] IF Other type of building → B27 [Specify other activity]	



<b>B27</b>	<b>Specify other activity</b>
<b>ASK</b>	<p>IF B5 [Office type] = Other type of office OR  IF B9 [Warehouse type] = Other type of warehouse OR  IF B10 [Food sales or service type] = Other type of food sales or service OR  IF B11 [Retail type] = Other type of retail OR  IF B12 [Education type] = Other type of classroom education OR  IF B13 [Assembly type] = Other type of public assembly OR  IF B14 [Health care type] = Other type of health care OR  IF B15 [Service type] = Other type of service OR  IF B19 [Lodging type] = Other type of lodging OR  IF B20 [Public order type] = Other type of public order and safety OR  IF B26 [Other type] = Other type of building</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] → B32 [Assign CBECS Activity = Office]  B9 [Warehouse type] → B32 [Assign CBECS Activity = Nonrefrigerated warehouse]  B10 [Food sales or service type] → B32 [Assign CBECS Activity = Food service]  B11 [Retail type] → B32 [Assign CBECS Activity = Retail]  B12 [Education type] → B32 [Assign CBECS Activity = Education]  B13 [Assembly type] → B32 [Assign CBECS Activity = Public assembly]  B14 [Health care type] → B32 [Assign CBECS Activity = Outpatient health care]  B15 [Service type] → B32 [Assign CBECS Activity = Service]  B19 [Lodging type] → B32 [Assign CBECS Activity = Lodging]  B20 [Public order type] → B32 [Assign CBECS Activity = Public order and safety]  B26 [Other type] → B32 [Assign CBECS Activity = Other]</p>

<b>B28</b>	<b>End of interview</b>
<b>ASK</b>	IF B21 [Residential type] = Other type of residential
<p>Thank you, that's all the questions that I have at this time, since we are not interviewing buildings that are primarily residential.</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>	B22 [Space for retail sales] = No OR DK/RF OR B23 [Space for retail sales] = No OR DK/RF
<p>Thank you, that's all the questions that I have at this time, since we are since we are not interviewing buildings that are primarily industrial or agricultural.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B30</b>	<b>End of interview</b>
<b>ASK</b>	IF B26 [Other type] = Indoor parking garage
<p>Thank you, that's all the questions that I have at this time, since this study does not cover parking garages.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B31</b>	<b>End of interview</b>
<b>ASK</b>	IF B24 [Vacant for noncommercial] = Yes
<p>Thank you, that's all the questions that I have at this time, since we are only interviewing buildings intended for commercial use.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B32</b>	<b>Assign CBECS Activity</b>	<i>PBA</i>
<b>NEXT</b>	<ul style="list-style-type: none"> <li>1 <b>Vacant</b> → B41 [On a multibuilding complex]</li> <li>2 <b>Office</b> → B41 [On a multibuilding complex]</li> <li>3 <b>Data center</b> → B41 [On a multibuilding complex]</li> <li>4 <b>Laboratory</b> → B41 [On a multibuilding complex]</li> <li>5 <b>Nonrefrigerated warehouse</b> → B41 [On a multibuilding complex]</li> <li>6 <b>Food sales</b> → B41 [On a multibuilding complex]</li> <li>7 <b>Public order and safety</b> → B41 [On a multibuilding complex]</li> <li>8 <b>Outpatient health care</b> → B41 [On a multibuilding complex]</li> <li>11 <b>Refrigerated warehouse</b> → B41 [On a multibuilding complex]</li> <li>12 <b>Religious worship</b> → B33 [Religious worship seating capacity]</li> <li>13 <b>Public assembly</b> → B34 [Assembly seating capacity]</li> <li>14 <b>Education</b> → B35 [Number of classroom seats]</li> <li>15 <b>Food service</b> → B36 [Food service seating capacity]</li> <li>16 <b>Inpatient health care</b> → B37 [Licensed bed capacity]</li> <li>17 <b>Nursing</b> → B38 [Licensed bed capacity]</li> <li>18 <b>Lodging</b> → B39 [Number of guest rooms]</li> <li>24 <b>Enclosed mall</b> → B40 [Food court]</li> <li>25 <b>Retail</b> → B41 [On a multibuilding complex]</li> <li>26 <b>Service</b> → B41 [On a multibuilding complex]</li> <li>91 <b>Other</b> → B41 [On a multibuilding complex]</li> </ul>	

<b>B33</b>	<b>Religious worship seating capacity</b>	<i>RWSEAT</i>
<b>ASK</b>	IF CBECS Activity = Religious worship	
	<p>What is the total seating capacity of the religious worship areas in this building?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B34</b>	<b>Assembly seating capacity</b>	<i>PBSEAT</i>
<b>ASK</b>	IF CBECS Activity = Public assembly	
	<p>What is the fixed seating capacity of the public assembly areas in this building?</p> <p>◆ PROBE for estimate if DK</p>	
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B35</b>	<b>Number of classroom seats</b>	<i>EDSEAT</i>
<b>ASK</b>	IF CBECS Activity = Education	
<p>How many students can be seated in all of the classrooms in this building at one time?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B36</b>	<b>Food service seating capacity</b>	<i>FDSEAT</i>
<b>ASK</b>	IF CBECS Activity = Food service	
<p>What is the total seating capacity of the food service areas in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B37</b>	<b>Licensed bed capacity</b>	<i>HCBED</i>
<b>ASK</b>	IF CBECS Activity = Inpatient health care	
<p>What is the inpatient licensed bed capacity in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B38</b>	<b>Licensed bed capacity</b>	<i>NRSBED</i>
<b>ASK</b>	IF CBECS Activity = Nursing	
<p>What is the skilled or residential care licensed bed capacity in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 99,999	
<b>NEXT</b>	→ B41 [On a multibuilding complex]	

<b>B39</b>	<b>Number of guest rooms</b>	<i>LODGRM</i>
<b>ASK</b>	IF CBECS Activity = Lodging	
<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>	→ B41 [On a multibuilding complex]	


<b>B40</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>	→ B41 [On a multibuilding complex]	

<b>B41</b>	<b>On a multibuilding complex</b>	<i>FACIL</i>
<b>ASK</b>	All Buildings	
<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 → B42 [Number of buildings on complex] OTHERWISE → C1 [Government owned]	

<b>B42</b>	<b>Number of buildings on complex</b>	<i>FACBLDGS</i>
<b>ASK</b>	IF B41 [On a multibuilding complex] = Yes	
<p>How many buildings are part of this multibuilding campus or complex?</p> <ul style="list-style-type: none"> <li>◆ 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.]</li> <li>◆ PROBE for estimate if DK</li> </ul>		
<b>RANGE</b>	2 to 500	
<b>NEXT</b>	→ B43 [Multibuilding complex name]	

<b>B43</b>	<b>Multibuilding complex name</b>	<i>FACNAME</i>
<b>ASK</b>	IF B41 [On a multibuilding complex] = Yes	
<p>By what name is this multibuilding campus or complex most commonly referred?</p> <ul style="list-style-type: none"> <li>◆ 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.]</li> <li>◆ RECORD in open box</li> </ul>		
<b>NEXT</b>	→ B44 [Federal complex]	

<b>B44</b>	<b>Federal complex</b>	<i>FEDFAC</i>
<b>ASK</b>	IF B41 [On a multibuilding complex] = Yes	
<p>Is this <u>campus or complex</u> owned by the Federal government?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B45 [Type of complex]	

<b>B45</b>	<b>Type of complex</b>	<i>FACACT</i>
<b>ASK</b>	IF B41 [On a multibuilding complex] = Yes	
 SHOW CARD B15  Looking at the list on Show Card B15, what is the primary business or function of this group of buildings as a whole?  1 College, university, or junior college 2 Primary or secondary school [GRADES K-12] 3 Other type of school 4 Office complex 5 Retail complex 6 Storage or distribution complex 7 Religious campus or complex 8 Hospital or other health care complex 9 Lodging or resort complex 10 Post office complex 11 Prison or correctional facility 12 Other type of government complex 13 Industrial complex 14 Transportation complex such as a terminal, depot, or airport 15 Other type of campus or complex		
<b>NEXT</b>	IF Industrial complex → B46 [Manufacturing industrial] OTHERWISE → B49 [Central physical plant]	

<b>B46</b>	<b>Manufacturing industrial</b>	<i>MANIND</i>
<b>ASK</b>	IF B45 [Type of complex] = Industrial complex	
Is it a <u>manufacturing</u> industrial complex?  ◆ DEF: [Manufacturing industrial complexes involve the production or processing of goods, merchandise, raw materials, or food.]  1 Yes 2 No		
<b>NEXT</b>	IF Yes → B47 [Same owner as manufacturing] OTHERWISE → B49 [Central physical plant]	

<b>B47</b>	<b>Same owner as manufacturing</b>	<i>MANFAC</i>
<b>ASK</b>	IF B46 [Manufacturing industrial] = Yes	
Does this building have the same owner and operator as the manufacturing campus or complex?  1 Yes 2 No		
<b>NEXT</b>	IF Yes → B48 [End of interview] OTHERWISE → B49 [Central physical plant]	

<b>B48</b>	<b>End of interview</b>
<b>ASK</b>	IF B47 [Same owner as manufacturing] = Yes
<p>Thank you, that's all the questions that I have at this time, since this study does not include buildings on manufacturing facilities.</p> <p>Thank you for your time and help.</p> <p>◆ [F10]-Exit</p>	
<b>NEXT</b>	TERMINATE

<b>B49</b>	<b>Central physical plant</b>	<i>PLANT</i>
<b>ASK</b>	IF B41 [On a multibuilding complex] = Yes & NOT B47 [Same owner as manufacturing] = Yes	
<p>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>?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → B50 [Plant produces district steam] OTHERWISE → C1 [Government owned]	

<b>B50</b>	<b>Plant produces district steam</b>	<i>FACDST</i>
<b>ASK</b>	IF B49 [Central physical plant] = Yes	
<p>Does the central physical plant produce...</p> <p>District steam?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B51 [Plant produces district hot water]	



<b>B51</b>	<b>Plant produces district hot water</b>	<i>FACDHW</i>
<b>ASK</b>	IF B49 [Central physical plant] = Yes	
<p>(Does the central physical plant produce...)</p> <p>District hot water?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B52 [Plant produces district chilled water]	

<b>B52</b>	<b>Plant produces district chilled water</b>	<i>FACDCW</i>
<b>ASK</b>	IF B49 [Central physical plant] = Yes	
<p>(Does the central physical plant produce...)</p> <p>District chilled water?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B53 [Plant produces electricity]	


<b>B53</b>	<b>Plant produces electricity</b>	<i>FACELC</i>
<b>ASK</b>	IF B49 [Central physical plant] = Yes	
<p>(Does the central physical plant produce...)</p> <p>Electricity?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ B54 [Central plant in building]	

<b>B54</b>	<b>Central plant in building</b>	<i>BLDPLT</i>
<b>ASK</b>	IF B49 [Central physical plant] = Yes	
<p>Is the central physical plant for this campus or complex located in this building or is it in another building?</p> <p>1 In this building 2 In another building</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 B41 [On a multibuilding complex] = Yes = "For the rest of this survey, I will be asking you only about this <u>building</u>, not the entire campus or complex."                      OTHERWISE = BLANK</p> <p><b>{SchoolExample}</b>                      IF B12 [Education type] = Elementary or middle school OR High school = ", such as a local school district"                      OTHERWISE = BLANK</p>	
	<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	
	<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 B25 [Completely vacant] = Yes → C10 [Owner operates] OTHERWISE → C5 [Number of businesses]	

<b>C3</b>	<b>Owner</b>	<i>OWNER</i>
<b>ASK</b>	IF C1 [Government owned] ≠ Yes	
 SHOW CARD C1  Looking at Show Card C1, please tell me which category best describes the owner of this building. <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 B25 [Completely vacant] ≠ Yes → C5 [Number of businesses] IF B25 [Completely vacant] = Yes: IF Owner known → C10 [Owner operates] IF DK/RF → C17 [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 B25 [Completely vacant] = Yes → C10 [Owner operates] OTHERWISE → C5 [Number of businesses]

<b>C5</b>	<b>Number of businesses</b>	<i>NOCC</i>
<b>ASK</b>	IF B25 [Completely vacant] ≠ Yes	
How many different businesses or organizations use space full-time in this building?		
<b>RANGE</b>	0 to 9,999	
<b>NEXT</b>	IF 1 → C7 [Single occupant owner occupies] IF > 1 → C8 [Multi-occupant owner occupies] IF Zero & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C10 [Owner operates] IF Zero & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → [C17] Months in use IF DK/RF → C6 [Number of businesses category]	

<b>C6</b>	<b>Number of businesses category</b>	NOCCAT
<b>ASK</b>	IF C5 [Number of businesses] = DK/RF	
 SHOW CARD C2  Which category on Show Card C2 best describes the number of businesses or organizations that use space full-time in this building?  0 Zero 1 One 2 2 to 5 3 6 to 10 4 11 to 20 5 21 to 50 6 51 to 100 7 More than 100		
<b>NEXT</b>	IF One → C7 [Single occupant owner occupies] IF Any category except Zero OR One → C8 [Multi-occupant owner occupies] IF Zero OR DK/RF & <b>NOT</b> (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C10 [Owner operates] IF Zero OR DK/RF & (C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF) → C17 [Months in use]	


<b>C7</b>	<b>Single occupant owner occupies</b>	SOWNOCC
<b>ASK</b>	IF C5 [Number of businesses] = 1 OR C6 [Number of businesses category] = One	
Does the owner occupy the building or is it leased to a tenant?  1 Owner occupies 2 Leased to tenant		
<b>NEXT</b>	IF C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF → C17 [Months in use] OTHERWISE → C10 [Owner operates]	


<b>C8</b>	<b>Multi-occupant owner occupies</b>	MOWNOCC
<b>ASK</b>	IF C5 [Number of businesses] > 1 OR C6 [Number of businesses category] NOT Zero, One, DK/RF	
Does the owner occupy any space in this building?  1 Yes 2 No		
<b>NEXT</b>	→ C9 [Number of tenants]	

<b>C9</b>	<b>Number of tenants</b>	<i>NTENANT</i>
<b>ASK</b>	IF C5 [Number of businesses] > 1 OR C6 [Number of businesses category] NOT Zero, One, DK/RF	
<p>How many tenants lease space in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	0 to 9,999	
<b>NEXT</b>	IF C1 [Government owned] = DK/RF & C3 [Owner] = DK/RF → C17 [Months in use] OTHERWISE → C10 [Owner operates]	

<b>C10</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 of the energy systems?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → C11 [Owner has purchasing power] IF No → C13 [Nonowner operator] IF DK/RF → C17 [Months in use]	

<b>C11</b>	<b>Owner has purchasing power</b>	<i>OWNPPR</i>
<b>ASK</b>	IF C10 [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 → C17 [Months in use] IF No → C12 [Nonowner with purchasing power]	

<b>C12</b>	<b>Nonowner with purchasing power</b>	<i>NWNPPR</i>
<b>ASK</b>	IF C11 [Owner has purchasing power] = No	
 SHOW CARD C3  Looking at Show Card C3, please tell me who <u>does</u> have direct input (on decisions regarding purchases of energy-related equipment). <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 → C16 [Other with purchasing power] OTHERWISE → C17 [Months in use]	

<b>C13</b>	<b>Nonowner operator</b>	<i>NWNOPR</i>
<b>ASK</b>	IF C10 [Owner operates] = No	
 SHOW CARD C3  Looking at Show Card C3, please tell me who <u>is</u> responsible for the operation of the energy systems. <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 → C14 [Other operator] OTHERWISE → C15 [Who has purchasing power]	

<b>C14</b>	<b>Other operator</b>	
<b>ASK</b>	IF C13 [Nonowner operator] = Other	
Please describe who is responsible for the operation of the energy systems.  ◆ RECORD in open box		
<b>NEXT</b>	→ C15 [Who has purchasing power]	

<b>C15</b>	<b>Who has purchasing power</b>	<i>WHOPPR</i>
<b>ASK</b>	IF C10 [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 → C16 [Other with purchasing power] OTHERWISE →C17 [Months in use]	

<b>C16</b>	<b>Other with purchasing power</b>	
<b>ASK</b>	IF C15 [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>	→C17 [Months in use]	

<b>C17</b>	<b>Months in use</b>	<i>MONUSE</i>
<b>ASK</b>	All Buildings	
<b>FILL</b>	<p><b>{DiffActivity}</b></p> <p>IF CBECS Activity = Education = “The next question is about the number of months that the building was in use. If there were months when the building was only entered by a limited number of staff, do not count those months. How many months was this building in use during calendar year 2018?”</p> <p>IF CBECS Activity = Nonrefrigerated warehouse OR Refrigerated warehouse = “The next question is about the number of months that the building was in use. If there were goods being stored, even if there was not much activity in the building, it should count as being “in use.” How many months was this building in use during calendar year 2018?”</p> <p>OTHERWISE = “Thinking of calendar year 2018, for how many months was this building in use?”</p>	
	{DiffActivity}	
<b>RANGE</b>	0 to 12	
<b>NEXT</b>	<p>IF Zero → D1 [Heating]</p> <p>IF 1-12:</p> <p>IF B25 [Completely vacant] = Yes → C18 [Previous use]</p> <p>IF CBECS Activity = Office OR Enclosed Mall OR Outpatient health care → C19 [Percent occupancy]</p> <p>IF B19 [Lodging type] = Hotel OR Motel, inn, or bed and breakfast OR Retirement home OR B21 [Residential type] = Hotel OR Motel, inn, or bed and breakfast OR Retirement home OR B14 [Health care type] = Retirement home → C20 [Lodging room percent occupancy]</p> <p>OTHERWISE → C21 [Open 24 hours a day]</p> <p>IF DK/RF → C21 [Open 24 hours a day]</p>	

<b>C18</b>	<b>Previous use</b>
<b>ASK</b>	IF B25 [Completely vacant] = Yes & C17 [Months in use] > 0
	<p>Since this building was not completely vacant for all of 2018, 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 2018.</p> <p>◆ RECORD in open box</p>
<b>NEXT</b>	→ D1 [Heating]



<b>C19</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 C17 [Months in use] < 12 = "Thinking about the months that this building was in use in 2018, about " OTHERWISE = "In 2018, 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>	→ C21 [Open 24 hours a day]	

<b>C20</b>	<b>Lodging room percent occupancy</b>	<i>LODOCCP</i>
<b>ASK</b>	IF B19 [Lodging type] = Hotel OR Motel, inn, or bed and breakfast OR Retirement home OR B21 [Residential type] = Hotel OR Motel, inn, or bed and breakfast OR Retirement home OR B14 [Health care type] = Retirement home	
<b>FILL</b>	<b>{LodgeRooms}</b> IF B39 [Number of guest rooms] known = "B39 [Number of guest rooms]" IF B39 [Number of guest rooms] = DK/RF = BLANK	
In 2018, 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>	→ C21 [Open 24 hours a day]	


<b>C21</b>	<b>Open 24 hours a day</b>	<i>OPEN24</i>
<b>ASK</b>	IF B25 [Completely vacant] ≠ Yes & C17 [Months in use] ≠ Zero	
<b>FILL</b>	<p><b>{Occur}</b>  IF C17 [Months in use] = 12 = “occur”  OTHERWISE = “occured during the months when the building was in use”</p> <p><b>{HoursInstruct}</b>  IF C17 [Months in use] = 12 = “If the hours of operation varied throughout the year, report the most typical hours.”  OTHERWISE = “If the hours of operation varied throughout this time, consider the hours for the most typical months.”</p>	
<p>The next questions are 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. {HoursInstruct}</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 Yes → C27 [Number of employees] IF No OR DK/RF → C22 [Open during week]	

<b>C22</b>	<b>Open during week</b>	<i>OPNMF</i>
<b>ASK</b>	IF C21 [Open 24 hours a day] = No OR DK/RF	
<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>	→ C23 [Open on weekend]	


<b>C23</b>	<b>Open on weekend</b>	<i>OPNWE</i>
<b>ASK</b>	IF C21 [Open 24 hours a day] = No OR DK/RF	
<p>Is this building normally open at all on the weekend?</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 No & C22 [Open during week] = Not open at all Monday through Friday → C24 [No operating hours] OTHERWISE → C25 [Total hours open per week]	

<b>C24</b>	<b>No operating hours</b>	<i>NOHRS</i>
<b>ASK</b>	IF C22 [Open during week] = Not open at all Monday through Friday & C23 [Open on weekend] = No	
<p>I would just like to confirm that this building does not have any normal operating hours?</p> <p>1 True, no operating hours 2 False, there are operating hours</p>		
<b>NEXT</b>	IF True, no operating hours → C27 [Number of employees] IF False, there are operating hours OR DK/RF → C25 [Total hours open per week]	

<b>C25</b>	<b>Total hours open per week</b>	<i>WKHRS</i>
<b>ASK</b>	IF (C22 [Open during week] = All five days OR Some of these days) OR C23 [Open on weekend] = Yes OR C24 [No operating hours] = False, there are operating hours	
<p>How many total hours per week is the building 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>		
<b>RANGE</b>	0 to 168	
<b>NEXT</b>	IF DK/RF → C26 [Weekly hours category] OTHERWISE → C27 [Number of employees]	

<b>C26</b>	<b>Weekly hours category</b>	<i>WKHRSC</i>
<b>ASK</b>	IF C25 [Total hours open per week] = DK/RF	
<p> SHOW CARD C4</p> <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> <p>1 1 to 39 2 40 to 48 3 49 to 60 4 61 to 84 5 85 to 167 6 168</p>		
<b>NEXT</b>	→ C27 [Number of employees]	

<b>C27</b>	<b>Number of employees</b>	<i>NWKER</i>
<b>ASK</b>	IF B25 [Completely vacant] ≠ Yes & C17 [Months in use] ≠ Zero	
<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 → D1 [Heating] IF DK/RF → C28 [Number of employees category]	

<b>C28</b>	<b>Number of employees category</b>	<i>NWKERC</i>
<b>ASK</b>	IF C27 [Number of employees] = DK/RF	
<p> SHOW CARD C5</p> <p>Which category on Show Card C5 best describes how many employees work <u>in the building</u> during the main shift?</p> <ul 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> </ul>		
<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	
<p>The next section is about energy sources, uses, and equipment.</p> <p>For the next five questions, please tell me if energy was used in this building for any of these purposes during calendar year 2018.</p> <p>Was any energy used for heating the building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service → D2 [Why no heating] OTHERWISE → D4 [Cooling]	

<b>D2</b>	<b>Why no heating</b>	<i>NOHEAT</i>
<b>ASK</b>	IF D1 [Heating] = No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service	
<p>Which of the following reasons best explains why there was no heating in this building during 2018?</p> <p>1 Previous answer incorrect, building does have heating 2 Climate doesn't require heating 3 Building not used during the 2018 heating season 4 Waste heat from other equipment is sufficient 5 Heating equipment was broken during 2018 6 Some other reason</p>		
<b>NEXT</b>	IF Some other reason → D3 [Other no heating specify] OTHERWISE → D4 [Cooling]	
<b>NOTE</b>	If "Previous answer incorrect, building does have heating" is selected, interview will proceed as if D1 [Heating] = Yes.	

<b>D3</b>	<b>Other no heating specify</b>
<b>ASK</b>	IF D2 [Why no heating] = Some other reason
<p>Please briefly explain why there was no heating in this building during 2018.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ D4 [Cooling]

<b>D4</b>	<b>Cooling</b>	<i>COOL</i>
<b>ASK</b>	All Buildings	
<p>(Was any energy used...)</p> <p>For air conditioning?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & NOT (A24 [Year of construction] = 2018 & A27 [Month ready for occupancy] = September, October, November, OR December) → D5 [Why no cooling] OTHERWISE → D7 [Water heating]	

<b>D5</b>	<b>Why no cooling</b>	<i>NOCOOL</i>
<b>ASK</b>	IF D4 [Cooling] = No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service & NOT (A24 [Year of construction] = 2018 & A27 [Month ready for occupancy] = September, October, November, OR December)	
<p>Which of the following reasons best explains why there was no cooling in this building during 2018?</p> <p>1 Previous answer incorrect, building does have cooling          2 Climate doesn't require cooling          3 Building not used during the 2018 cooling season          4 Building is used for storage          5 Air conditioning equipment was broken during 2018          6 Can not afford air conditioning          7 Some other reason</p>		
<b>NEXT</b>	IF Some other reason → D6 [Other no cooling specify] OTHERWISE → D7 [Water heating]	
<b>NOTE</b>	If "Previous answer incorrect, building does have cooling" is selected, interview will proceed as if D4 [Cooling] = Yes.	

<b>D6</b>	<b>Other no cooling specify</b>
<b>ASK</b>	IF D5 [Why no cooling] = Some other reason
<p>Please briefly explain why there was no cooling in this building during 2018.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ D7 [Water heating]

<b>D7</b>	<b>Water heating</b>	<i>WATR</i>
<b>ASK</b>	All Buildings	
<p>(Was any energy used...)</p> <p>For heating water for purposes such as washing hands, dishes, or clothes?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service → D8 [Why no water heating] OTHERWISE → D10 [Cooking]	

<b>D8</b>	<b>Why no water heating</b>	<i>NOWATR</i>
<b>ASK</b>	IF D7 [Water heating] = No & CBECS Activity ≠ Vacant, Refrigerated warehouse, Nonrefrigerated warehouse, OR Service	
<p>Which of the following reasons best explains why there was no water heating in this building during 2018?</p> <p>1 Previous answer incorrect, building does have water heating          2 No plumbing in building          3 Cold water only          4 Water heater was broken during 2018          5 Some other reason</p>		
<b>NEXT</b>	IF Some other reason → D9 [Other no water heating specify] OTHERWISE → D10 [Cooking]	
<b>NOTE</b>	If “Previous answer incorrect, building does have water heating” is selected, interview will proceed as if D7 [Water heating] = Yes.	

<b>D9</b>	<b>Other no water heating specify</b>
<b>ASK</b>	IF D8 [Why no water heating] = Some other reason
<p>Please briefly explain why there was no water heating in this building during 2018.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	→ D10 [Cooking]


<b>D10</b>	<b>Cooking</b>	<i>COOK</i>
<b>ASK</b>	All Buildings	
<p>(Was any energy used...)</p> <p>For cooking?</p> <ul style="list-style-type: none"> <li>◆ EXP: [If there is only minimal cooking, such as microwaves, hot plates, or toaster ovens, answer "No."]</li> </ul> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF D1 [Heating] = DK/RF & D4 [Cooling] = DK/RF & D7 [Water heating] = DK/RF & D10 [Cooking] = DK/RF → D11 [Missing end uses] OTHERWISE → D12 [Manufacturing]	

<b>D11</b>	<b>Missing end uses</b>
<b>SHOW</b>	IF D1 [Heating] = DK/RF & D4 [Cooling] = DK/RF & D7 [Water heating] = DK/RF & D10 [Cooking] = DK/RF
<ul style="list-style-type: none"> <li>◆ 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.</li> <li>◆ ENTER "1" when you are ready to continue</li> </ul>	
<b>NEXT</b>	→ D12 [Manufacturing]

<b>D12</b>	<b>Manufacturing</b>	<i>MANU</i>
<b>ASK</b>	All Buildings	
<p>(Was any energy used...)</p> <p>For manufacturing?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No & D1 [Heating] = No & D4 [Cooling] = No & D7 [Water heating] = No & D10 [Cooking] = No → D13 [Any energy used] OTHERWISE → D14 [Energy sources used]	



<b>D13</b>	<b>Any energy used</b>	<i>ANYEGY</i>
<b>ASK</b>	IF D1 [Heating] = No & D4 [Cooling] = No & D7 [Water heating] = No & D10 [Cooking] = No & D12 [Manufacturing] = No	
<p>I did not record any uses of energy for this building. Did this building use <u>any</u> energy in 2018 for other purposes, such as lighting or appliances?</p> <p>1 Yes, some energy was used in 2018 2 No, no energy was used</p>		
<b>NEXT</b>	IF Yes, some energy was used OR DK/RF → D14 [Energy sources used] IF No, no energy was used → E75 [Window glass type]	

<b>D14</b>	<b>Energy sources used</b>	<i>see below</i>																														
<b>ASK</b>	IF D1 [Heating] = Yes OR D4 [Cooling] = Yes OR D7 [Water heating] = Yes OR D10 [Cooking] = Yes OR D12 [Manufacturing] = Yes OR D13 [Any energy used] = Yes, some energy was used OR DK/RF																															
<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 2018.</p> <ul style="list-style-type: none"> <li>◆ EXP: [Include fuel oil, diesel, or kerosene if it was purchased or delivered in 2018, 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> <tr> <td>11</td> <td>Electricity</td> <td><i>ELUSED</i></td> </tr> <tr> <td>12</td> <td>Natural gas</td> <td><i>NGUSED</i></td> </tr> <tr> <td>13</td> <td>Fuel oil, diesel, or kerosene</td> <td><i>FKUSED</i></td> </tr> <tr> <td>14</td> <td>Propane, also known as bottled gas or LPG</td> <td><i>PRUSED</i></td> </tr> <tr> <td>15</td> <td>District steam piped in from a separate building or utility</td> <td><i>STUSED</i></td> </tr> <tr> <td>16</td> <td>District hot water piped in from a separate building or utility</td> <td><i>HWUSED</i></td> </tr> <tr> <td>17</td> <td>District chilled water piped in from a separate building or utility</td> <td><i>CWUSED</i></td> </tr> <tr> <td>18</td> <td>Wood or coal</td> <td></td> </tr> <tr> <td>19</td> <td>Solar</td> <td><i>SOUSED</i></td> </tr> <tr> <td>24</td> <td>Other source or sources</td> <td><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	Propane, also known as bottled gas or LPG	<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 or coal		19	Solar	<i>SOUSED</i>	24	Other source or sources	<i>OTUSED</i>
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<b>NEXT</b>	IF Fuel, oil, diesel, or kerosene selected → D15 [Fuel oil, diesel, or kerosene] IF Wood or coal selected → D16 [Wood or coal] IF Solar selected → D17 [Type of solar] IF Other source or sources selected → D18 [Other energy source 1] IF District steam OR District hot water selected & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → D21 [From central plant] IF DK/RF → D136 [Electricity generation capability] <b>OTHERWISE:</b> IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] <b>OTHERWISE → D136 [Electricity generation capability]</b>																															

<b>D15</b>	<b>Fuel oil, diesel, or kerosene</b>	<i>FKTYPE</i>
<b>ASK</b>	IF Fuel oil, diesel, or kerosene IN D14 [Energy sources used]	
	<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 2018)?</p> <p>◆ ENTER all that apply</p> <p>1 Fuel oil 2 Diesel 3 Kerosene</p>	
<b>NEXT</b>	IF Wood or coal IN D14 [Energy sources used] → D16 [Wood or coal] IF Solar IN D14 [Energy sources used] → D17 [Type of solar] IF Other source or sources IN D14 [Energy sources used] → D18 [Other energy source 1] IF District steam OR District hot water IN D14 [Energy sources used] & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → D21 [From central plant] IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] OTHERWISE → D136 [Electricity generation capability]	

<b>D16</b>	<b>Wood or coal</b>	<i>see below</i>
<b>ASK</b>	IF Wood or coal IN D14 [Energy sources used]	
	<p>◆ VERIFY if volunteered in previous question</p> <p>You mentioned wood or coal. Which of these were used (in this building in 2018)?</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></p>	
<b>NEXT</b>	IF Solar IN D8 → D17 [Type of solar] IF Other source or sources IN D14 [Energy sources used] → D18 [Other energy source 1] IF District steam OR District hot water IN D14 [Energy sources used] & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → D21 [From central plant] IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] OTHERWISE → D136 [Electricity generation capability]	

<b>D17</b>	<b>Type of solar</b>	<i>see below</i>
<b>ASK</b>	IF Solar IN D14 [Energy sources used]	
	<p>◆ VERIFY if volunteered in previous question</p> <p>Which type of solar was used: solar panels to generate electricity or solar thermal energy, which is the direct use of solar energy <u>without</u> generating electricity?</p> <p>◆ ENTER all that apply</p> <p>1 Solar panels used to generate electricity <span style="float: right;"><i>PVC/SOGENR/CAPGEN</i></span>  2 Solar thermal energy (use of solar energy <u>without</u> generating electricity) <span style="float: right;"><i>SOTHERM</i></span></p>	
<b>NEXT</b>	IF Other source or sources IN D14 [Energy sources used] → D18 [Other energy source 1] IF District steam OR District hot water IN D14 [Energy sources used] & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → D21 [From central plant] IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF Solar panels used to generate electricity → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D18</b>	<b>Other energy source 1</b>	<i>OTUSDX1</i>
<b>ASK</b>	IF Other source or sources IN D14 [Energy sources used]	
	<p>What was the first other energy source used (in this building in 2018)?</p> <p>◆ ENTER the first energy source used</p>	
<b>NEXT</b>	→ D19 [Other energy source 2]	

<b>D19</b>	<b>Other energy source 2</b>	<i>OTUSDX2</i>
<b>ASK</b>	IF Other source or sources IN D14 [Energy sources used]	
<p>Were there any other energy sources used (in this building in 2018)?</p> <ul style="list-style-type: none"> <li>◆ ENTER the next energy source</li> <li>◆ [ENTER] if no others</li> </ul>		
<b>NEXT</b>	<p>IF Source entered here → D20 [Other energy source 3]  IF No source entered here:  IF District steam OR District hot water IN D14 [Energy sources used] &amp;  B49 [Central physical plant] = Yes &amp; B54 [Central plant in building] = In another building  → D21 [From central plant]  IF D1 [Heating] = Yes → D23 [Percent heated]  IF D4 [Cooling] = Yes → D91 [Percent cooled]  IF D7 [Water heating] = Yes → D128 [Sources for water heating]  IF D10 [Cooking] = Yes → D132 [Sources for cooking]  IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing]  IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar]  OTHERWISE → D136 [Electricity generation capability]</p>	

<b>D20</b>	<b>Other energy source 3</b>	<i>OTUSDX3</i>
<b>ASK</b>	IF Source was entered in D19 [Other energy source 2]	
<p>Were there any other energy sources used (in this building in 2018)?</p> <ul style="list-style-type: none"> <li>◆ ENTER the next energy source</li> <li>◆ [ENTER] if no others</li> </ul>		
<b>NEXT</b>	<p>IF District steam OR District hot water IN D14 [Energy sources used] &amp;  B49 [Central physical plant] = Yes &amp; B54 [Central plant in building] = In another building  → D21 [From central plant]  IF D1 [Heating] = Yes → D23 [Percent heated]  IF D4 [Cooling] = Yes → D91 [Percent cooled]  IF D7 [Water heating] = Yes → D128 [Sources for water heating]  IF D10 [Cooking] = Yes → D132 [Sources for cooking]  IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing]  IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar]  OTHERWISE → D136 [Electricity generation capability]</p>	

<b>D21</b>	<b>From central plant</b>	<i>DHFRPL</i>
<b>ASK</b>	IF District steam OR District hot water IN D14 [Energy sources used] & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building	
<p>Is the district steam or hot water piped in from a central plant that is part of the same campus or complex as this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF No OR DK/RF → D22 [Purchase from offsite] IF Yes: IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D22</b>	<b>Purchase from offsite</b>	<i>DHOFF</i>
<b>ASK</b>	IF D21 [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>	IF D1 [Heating] = Yes → D23 [Percent heated] IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D23</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"	
<p>These next questions are about heating in the building.</p> <p>What percent of the {SqFt} in this building was heated to at least 50 degrees Fahrenheit during 2018, including basements and indoor parking levels if they were heated to at least 50 degrees?</p> <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 → D24 [Heated to less than 50 degrees] OTHERWISE → D25 [Source for main heating]	

<b>D24</b>	<b>Heated to less than 50 degrees</b>	<i>HTLS50</i>
<b>ASK</b>	IF D23 [Percent heated] = Zero	
<p>Was any of this building heated to less than 50 degrees Fahrenheit?</p> <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 → D25 [Source for main heating] IF No: IF D4 [Cooling] = Yes → D91 [Percent cooled] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D25</b>	<b>Source for main heating</b>	<i>see below</i>																										
<b>ASK</b>	IF D1 [Heating] = Yes & NOT ([D23 [Percent heated] = Zero & D24 [Heated to less than 50 degrees] = No)																											
<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 D15 [Fuel oil, diesel, or kerosene]  <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D18 [Other energy source 1] – D20 [Other energy source 3]</p> <p>What was the <u>main</u> energy source for heating? Do not include electricity if it is used only to run fan motors. (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>◆ Only sources already selected are shown here</li> </ul> <table style="width: 100%; border: none;"> <tr><td>11 {Electricity}</td><td style="text-align: right;"><i>ELHT1</i></td></tr> <tr><td>12 {Natural gas}</td><td style="text-align: right;"><i>NGHT1</i></td></tr> <tr><td>13 {FuelOilType}</td><td style="text-align: right;"><i>FKHT1</i></td></tr> <tr><td>14 {Propane}</td><td style="text-align: right;"><i>PRHT1</i></td></tr> <tr><td>15 {District steam}</td><td style="text-align: right;"><i>STHT1</i></td></tr> <tr><td>16 {District hot water}</td><td style="text-align: right;"><i>HWHT1</i></td></tr> <tr><td>18 {Wood}</td><td style="text-align: right;"><i>WOHT1</i></td></tr> <tr><td>19 {Coal}</td><td style="text-align: right;"><i>COHT1</i></td></tr> <tr><td>20 {Solar thermal}</td><td style="text-align: right;"><i>SOHT1</i></td></tr> <tr><td>21 {Other1}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>22 {Other2}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>23 {Other3}</td><td style="text-align: right;"><i>OTHT1</i></td></tr> <tr><td>24 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 {Propane}	<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 thermal}	<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 → D26 [Other source for main heating] IF DK/RF → D35 [Heating equipment for unknown source] OTHERWISE: IF More than one energy source used → D27 [Which other sources for heating] IF Only one energy source used → D28 [Any other sources for heating]																											

<b>D26</b>	<b>Other source for main heating</b>	<i>see below</i>																				
<b>ASK</b>	IF D25 [Source for main heating] = Some other energy source																					
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<b>NEXT</b>	→ D27 [Which other sources for heating]																					



<b>D27</b>	<b>Which other sources for heating</b>	<i>HT2 &amp; see below</i>																																										
<b>ASK</b>	IF D1 [Heating] = Yes & D25 [Source for main heating] ≠ DK/RF & 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 D15 [Fuel oil, diesel, or kerosene]  <b>{Other1} – {Other3}</b> = Sources specified in D18 [Other energy source 1] – D20 [Other energy source 3]</p> <p>Which other energy sources, if any, were used for heating? Do not include electricity if it is used only to run fan motors. ({Ht2SourcesList})</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: 10%;">11</td> <td style="width: 70%;">{Electricity}</td> <td style="width: 20%; 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>{Propane}</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 thermal}</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	{Propane}	<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 thermal}	<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 → D29 [Other source for heating] OTHERWISE → D30 [Main heating routing]																																											

<b>D28</b>	<b>Any other sources for heating</b>	<i>HT2</i>
<b>ASK</b>	IF D1 [Heating] = Yes & D25 [Source for main heating] ≠ DK/RF & 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 → D29 [Other source for heating] IF No OR DK/RF → D30 [Main heating routing]	

<b>D29</b>	<b>Other source for heating</b>																														
<b>ASK</b>	IF D27 [Which other sources for heating] = Some other energy source OR D28 [Any other sources for heating] = Yes																														
<p>What was the other energy source used for secondary space heating?</p> <table> <tr> <td>11</td> <td>Electricity</td> <td><i>ELHT2</i></td> </tr> <tr> <td>12</td> <td>Natural gas</td> <td><i>NGHT2</i></td> </tr> <tr> <td>13</td> <td>Fuel oil/Diesel/Kerosene</td> <td><i>FKHT2</i></td> </tr> <tr> <td>14</td> <td>Propane</td> <td><i>PRHT2</i></td> </tr> <tr> <td>15</td> <td>District steam</td> <td><i>STHT2</i></td> </tr> <tr> <td>16</td> <td>District hot water</td> <td><i>HWHT2</i></td> </tr> <tr> <td>18</td> <td>Wood</td> <td><i>WOHT2</i></td> </tr> <tr> <td>19</td> <td>Coal</td> <td><i>COHT2</i></td> </tr> <tr> <td>20</td> <td>Solar thermal</td> <td><i>SOHT2</i></td> </tr> <tr> <td>24</td> <td>Some other energy source</td> <td><i>OTHT2</i></td> </tr> </table>		11	Electricity	<i>ELHT2</i>	12	Natural gas	<i>NGHT2</i>	13	Fuel oil/Diesel/Kerosene	<i>FKHT2</i>	14	Propane	<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 thermal	<i>SOHT2</i>	24	Some other energy source	<i>OTHT2</i>
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<b>NEXT</b>	➔ D30 [Main heating routing]																														

**NOTE ON ENERGY SOURCES:**

Throughout the rest of this questionnaire, there will be references such as “Electricity used” or “Natural gas used.” In addition to the energy sources that were given in D14 [Energy sources used], if sources are added along the way, such as in D26 [Other source for main heating] OR D29 [Other source for heating], those sources are then also considered to be used.


<b>D30</b>	<b>Main heating routing</b>
<b>NEXT</b>	<p>IF D25 [Source for main heating] = District steam &amp; NOT D21 [From central plant] = Yes &amp; NOT D22 [Purchase from offsite] = Yes ➔ D31 [Where does steam come from]</p> <p>IF D25 [Source for main heating] = District hot water &amp; NOT D21 [From central plant] = Yes &amp; NOT D22 [Purchase from offsite] = Yes ➔ D33 [Where does hot water come from]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Electricity ➔ D36 [Elec main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Natural gas ➔ D37 [Nat gas main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Fuel oil/Diesel/Kerosene ➔ D38 [Fuel oil main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Propane ➔ D39 [Propane main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = District steam ➔ D40 [District steam distribution]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = District hot water ➔ D41 [District hot water distribution]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Wood ➔ D42 [Wood main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Coal ➔ D43 [Coal main heating equipment]</p> <p>IF D25 [Source for main heating] OR D26 [Other source for main heating] = Solar thermal ➔ D44 [Solar thermal heating equipment]</p> <p>IF D25 [Source for main heating] = {Other} OR D26 [Other source for main heating] = Some other energy source ➔ D45 [Other source main heating equipment]</p>


<b>D31</b>	<b>Where does steam come from</b>	<i>STLOCTN</i>
<b>ASK</b>	IF D25 [Source for main heating] = District steam & NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes	
<p>Does the steam come from a boiler in another building, from a utility, or from a boiler <u>inside</u> this building?</p> <ol style="list-style-type: none"> <li>1 From a boiler in another building</li> <li>2 From a district steam utility</li> <li>3 From a boiler <u>inside</u> this building</li> </ol>		
<b>NEXT</b>	IF From a boiler inside this building → D32 [Steam boiler fuel] OTHERWISE → D40 [District steam distribution]	


<b>D32</b>	<b>Steam boiler fuel</b>	<i>STBLFL</i>
<b>ASK</b>	IF D31 [Where does steam come from] = From a boiler inside this building	
<p>What energy source does the boiler use to make the district steam: natural gas, fuel oil, propane, wood, coal, electricity, or something else?</p> <ol style="list-style-type: none"> <li>1 Natural gas</li> <li>2 Fuel oil</li> <li>3 Propane</li> <li>4 Wood</li> <li>5 Coal</li> <li>6 Electricity</li> <li>7 Other fuel</li> </ol>		
<b>NEXT</b>	→ D40 [District steam distribution]	


<b>D33</b>	<b>Where does dist hot water come from</b>	<i>HWLOCTN</i>
<b>ASK</b>	IF D25 [Source for main heating] = District hot water & NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes	
<p>Does the district hot water come from a boiler in another building, from a utility, or from a boiler <u>inside</u> this building?</p> <ol style="list-style-type: none"> <li>1 From a boiler in another building</li> <li>2 From a district steam utility</li> <li>3 From a boiler <u>inside</u> this building</li> </ol>		
<b>NEXT</b>	IF From a boiler inside this building → D34 [Hot water boiler fuel] OTHERWISE → D41 [District hot water distribution]	


<b>D34</b>	<b>Hot water boiler fuel</b>	<i>HWBLFL</i>
<b>ASK</b>	IF D33 [Where does hot water come from] = From a boiler inside this building	
<p>What energy source does the boiler use to make the district hot water: natural gas, fuel oil, propane, wood, coal, electricity, or something else?</p> <ol style="list-style-type: none"> <li>1 Natural gas</li> <li>2 Fuel oil</li> <li>3 Propane</li> <li>4 Wood</li> <li>5 Coal</li> <li>6 Electricity</li> <li>7 Other fuel</li> </ol>		
<b>NEXT</b>	➔ D41 [District hot water distribution]	


<b>D35</b>	<b>Heating equipment for unknown source</b>	<i>see below</i>																						
<b>ASK</b>	IF D25 [Source for main heating] = DK/RF																							
<p> SHOW CARD D2</p> <p>Even though you aren't sure of the energy source used for heating this building, you may still be familiar with the equipment. Looking at the list of heating equipment and distribution types on Show Card D2, please tell me which one (or ones) are used in this 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: 70%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 30%; text-align: right;"><i>PKGHT</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON</i></td> </tr> <tr> <td>6 Fireplace</td> <td style="text-align: right;"><i>FIREPLC</i></td> </tr> <tr> <td>7 Central air handlers</td> <td style="text-align: right;"><i>AIRHAND</i></td> </tr> <tr> <td>8 Fan coil units</td> <td style="text-align: right;"><i>FANCOIL</i></td> </tr> <tr> <td>9 Duct reheat</td> <td style="text-align: right;"><i>REHEAT</i></td> </tr> <tr> <td>10 Radiators</td> <td style="text-align: right;"><i>RADIATR</i></td> </tr> <tr> <td>11 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT</i>	2 Boilers that produce steam or hot water	<i>BOILER</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH</i>	4 Residential-type furnaces	<i>FURNAC</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON</i>	6 Fireplace	<i>FIREPLC</i>	7 Central air handlers	<i>AIRHAND</i>	8 Fan coil units	<i>FANCOIL</i>	9 Duct reheat	<i>REHEAT</i>	10 Radiators	<i>RADIATR</i>	11 Other heating equipment	<i>OTHTEQ</i>
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4 Residential-type furnaces	<i>FURNAC</i>																							
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6 Fireplace	<i>FIREPLC</i>																							
7 Central air handlers	<i>AIRHAND</i>																							
8 Fan coil units	<i>FANCOIL</i>																							
9 Duct reheat	<i>REHEAT</i>																							
10 Radiators	<i>RADIATR</i>																							
11 Other heating equipment	<i>OTHTEQ</i>																							
<b>NEXT</b>	IF Boiler selected ➔ D46 [Where is the boiler located] IF Other heating equipment selected ➔ D47 [Unknown source main equip specify] IF D4 [Cooling] = Yes ➔ D91 [Percent cooled] OTHERWISE ➔ D118 [Building automation system]																							


<b>D36</b>	<b>Elec main heating equipment</b>	<i>see below</i>														
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Electricity															
 SHOW CARD D3  Looking at the list of heating equipment types on Show Card D3, please tell me which one (or ones) are powered by <u>electricity</u> 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: 70%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 30%; text-align: right;"><i>PKGHT_EL</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_EL</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_EL</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_EL</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_EL</i></td> </tr> <tr> <td>6 Duct reheat coils</td> <td style="text-align: right;"><i>REHEAT_EL</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_EL</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_EL</i>	2 Boilers that produce steam or hot water	<i>BOILER_EL</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_EL</i>	4 Residential-type furnaces	<i>FURNAC_EL</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON_EL</i>	6 Duct reheat coils	<i>REHEAT_EL</i>	7 Other heating equipment	<i>OTHTEQ_EL</i>
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4 Residential-type furnaces	<i>FURNAC_EL</i>															
5 Individual space heaters (other than heat pumps)	<i>SLFCON_EL</i>															
6 Duct reheat coils	<i>REHEAT_EL</i>															
7 Other heating equipment	<i>OTHTEQ_EL</i>															
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D49 [Elec other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]															


<b>D37</b>	<b>Nat gas main heating equipment</b>	<i>see below</i>														
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Natural gas															
 SHOW CARD D4  Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by <u>natural gas</u> 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: 70%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 30%; text-align: right;"><i>PKGHT_NG</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_NG</i></td> </tr> <tr> <td>8 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_NG</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_NG</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_NG</i></td> </tr> <tr> <td>6 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_NG</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_NG</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_NG</i>	2 Boilers that produce steam or hot water	<i>BOILER_NG</i>	8 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_NG</i>	4 Residential-type furnaces	<i>FURNAC_NG</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON_NG</i>	6 Fireplace	<i>FIREPLC_NG</i>	7 Other heating equipment	<i>OTHTEQ_NG</i>
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5 Individual space heaters (other than heat pumps)	<i>SLFCON_NG</i>															
6 Fireplace	<i>FIREPLC_NG</i>															
7 Other heating equipment	<i>OTHTEQ_NG</i>															
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D50 [Nat gas other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]															


<b>D38</b>	<b>Fuel oil main heating equipment</b>	<i>see below</i>								
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Fuel Oil/Diesel/Kerosene									
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]									
 SHOW CARD D5  Looking at the list of heating equipment types on Show Card D5, please tell me which one (or ones) are fueled by {FuelOilType} in this 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: 80%;">1 Boilers that produce steam or hot water</td> <td style="width: 20%; text-align: right;"><i>BOILER_FK</i></td> </tr> <tr> <td>2 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_FK</i></td> </tr> <tr> <td>3 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_FK</i></td> </tr> <tr> <td>4 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_FK</i></td> </tr> </table>			1 Boilers that produce steam or hot water	<i>BOILER_FK</i>	2 Residential-type furnaces	<i>FURNAC_FK</i>	3 Individual space heaters (other than heat pumps)	<i>SLFCON_FK</i>	4 Other heating equipment	<i>OTHTEQ_FK</i>
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4 Other heating equipment	<i>OTHTEQ_FK</i>									
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D51 [Fuel oil other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]									

<b>D39</b>	<b>Propane main heating equipment</b>	<i>see below</i>														
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Propane															
 SHOW CARD D4  Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by <u>propane</u> 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: 80%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 20%; text-align: right;"><i>PKGHT_PR</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_PR</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_PR</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_PR</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_PR</i></td> </tr> <tr> <td>6 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_PR</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_PR</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_PR</i>	2 Boilers that produce steam or hot water	<i>BOILER_PR</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_PR</i>	4 Residential-type furnaces	<i>FURNAC_PR</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON_PR</i>	6 Fireplace	<i>FIREPLC_PR</i>	7 Other heating equipment	<i>OTHTEQ_PR</i>
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6 Fireplace	<i>FIREPLC_PR</i>															
7 Other heating equipment	<i>OTHTEQ_PR</i>															
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D52 [Propane other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]															

<b>D40</b>	<b>District steam distribution</b>	<i>see below</i>										
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = District steam											
 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>district steam</u> 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: 80%;">1 Central air handlers</td> <td style="width: 20%; text-align: right;"><i>AIRHAND_ST</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>FANCOIL_ST</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>REHEAT_ST</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>RADIATR_ST</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>OTDIST_ST</i></td> </tr> </table>			1 Central air handlers	<i>AIRHAND_ST</i>	2 Fan coil units	<i>FANCOIL_ST</i>	3 Duct reheat	<i>REHEAT_ST</i>	4 Radiators	<i>RADIATR_ST</i>	5 Other distribution equipment	<i>OTDIST_ST</i>
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3 Duct reheat	<i>REHEAT_ST</i>											
4 Radiators	<i>RADIATR_ST</i>											
5 Other distribution equipment	<i>OTDIST_ST</i>											
<b>NEXT</b>	➔ D56 [Secondary heating routing]											


<b>D41</b>	<b>District hot water distribution</b>	<i>see below</i>										
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = District hot water											
 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>district hot water</u> in this building.												
<ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul>												
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2 Fan coil units	<i>FANCOIL_HW</i>											
3 Duct reheat	<i>REHEAT_HW</i>											
4 Radiators	<i>RADIATR_HW</i>											
5 Other distribution equipment	<i>OTDIST_HW</i>											
<b>NEXT</b>	➔ D56 [Secondary heating routing]											

<b>D42</b>	<b>Wood main heating equipment</b> <span style="float: right;"><i>see below</i></span>								
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Wood								
 SHOW CARD D7  Looking at the list of heating equipment types on Show Card D7, please tell me which one (or ones) are fueled by <u>wood</u> in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_WO</i></td> </tr> <tr> <td>2 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_WO</i></td> </tr> <tr> <td>3 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_WO</i></td> </tr> <tr> <td>4 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_WO</i></td> </tr> </table> </li> </ul>		1 Residential-type furnaces	<i>FURNAC_WO</i>	2 Individual space heaters (other than heat pumps)	<i>SLFCON_WO</i>	3 Fireplace	<i>FIREPLC_WO</i>	4 Other heating equipment	<i>OTHTEQ_WO</i>
1 Residential-type furnaces	<i>FURNAC_WO</i>								
2 Individual space heaters (other than heat pumps)	<i>SLFCON_WO</i>								
3 Fireplace	<i>FIREPLC_WO</i>								
4 Other heating equipment	<i>OTHTEQ_WO</i>								
<b>NEXT</b>	IF Other heating equipment selected → D53 [Wood other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]								

<b>D43</b>	<b>Coal main heating equipment</b> <span style="float: right;"><i>see below</i></span>						
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Coal						
 SHOW CARD D8  Looking at the list of heating equipment types on Show Card D8, please tell me which one (or ones) are fueled by <u>coal</u> in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_CO</i></td> </tr> <tr> <td>2 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_WO</i></td> </tr> <tr> <td>3 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_CO</i></td> </tr> </table> </li> </ul>		1 Boilers that produce steam or hot water	<i>BOILER_CO</i>	2 Residential-type furnaces	<i>FURNAC_WO</i>	3 Other heating equipment	<i>OTHTEQ_CO</i>
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2 Residential-type furnaces	<i>FURNAC_WO</i>						
3 Other heating equipment	<i>OTHTEQ_CO</i>						
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D54 [Coal other main heat equip specify] OTHERWISE → D56 [Secondary heating routing]						


<b>D44</b>	<b>Solar thermal heating equipment</b>
<b>ASK</b>	IF D25 [Source for main heating] OR D26 [Other source for main heating] = Solar thermal
Please describe the solar thermal heating system. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	→ D56 [Secondary heating routing]



<b>D45</b>	<b>Other source main heating equipment</b>	<i>see below</i>										
<b>ASK</b>	IF D25 [Source for main heating] = {Other} OR D26 [Other source for main heating] = Some other energy source											
 SHOW CARD D9  Looking at the list of heating equipment types on Show Card D9, please tell me which one (or ones) are fueled by <u>the other energy source</u> 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: 80%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 20%; text-align: right;"><i>PKGHT_OT</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_OT</i></td> </tr> <tr> <td>3 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_OT</i></td> </tr> <tr> <td>4 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_OT</i></td> </tr> <tr> <td>5 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_OT</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_OT</i>	2 Boilers that produce steam or hot water	<i>BOILER_OT</i>	3 Residential-type furnaces	<i>FURNAC_OT</i>	4 Individual space heaters (other than heat pumps)	<i>SLFCON_OT</i>	5 Other heating equipment	<i>OTHTEQ_OT</i>
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3 Residential-type furnaces	<i>FURNAC_OT</i>											
4 Individual space heaters (other than heat pumps)	<i>SLFCON_OT</i>											
5 Other heating equipment	<i>OTHTEQ_OT</i>											
<b>NEXT</b>	IF Boiler selected → D46 [Where is the boiler located] IF Other heating equipment selected → D55 [Other source other main heat specify] OTHERWISE → D56 [Secondary heating routing]											

<b>D46</b>	<b>Where is the boiler located</b>	<i>BLLOCTN</i>
<b>ASK</b>	IF Boilers IN D35 [Heating equipment for unknown source] OR D36 [Elec main heating equipment] OR D37 [Nat gas main heating equipment] OR D38 [Fuel oil main heating equipment] OR D39 [Propane main heating equipment] OR D43 [Coal main heating equipment] OR D45 [Other source main heating equipment]	
Is the boiler located in this building or in another building? <ul style="list-style-type: none"> <li>1 In this building</li> <li>2 In another building</li> </ul>		
<b>NEXT</b>	IF D25 [Source for main heating] = DK/RF THEN: IF D4 [Cooling] = Yes → D91 [Percent cooled] OTHERWISE → D118 [Building automation system] OTHERWISE → D48 [Boiler heat distribution]	

<b>D47</b>	<b>Unknown source main equip specify</b>
<b>ASK</b>	IF D35 [Heating equipment for unknown source] = Other heating equipment
Please describe the other type of heating equipment. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	IF D4 [Cooling] = Yes → D91 [Percent cooled] OTHERWISE → D118 [Building automation system]

<b>D48</b>	<b>Boiler heat distribution</b>	<i>see below</i>										
<b>ASK</b>	IF Boilers IN D36 [Elec main heating equipment] OR D37 [Nat gas main heating equipment] OR D38 [Fuel oil main heating equipment] OR D39 [Propane main heating equipment] OR D43 [Coal main heating equipment] OR D45 [Other source main heating equipment]											
 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>boiler</u> 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 Central air handlers</td> <td style="width: 40%; text-align: right;"><i>BLRAIR</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>BLRFNCL</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>BLRDUCT</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>BLRRAD</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>BLROTDIST</i></td> </tr> </table>			1 Central air handlers	<i>BLRAIR</i>	2 Fan coil units	<i>BLRFNCL</i>	3 Duct reheat	<i>BLRDUCT</i>	4 Radiators	<i>BLRRAD</i>	5 Other distribution equipment	<i>BLROTDIST</i>
1 Central air handlers	<i>BLRAIR</i>											
2 Fan coil units	<i>BLRFNCL</i>											
3 Duct reheat	<i>BLRDUCT</i>											
4 Radiators	<i>BLRRAD</i>											
5 Other distribution equipment	<i>BLROTDIST</i>											
<b>NEXT</b>	IF Other heating equipment IN D36 [Elec main heating equipment] ➔ D49 [Elec other main heat equip specify] IF Other heating equipment IN D37 [Nat gas main heating equipment] ➔ D50 [Nat gas other main heat equip specify] IF Other heating equipment IN D38 [Fuel oil main heating equipment] ➔ D51 [Fuel oil other main heat equip specify] IF Other heating equipment IN D39 [Propane main heating equipment] ➔ D52 [Propane other main heat equip specify] IF Other heating equipment IN D42 [Wood main heating equipment] ➔ D53 [Wood other main heat equip specify] IF Other heating equipment IN D43 [Coal main heating equipment] ➔ D54 [Coal other main heat equip specify] IF Other heating equipment IN D45 [Other source main heating equipment] ➔ D55 [Other source other main heat specify] OTHERWISE ➔ D56 [Secondary heating routing]											

<b>D49</b>	<b>Elec other main heat equip specify</b>
<b>ASK</b>	IF D36 [Elec main heating equipment] = Other heating equipment
Please describe the other type of heating equipment that is powered by electricity.	
<ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]

<b>D50</b>	<b>Nat gas other main heat equip specify</b>
<b>ASK</b>	IF D37 [Nat gas main heating equipment] = Other heating equipment
<p>Please describe the other type of heating equipment that is fueled by natural gas.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]

<b>D51</b>	<b>Fuel oil other main heat equip specify</b>
<b>ASK</b>	IF D38 [Fuel oil main heating equipment] = Other heating equipment
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]
<p>Please describe the other type of heating equipment that is fueled by {FuelOilType}.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]


<b>D52</b>	<b>Propane other main heat equip specify</b>
<b>ASK</b>	IF D39 [Propane main heating equipment] = Other heating equipment
<p>Please describe the other type of heating equipment that is fueled by propane.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]


<b>D53</b>	<b>Wood other main heat equip specify</b>
<b>ASK</b>	IF D42 [Wood main heating equipment] = Other heating equipment
<p>Please describe the other type of heating equipment that is fueled by wood.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]

<b>D54</b>	<b>Coal other main heat equip specify</b>
<b>ASK</b>	IF D43 [Coal main heating equipment] = Other heating equipment
<p>Please describe the other type of heating equipment that is fueled by coal.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]


<b>D55</b>	<b>Other source other main heat specify</b>
<b>ASK</b>	IF D45 [Other source main heating equipment] = Other heating equipment
<p>Please describe the other type of heating equipment that is fueled by the other energy source.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing]


D56	Secondary heating routing	
NEXT	STEP 1	IF Electricity IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D57 [Elec secondary heating equipment]
	STEP 2	IF Natural gas IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D60 [Nat gas secondary heating equipment]
	STEP 3	IF Fuel Oil/Diesel/Kerosene IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D63 [Fuel oil secondary heating equipment]
	STEP 4	IF Propane IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D66 [Propane secondary heating equipment]
	STEP 5	IF District steam IN D27 [Which other sources for heating] OR D29 [Other source for heating] THEN: IF NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes → D69 [Where does steam come from] OTHERWISE → D71 [District steam distribution]
	STEP 6	IF District hot water IN D27 [Which other sources for heating] OR D29 [Other source for heating] THEN: IF NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes → D72 [Where does hot water come from] OTHERWISE → D74 [District hot water distribution]
	STEP 7	IF Wood IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D75 [Wood secondary heating equipment]
	STEP 8	IF Coal IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D77 [Coal secondary heating equipment]
	STEP 9	IF Solar thermal IN D27 [Which other sources for heating] OR D29 [Other source for heating] → D80 [Solar thermal secondary heating]
	STEP 10	IF {Other} IN D27 [Which other sources for heating] OR D29 [Other source for heating] = Some other energy source → D81 [Other source secondary heating]
	STEP 11	IF (Furnaces IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment]) & Furnaces for any other source main or secondary heating equipment → D84 [Furnace with >1 source] IF Boilers for Two or more main or secondary heating equipment → D85 [Boiler with >1 source] IF Heat pumps IN D37 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D60 [Nat gas secondary heating equipment] OR D66 [Propane secondary heating equipment] & NOT (Heat pumps IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment]) → D86 [Heat pump with no elec] IF Heat pumps for any other heating source → D87 [Heat pump heating type] IF more than one selected heating source/equipment combination → D88 [Percent heated by type] IF Main heating equipment known & NOT District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D90 [Main heating replaced] IF D4 [Cooling] = Yes → D91 [Percent cooled] OTHERWISE → D118 [Building automation system]

<b>D57</b>	<b>Elec secondary heating equipment</b>	<i>see below</i>														
<b>ASK</b>	IF Electricity IN D27 [Which other sources for heating] OR D29 [Other source for heating]															
 SHOW CARD D3  You mentioned that electricity was also used for heating. Looking at the list of heating equipment types on Show Card D3, please tell me which one (or ones) are powered by <u>electricity</u> 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: 70%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 30%; text-align: right;"><i>PKGHT_EL</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_EL</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_EL</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_EL</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_EL</i></td> </tr> <tr> <td>6 Duct reheat coils</td> <td style="text-align: right;"><i>REHEAT_EL</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_EL</i></td> </tr> </table>			1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_EL</i>	2 Boilers that produce steam or hot water	<i>BOILER_EL</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_EL</i>	4 Residential-type furnaces	<i>FURNAC_EL</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON_EL</i>	6 Duct reheat coils	<i>REHEAT_EL</i>	7 Other heating equipment	<i>OTHTEQ_EL</i>
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<b>NEXT</b>	IF Boiler selected → D58 [Elec boiler heat distribution] IF Other heating equipment selected → D59 [Elec other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 2															

<b>D58</b>	<b>Elec boiler heat distribution</b>	<i>see below</i>										
<b>ASK</b>	IF Boilers IN D57 [Elec secondary heating equipment]											
 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>electric boiler</u> in this building.												
<ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul>												
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3 Duct reheat	<i>BLRDUCT_EL</i>											
4 Radiators	<i>BLRRAD_EL</i>											
5 Other distribution equipment	<i>BLROTDIST_EL</i>											
<b>NEXT</b>	IF Other heating equipment IN D57 [Elec secondary heating equipment] → D59 [Elec other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 2											


<b>D59</b>	<b>Elec other secondary heat equip</b>
<b>ASK</b>	IF Other heating equipment IN D57 [Elec secondary heating equipment]
<p>Please describe the other type of heating equipment that is powered by electricity.</p> <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 2


<b>D60</b>	<b>Nat gas secondary heating equipment</b> <span style="float: right;"><i>see below</i></span>														
<b>ASK</b>	IF Natural gas IN D27 [Which other sources for heating] OR D29 [Other source for heating]														
<p> SHOW CARD D4</p> <p>You mentioned that natural gas was also used for heating. Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by <u>natural gas</u> 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: 80%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 20%; text-align: right;"><i>PKGHT_NG</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_NG</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_NG</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_NG</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCO_NG</i></td> </tr> <tr> <td>6 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_NG</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_NG</i></td> </tr> </table>		1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_NG</i>	2 Boilers that produce steam or hot water	<i>BOILER_NG</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_NG</i>	4 Residential-type furnaces	<i>FURNAC_NG</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCO_NG</i>	6 Fireplace	<i>FIREPLC_NG</i>	7 Other heating equipment	<i>OTHTEQ_NG</i>
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5 Individual space heaters (other than heat pumps)	<i>SLFCO_NG</i>														
6 Fireplace	<i>FIREPLC_NG</i>														
7 Other heating equipment	<i>OTHTEQ_NG</i>														
<b>NEXT</b>	IF Boiler selected ➔ D61 [Nat gas boiler heat distribution] IF Other heating equipment selected ➔ D62 [Nat gas other secondary heat equip] OTHERWISE ➔ D56 [Secondary heating routing] STEP 3														

<b>D61</b>	<b>Nat gas boiler heat distribution</b>	<i>see below</i>										
<b>ASK</b>	IF Boilers IN D60 [Nat gas secondary heating equipment]											
	 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>natural gas boiler</u> in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">1 Central air handlers</td> <td style="width: 30%; text-align: right;"><i>BLRAIR_NG</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>BLRFNCL_NG</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>BLRDUCT_NG</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>BLRRAD_NG</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>BLROTDIST_NG</i></td> </tr> </table> </li> </ul>		1 Central air handlers	<i>BLRAIR_NG</i>	2 Fan coil units	<i>BLRFNCL_NG</i>	3 Duct reheat	<i>BLRDUCT_NG</i>	4 Radiators	<i>BLRRAD_NG</i>	5 Other distribution equipment	<i>BLROTDIST_NG</i>
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4 Radiators	<i>BLRRAD_NG</i>											
5 Other distribution equipment	<i>BLROTDIST_NG</i>											
<b>NEXT</b>	IF Other heating equipment IN D60 [Nat gas secondary heating equipment] ➔ D62 [Nat gas other secondary heat equip] OTHERWISE ➔ D56 [Secondary heating routing] STEP 3											


<b>D62</b>	<b>Nat gas other secondary heat equip</b>	
<b>ASK</b>	IF Other heating equipment IN D60 [Nat gas secondary heating equipment]	
	Please describe the other type of heating equipment that is fueled by natural gas. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 3	




<b>D63</b>	<b>Fuel oil secondary heating equipment</b> <span style="float: right;"><i>see below</i></span>
<b>ASK</b>	IF Fuel Oil/Diesel/Kerosene IN D27 [Which other sources for heating] OR D29 [Other source for heating]
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]
 SHOW CARD D5  You mentioned that {FuelOilType} was also used for heating. Looking at the list of heating equipment types on Show Card D5, please tell me which one (or ones) fueled by {FuelOilType} in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <ol style="list-style-type: none"> <li>1 Boilers that produce steam or hot water <span style="float: right;"><i>BOILER_FK</i></span></li> <li>2 Residential-type furnaces <span style="float: right;"><i>FURNAC_FK</i></span></li> <li>3 Individual space heaters (other than heat pumps) <span style="float: right;"><i>SLFCON_FK</i></span></li> <li>4 Other heating equipment <span style="float: right;"><i>OTHTEQ_FK</i></span></li> </ol> </li> </ul>	
<b>NEXT</b>	IF Boiler selected → D64 [Fuel oil boiler heat distribution] IF Other heating equipment selected → D65 [Fuel oil other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 4

<b>D64</b>	<b>Fuel oil boiler heat distribution</b> <span style="float: right;"><i>see below</i></span>
<b>ASK</b>	IF Boilers IN D63 [Fuel oil secondary heating equipment]
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]
 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the {FuelOilType} boiler in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <ol style="list-style-type: none"> <li>1 Central air handlers <span style="float: right;"><i>BLRAIR_FK</i></span></li> <li>2 Fan coil units <span style="float: right;"><i>BLRFNCL_FK</i></span></li> <li>3 Duct reheat <span style="float: right;"><i>BLRDUCT_FK</i></span></li> <li>4 Radiators <span style="float: right;"><i>BLRRAD_FK</i></span></li> <li>5 Other distribution equipment <span style="float: right;"><i>BLROTDIST_FK</i></span></li> </ol> </li> </ul>	
<b>NEXT</b>	IF Other heating equipment IN D63 [Fuel oil secondary heating equipment] → D65 [Fuel oil other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 4

<b>D65</b>	<b>Fuel oil other secondary heat equip</b>
<b>ASK</b>	IF Other heating equipment IN D63 [Fuel oil secondary heating equipment]
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]
<p>Please describe the other type of heating equipment that is fueled by {FuelOilType}.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 4


<b>D66</b>	<b>Propane secondary heating equipment</b> <span style="float: right;"><i>see below</i></span>														
<b>ASK</b>	IF Propane IN D27 [Which other sources for heating] OR D29 [Other source for heating]														
<p> SHOW CARD D4</p> <p>You mentioned that propane was also used for heating. Looking at the list of heating equipment types on Show Card D4, please tell me which one (or ones) are fueled by <u>propane</u> in this building.</p> <p>◆ PROBE for any others</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="width: 20%; text-align: right;"><i>PKGHT_PR</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_PR</i></td> </tr> <tr> <td>3 Heat pumps (other than components of a packaged unit)</td> <td style="text-align: right;"><i>HTPMPH_PR</i></td> </tr> <tr> <td>4 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_PR</i></td> </tr> <tr> <td>5 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_PR</i></td> </tr> <tr> <td>6 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_PR</i></td> </tr> <tr> <td>7 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_PR</i></td> </tr> </table>		1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_PR</i>	2 Boilers that produce steam or hot water	<i>BOILER_PR</i>	3 Heat pumps (other than components of a packaged unit)	<i>HTPMPH_PR</i>	4 Residential-type furnaces	<i>FURNAC_PR</i>	5 Individual space heaters (other than heat pumps)	<i>SLFCON_PR</i>	6 Fireplace	<i>FIREPLC_PR</i>	7 Other heating equipment	<i>OTHTEQ_PR</i>
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7 Other heating equipment	<i>OTHTEQ_PR</i>														
<b>NEXT</b>	IF Boiler selected ➔ D67 [Propane boiler heat distribution] IF Other heating equipment selected ➔ D68 [Propane other secondary heat equip] OTHERWISE ➔ D56 [Secondary heating routing] STEP 5														

<b>D67</b>	<b>Propane boiler heat distribution</b>	<i>see below</i>
<b>ASK</b>	IF Boilers IN D66 [Propane secondary heating equipment]	
	 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>propane boiler</u> in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply <ul style="list-style-type: none"> <li>1 Central air handlers</li> <li>2 Fan coil units</li> <li>3 Duct reheat</li> <li>4 Radiators</li> <li>5 Other distribution equipment</li> </ul> </li> </ul> <div style="text-align: right;"> <i>BLRAIR_FK BLRFNCL_FK BLRDUCT_FK BLRRAD_FK BLROTDIST_FK</i> </div>	
<b>NEXT</b>	IF Other heating equipment IN D66 [Propane secondary heating equipment] → D68 [Propane other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 5	

<b>D68</b>	<b>Propane other secondary heat equip</b>	
<b>ASK</b>	IF Other heating equipment IN D66 [Propane secondary heating equipment]	
	Please describe the other type of heating equipment that is fueled by propane. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	→ D56 [Secondary heating routing] STEP 5	


<b>D69</b>	<b>Where does steam come from</b>	<i>ST2LOCTN</i>
<b>ASK</b>	IF District steam IN D27 [Which other sources for heating] OR D29 [Other source for heating] & NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes	
	You mentioned that district steam was also used for heating. Does the steam come from a boiler in another building, from a utility, or from a boiler <u>inside</u> this building? <ul style="list-style-type: none"> <li>1 From a boiler in another building</li> <li>2 From a district steam utility</li> <li>3 From a boiler <u>inside</u> this building</li> </ul>	
<b>NEXT</b>	IF From a boiler inside this building → D70 [Steam boiler fuel] OTHERWISE → D71 [District steam distribution]	


<b>D70</b>	<b>Steam boiler fuel</b>	<i>ST2BLFL</i>
<b>ASK</b>	IF D69 [Where does steam come from] = From a boiler inside this building	
<p>What energy source does the boiler use to make the district steam: natural gas, fuel oil, propane, wood, coal, electricity, or something else?</p> <ol style="list-style-type: none"> <li>1 Natural gas</li> <li>2 Fuel oil</li> <li>3 Propane</li> <li>4 Wood</li> <li>5 Coal</li> <li>6 Electricity</li> <li>7 Other fuel</li> </ol>		
<b>NEXT</b>	➔ D71 [District steam distribution]	

<b>D71</b>	<b>District steam distribution</b>	<i>see below</i>										
<b>ASK</b>	IF District steam IN D27 [Which other sources for heating] OR D29 [Other source for heating]											
<p> SHOW CARD D6</p> <p>Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>district steam</u> 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: 70%;">1 Central air handlers</td> <td style="width: 30%; text-align: right;"><i>AIRHAND_ST</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>FANCOIL_ST</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>REHEAT_ST</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>RADIATR_ST</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>OTDIST_ST</i></td> </tr> </table>			1 Central air handlers	<i>AIRHAND_ST</i>	2 Fan coil units	<i>FANCOIL_ST</i>	3 Duct reheat	<i>REHEAT_ST</i>	4 Radiators	<i>RADIATR_ST</i>	5 Other distribution equipment	<i>OTDIST_ST</i>
1 Central air handlers	<i>AIRHAND_ST</i>											
2 Fan coil units	<i>FANCOIL_ST</i>											
3 Duct reheat	<i>REHEAT_ST</i>											
4 Radiators	<i>RADIATR_ST</i>											
5 Other distribution equipment	<i>OTDIST_ST</i>											
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 6											


<b>D72</b>	<b>Where does hot water come from</b>	<i>HW2LOCTN</i>
<b>ASK</b>	IF District hot water IN D27 [Which other sources for heating] OR D29 [Other source for heating] & NOT D21 [From central plant] = Yes & NOT D22 [Purchase from offsite] = Yes	
<p>You mentioned that district hot water was also used for heating. Does the hot water come from a boiler in another building, from a utility, or from a boiler <u>inside</u> this building?</p> <ol style="list-style-type: none"> <li>1 From a boiler in another building</li> <li>2 From a district steam utility</li> <li>3 From a boiler <u>inside</u> this building</li> </ol>		
<b>NEXT</b>	IF From a boiler inside this building ➔ D73 [Hot water boiler fuel] OTHERWISE ➔ D74 [District hot water distribution]	


<b>D73</b>	<b>Hot water boiler fuel</b>	<i>HW2BLFL</i>
<b>ASK</b>	IF D72 [Where does hot water come from] = From a boiler inside this building	
<p>What energy source does the boiler use to make the district hot water: natural gas, fuel oil, propane, wood, coal, electricity, or something else?</p> <ul style="list-style-type: none"> <li>1 Natural gas</li> <li>2 Fuel oil</li> <li>3 Propane</li> <li>4 Wood</li> <li>5 Coal</li> <li>6 Electricity</li> <li>7 Other fuel</li> </ul>		
<b>NEXT</b>	➔ D74 [District hot water distribution]	

<b>D74</b>	<b>District hot water distribution</b>	<i>see below</i>
<b>ASK</b>	IF District hot water IN D27 [Which other sources for heating] OR D29 [Other source for heating]	
<p> SHOW CARD D6</p> <p>Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>district hot water</u> in this building.</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <ul style="list-style-type: none"> <li>1 Central air handlers</li> <li>2 Fan coil units</li> <li>3 Duct reheat</li> <li>4 Radiators</li> <li>5 Other distribution equipment</li> </ul> <div style="text-align: right;"> <p><i>AIRHAND_HW</i></p> <p><i>FANCOIL_HW</i></p> <p><i>REHEAT_HW</i></p> <p><i>RADIATR_HW</i></p> <p><i>OTDIST_HW</i></p> </div>		
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 7	

<b>D75</b>	<b>Wood secondary heating equipment</b> <span style="float: right;"><i>see below</i></span>								
<b>ASK</b>	IF Wood IN D27 [Which other sources for heating] OR D29 [Other source for heating]								
 SHOW CARD D7 <p>You mentioned that wood was also used for heating. Looking at the list of heating equipment types on Show Card D7, please tell me which one (or ones) are fueled by <u>wood</u> 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: 80%;">1 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_WO</i></td> </tr> <tr> <td>2 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_WO</i></td> </tr> <tr> <td>3 Fireplace</td> <td style="text-align: right;"><i>FIREPLC_WO</i></td> </tr> <tr> <td>4 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_WO</i></td> </tr> </table>		1 Residential-type furnaces	<i>FURNAC_WO</i>	2 Individual space heaters (other than heat pumps)	<i>SLFCON_WO</i>	3 Fireplace	<i>FIREPLC_WO</i>	4 Other heating equipment	<i>OTHTEQ_WO</i>
1 Residential-type furnaces	<i>FURNAC_WO</i>								
2 Individual space heaters (other than heat pumps)	<i>SLFCON_WO</i>								
3 Fireplace	<i>FIREPLC_WO</i>								
4 Other heating equipment	<i>OTHTEQ_WO</i>								
<b>NEXT</b>	IF Other heating equipment selected → D76 [Wood other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 8								


<b>D76</b>	<b>Wood other secondary heat equip</b>
<b>ASK</b>	IF Other heating equipment IN D75 [Wood secondary heating equipment]
<p>Please describe the other type of heating equipment that is fueled by wood.</p> <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	→ D56 [Secondary heating routing] STEP 8


<b>D77</b>	<b>Coal secondary heating equipment</b> <span style="float: right;"><i>see below</i></span>						
<b>ASK</b>	IF Coal IN D27 [Which other sources for heating] OR D29 [Other source for heating]						
 SHOW CARD D8 <p>You mentioned that coal was also used for heating. Looking at the list of heating equipment types on Show Card D8, please tell me which one (or ones) are fueled by <u>coal</u> 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: 80%;">1 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_CO</i></td> </tr> <tr> <td>2 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_CO</i></td> </tr> <tr> <td>3 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_CO</i></td> </tr> </table>		1 Boilers that produce steam or hot water	<i>BOILER_CO</i>	2 Residential-type furnaces	<i>FURNAC_CO</i>	3 Other heating equipment	<i>OTHTEQ_CO</i>
1 Boilers that produce steam or hot water	<i>BOILER_CO</i>						
2 Residential-type furnaces	<i>FURNAC_CO</i>						
3 Other heating equipment	<i>OTHTEQ_CO</i>						
<b>NEXT</b>	IF Boiler selected → D78 [Coal boiler heat distribution] IF Other heating equipment selected → D79 [Coal other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 9						

<b>D78</b>	<b>Coal boiler heat distribution</b>	<i>see below</i>										
<b>ASK</b>	IF Boilers IN D77 [Coal secondary heating equipment]											
	 SHOW CARD D6  Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>coal boiler</u> in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">1 Central air handlers</td> <td style="width: 30%; text-align: right;"><i>BLRAIR_CO</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>BLRFNCL_CO</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>BLRDUCT_CO</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>BLRRAD_CO</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>BLROTDIST_CO</i></td> </tr> </table> </li> </ul>		1 Central air handlers	<i>BLRAIR_CO</i>	2 Fan coil units	<i>BLRFNCL_CO</i>	3 Duct reheat	<i>BLRDUCT_CO</i>	4 Radiators	<i>BLRRAD_CO</i>	5 Other distribution equipment	<i>BLROTDIST_CO</i>
1 Central air handlers	<i>BLRAIR_CO</i>											
2 Fan coil units	<i>BLRFNCL_CO</i>											
3 Duct reheat	<i>BLRDUCT_CO</i>											
4 Radiators	<i>BLRRAD_CO</i>											
5 Other distribution equipment	<i>BLROTDIST_CO</i>											
<b>NEXT</b>	IF Other heating equipment IN D77 [Coal secondary heating equipment] ➔ D79 [Coal other secondary heat equip] OTHERWISE ➔ D56 [Secondary heating routing] STEP 9											

<b>D79</b>	<b>Coal other secondary heat equip</b>	
<b>ASK</b>	IF Other heating equipment IN D77 [Coal secondary heating equipment]	
	Please describe the other type of heating equipment that is fueled by coal. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 9	

<b>D80</b>	<b>Solar thermal secondary heating</b>	
<b>ASK</b>	IF Solar thermal IN D27 [Which other sources for heating] OR D29 [Other source for heating]	
	You mentioned that solar thermal was also used for heating. Please describe the solar thermal heating system. <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 10	

<b>D81</b>	<b>Other source secondary heating</b> <span style="float: right;"><i>see below</i></span>										
<b>ASK</b>	IF {Other} IN D27 [Which other sources for heating] OR D29 [Other source for heating] = Some other energy source										
 SHOW CARD D9  <p>You mentioned that some other energy source was also used for heating. Looking at the list of heating equipment types on Show Card D9, please tell me which one (or ones) are fueled by the other energy source in this 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: 80%;">1 Packaged central units (such as roof mounted units, or RTUs)</td> <td style="text-align: right;"><i>PKGHT_OT</i></td> </tr> <tr> <td>2 Boilers that produce steam or hot water</td> <td style="text-align: right;"><i>BOILER_OT</i></td> </tr> <tr> <td>3 Residential-type furnaces</td> <td style="text-align: right;"><i>FURNAC_OT</i></td> </tr> <tr> <td>4 Individual space heaters (other than heat pumps)</td> <td style="text-align: right;"><i>SLFCON_OT</i></td> </tr> <tr> <td>5 Other heating equipment</td> <td style="text-align: right;"><i>OTHTEQ_OT</i></td> </tr> </table>		1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_OT</i>	2 Boilers that produce steam or hot water	<i>BOILER_OT</i>	3 Residential-type furnaces	<i>FURNAC_OT</i>	4 Individual space heaters (other than heat pumps)	<i>SLFCON_OT</i>	5 Other heating equipment	<i>OTHTEQ_OT</i>
1 Packaged central units (such as roof mounted units, or RTUs)	<i>PKGHT_OT</i>										
2 Boilers that produce steam or hot water	<i>BOILER_OT</i>										
3 Residential-type furnaces	<i>FURNAC_OT</i>										
4 Individual space heaters (other than heat pumps)	<i>SLFCON_OT</i>										
5 Other heating equipment	<i>OTHTEQ_OT</i>										
<b>NEXT</b>	IF Boiler selected → D82 [Other source boiler heat distribution] IF Other heating equipment selected → D83 [Other source other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 11										

<b>D82</b>	<b>Other source boiler heat distribution</b> <span style="float: right;"><i>see below</i></span>										
<b>ASK</b>	IF Boilers IN D81 [Other source secondary heating]										
 SHOW CARD D6  <p>Looking at the list of heating distribution types on Show Card D6, please tell me which one (or ones) are used with the <u>other energy source boiler</u> 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: 80%;">1 Central air handlers</td> <td style="text-align: right;"><i>BLRAIR_OT</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>BLRFNCL_OT</i></td> </tr> <tr> <td>3 Duct reheat</td> <td style="text-align: right;"><i>BLRDUCT_OT</i></td> </tr> <tr> <td>4 Radiators</td> <td style="text-align: right;"><i>BLRRAD_OT</i></td> </tr> <tr> <td>5 Other distribution equipment</td> <td style="text-align: right;"><i>BLROTDIST_OT</i></td> </tr> </table>		1 Central air handlers	<i>BLRAIR_OT</i>	2 Fan coil units	<i>BLRFNCL_OT</i>	3 Duct reheat	<i>BLRDUCT_OT</i>	4 Radiators	<i>BLRRAD_OT</i>	5 Other distribution equipment	<i>BLROTDIST_OT</i>
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4 Radiators	<i>BLRRAD_OT</i>										
5 Other distribution equipment	<i>BLROTDIST_OT</i>										
<b>NEXT</b>	IF Other heating equipment IN D81 [Other source secondary heating] → D83 [Other source other secondary heat equip] OTHERWISE → D56 [Secondary heating routing] STEP 11										





<b>D83</b>	<b>Other source other secondary heat</b>
<b>ASK</b>	IF Other heating equipment IN D81 [Other source secondary heating]
<p>Please describe the other type of heating equipment that is fueled by the other energy source.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	➔ D56 [Secondary heating routing] STEP 11

<b>D84</b>	<b>Furnace with &gt;1 source</b>	<i>FURN2SRC</i>
<b>ASK</b>	IF (Furnaces IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment]) & Furnaces for any other source main or secondary heating equipment	
<b>FILL</b>	<b>{SecondFuel}</b> = The non-electric energy source reported with a furnace	
<p>I've recorded that you use a furnace with electricity <u>and</u> {SecondFuel}. Is the electricity for components such as the fans, igniter, or thermostat, or do you have two or more furnaces that run on different energy sources?</p> <p>1 Electricity is for fans, igniter, thermostat, etc. 2 Two or more furnaces</p>		
<b>NEXT</b>	<p>IF Electricity is for fans, igniter, thermostat, etc. remove the reported electric furnace. THEN:</p> <p>IF Boilers for Two or more main or secondary heating equipment ➔ D85 [Boiler with &gt;1 source]</p> <p>IF Heat pumps IN D37 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D60 [Nat gas secondary heating equipment] OR D66 [Propane secondary heating equipment] &amp; NOT (Heat pumps IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment]) ➔ D86 [Heat pump with no elec]</p> <p>IF Heat pumps for any other main heating source ➔ D87 [Heat pump heating type]</p> <p>IF more than one selected heating source/equipment combination ➔ D88 [Percent heated by type]</p> <p>IF Main heating equipment known &amp; NOT District steam or hot water &amp; (A24 [Year of construction] &lt; 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) ➔ D90 [Main heating replaced]</p> <p>IF D4 [Cooling] = Yes ➔ D91 [Percent cooled]</p> <p>OTHERWISE ➔ D118 [Building automation system]</p>	

<b>D85</b>	<b>Boiler with &gt;1 source</b>	<i>BOIL2SRC</i>
<b>ASK</b>	IF Boilers for Two or more main or secondary heating equipment	
	<p>I've recorded that you use a boiler with more than one energy source. Is the electricity used to run components such as the fans or pumps, is this one boiler that can switch fuels, or is it two or more boilers that run on different sources?</p> <ol style="list-style-type: none"> <li>1 Electricity is for fans, pumps, controls, thermostat, etc.</li> <li>2 The boiler can switch fuels</li> <li>3 Two or more boilers</li> </ol>	
<b>NEXT</b>	<p>IF Electricity is for fans, pumps, controls, thermostat, etc. remove the reported electric boiler. THEN:  IF Heat pumps IN D37 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D60 [Nat gas secondary heating equipment] OR D66 [Propane secondary heating equipment] &amp; NOT (Heat pumps IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment]) → D86 [Heat pump with no elec]  IF Heat pumps for any other main heating source → D87 [Heat pump heating type]  IF more than one selected heating source/equipment combination → D88 [Percent heated by type]  IF Main heating equipment known &amp; NOT District steam or hot water &amp; (A24 [Year of construction] &lt; 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D90 [Main heating replaced]  IF D4 [Cooling] = Yes → D91 [Percent cooled]  OTHERWISE → D118 [Building automation system]</p>	

<b>D86</b>	<b>Heat pump with no elec</b>	<i>HPCHKEL</i>
<b>ASK</b>	IF Heat pumps IN D37 [Nat gas main heating equipment] OR D39 [Propane main heating equipment] OR D60 [Nat gas secondary heating equipment] OR D66 [Propane secondary heating equipment] & NOT (Heat pumps IN D36 [Elec main heating equipment] OR D57 [Elec secondary heating equipment])	
<b>FILL</b>	<b>{GasType}</b> = "natural gas" or "propane" based on what type of heat pump is reported	
	<p>I've recorded that you use a heat pump that is fueled only by {GasType}. This is fairly unusual. Is this correct or is it a dual-fuel/hybrid heat pump that also uses electricity?</p> <ol style="list-style-type: none"> <li>1 Heat pump uses <u>only</u> natural gas</li> <li>2 Heat pump also uses electricity</li> <li>3 IF VOLUNTEERED: Correct, heat pump only uses electricity</li> </ol>	
<b>NEXT</b>	→ D87 [Heat pump heating type]	

<b>D87</b>	<b>Heat pump heating type</b>	<i>see below</i>												
<b>ASK</b>	IF Heat pumps for any main or secondary heating equipment													
 SHOW CARD D10  You reported using heat pumps. Looking at the list on Show Card D10, which types of heat pumps are these?  ◆ ENTER all that apply  <table border="0"> <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>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	Combination air source and geothermal	<i>HPHDUAL</i>	4	Water loop heat pump	<i>HPHWTR</i>
1	Air source heat pump	<i>HPHAIR</i>												
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3	Combination air source and geothermal	<i>HPHDUAL</i>												
4	Water loop heat pump	<i>HPHWTR</i>												
<b>NEXT</b>	IF more than one selected heating source/equipment combination → D88 [Percent heated by type] IF Main heating equipment known & NOT District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D90 [Main heating replaced] IF D4 [Cooling] = Yes → D91 [Percent cooled] OTHERWISE → D118 [Building automation system]													

<b>D88</b>	<b>Percent heated by type</b> <i>FURNP_EL, PKGHP_EL, BOILP_EL, HTPHP_EL, SLFCNP_EL, REHEATP_EL, OTHTP_EL, FURNP_NG, PKGHP_NG, BOILP_NG, HTPHP_NG, SLFCNP_NG, FIREPLP_NG, OTHTP_NG, FURNP_FK, BOILP_FK, SLFCNP_FK, OTHTP_FK, FURNP_PR, PKGHP_PR, BOILP_PR, HTPHP_PR, SLFCNP_PR, FIREPLP_PR, OTHTP_PR, STHWP_ST, STHWP_HW, FURNP_WO, SLFCNP_WO, FIREPLP_WO, OTHTP_WO, FURNP_CO, BOILP_CO, OTHTP_CO, SLTHP, FURNP_OT, PKGHP_OT, BOILP_OT, SLFCNP_OT, OTHTP_OT</i>
<b>ASK</b>	For buildings with more than one selected heating source/equipment combination Question is repeated for each combination
<b>FILL</b>	<p><b>{Introduction}</b>  IF First source/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 source/equipment and D23 [Percent heated] ≠ 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 source/equipment and D23 [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>{SourceEquipment}</b>  Combination of selected heating source and equipment, for example: "electric furnace"</p>
 SHOW CARD D11  {Introduction}  {Explanation}  Please look at Show Card D11. What percent of the heated area in this building is served by the {SourceEquipment}?  ◆ PROBE for estimate if DK	
<b>RANGE</b>	1 to 100
<b>NEXT</b>	IF there are equal maximum percents OR DK/RF → D89 [Main heating equipment] IF there is an equipment with a maximum percent, assign that equipment as the Main heating equipment [MAINHT9]. THEN: IF Main heating equipment known & NOT District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D90 [Main heating replaced] IF D4 [Cooling] = Yes → D91 [Percent cooled] OTHERWISE → D118 [Building automation system]

<b>D89</b>	<b>Main heating equipment</b>	<i>MAINHTX</i>
<b>ASK</b>	IF D88 [Percent heated by type] has equal maximum percents OR DK/RF	
<b>FILL</b>	<p><b>{SourceEquipmentMaxList}</b> = List of the source/equipment combinations with equal maximum percents, for example “the electric furnace or the natural gas boiler”</p> <p><b>{SourceEquipmentMax}</b> = Source/equipment combinations with an equal maximum percent, for example “electric furnace”</p>	
<p>Which do you consider to be your main heating equipment – {SourceEquipmentMaxList}?</p> <p>◆ Only equipment types with equal percentages are shown here</p> <p>1 {SourceEquipmentMax1}</p> <p>2 {SourceEquipmentMax2}</p> <p>3 {Etc.}</p>		
<b>NEXT</b>	<p>IF Main heating equipment known &amp; NOT District steam or hot water &amp; (A24 [Year of construction] &lt; 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D90 [Main heating replaced]</p> <p>IF D4 [Cooling] = Yes → D91 [Percent cooled]</p> <p>OTHERWISE → D118 [Building automation system]</p>	

<b>D90</b>	<b>Main heating replaced</b>	<i>NWMNHT</i>
<b>ASK</b>	IF Main heating equipment known & NOT District steam or hot water & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018)	
<b>FILL</b>	<p><b>{MainSourceEquipment}</b></p> <p>Combination of main heating source and equipment, for example “electric furnace”. If more than one source/equipment combination was selected, the one with the largest percent reported in D88 [Percent heated by type] is used. If D88 [Percent heated by type] has equal maximum percents OR DK/RF, the answer from D89 [Main heating equipment] is used.</p>	
<p>Has the {MainSourceEquipment} been replaced since 2000?</p> <p>◆ EXP: [If there is more than one of this equipment type and at least one has been replaced, answer "Yes."]</p> <p>1 Yes</p> <p>2 No</p>		
<b>NEXT</b>	<p>IF D4 [Cooling] = Yes → D91 [Percent cooled]</p> <p>OTHERWISE → D118 [Building automation system]</p>	

<b>D91</b>	<b>Percent cooled</b>	<i>COOLP</i>
<b>ASK</b>	IF D4 [Cooling] = Yes	
<b>FILL</b>	<b>{SqFt}</b> IF A6 [Square footage] known = A6 [Square footage] IF A6 [Square footage] = DK/RF = "floorspace"	
What percent of the {SqFt} in this building was cooled by air conditioning equipment during 2018?		
<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 Electricity used & NOT District chilled water used → D92 [Electricity only for cooling] IF District chilled water used → D94 [EL or CW for cooling] OTHERWISE → D93 [Sources for cooling]	

<b>D92</b>	<b>Electricity only for cooling</b>	<i>see below</i>
<b>ASK</b>	IF D4 [Cooling] = Yes & (Electricity used & NOT District chilled water used)	
Was electricity the only energy source used for air conditioning in this building in 2018?		
<ol style="list-style-type: none"> <li>1 Yes, electricity was the only energy source for air conditioning <span style="float: right;"><i>ELCOOL</i></span></li> <li>2 No, some other energy source was used in addition to or instead of electricity for air conditioning</li> </ol>		
<b>NEXT</b>	IF Yes → D97 [Cooling routing] IF No → D93 [Sources for cooling] IF DK/RF & (D23 [Percent heated] ≠ 0 OR D91 [Percent cooled] ≠ 0) → D118 [Building automation system] IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D93</b>	<b>Sources for cooling</b>	<i>see below</i>																					
<b>ASK</b>	IF D92 [Electricity only for cooling] = No OR (D4 [Cooling] = Yes & NOT Electricity used & NOT District chilled water used)																						
<p>Which energy source or sources were used for air conditioning?</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%;">11</td> <td style="width: 70%;">Electricity</td> <td style="width: 20%; 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>Propane</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>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	Propane	<i>PRCOOL</i>	15	District steam	<i>STCOOL</i>	17	District chilled water	<i>CWCOOL</i>	24	Some other energy source	<i>OTCOOL</i>
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<b>NEXT</b>	IF Some other energy source selected → D96 [Other type of cooling source] OTHERWISE → D97 [Cooling routing]																						


<b>D94</b>	<b>EL or CW for cooling</b>	<i>see below</i>									
<b>ASK</b>	IF D4 [Cooling] = Yes & District chilled water used										
<b>FILL</b>	<b>{ACSourceList}</b> IF Electricity used & District chilled water used = “(...electricity or district chilled water?)” IF District chilled water used & NOT Electricity used = “(Was district chilled water used?)” <b>{Electricity}</b> = If electricity is used it appears in this list; if not, the line is blank										
<p>Which energy sources were used for air conditioning? {ACSourceList}</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> <li>◆ Only sources already selected are shown here</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;">1</td> <td style="width: 70%;">{Electricity}</td> <td style="width: 20%; text-align: right;"><i>ELCOOL</i></td> </tr> <tr> <td>2</td> <td>District chilled water</td> <td style="text-align: right;"><i>CWCOOL</i></td> </tr> <tr> <td>3</td> <td>Some other energy source</td> <td></td> </tr> </table>			1	{Electricity}	<i>ELCOOL</i>	2	District chilled water	<i>CWCOOL</i>	3	Some other energy source	
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3	Some other energy source										
<b>NEXT</b>	IF Some other energy source → D95 [Other source for cooling] OTHERWISE → D97 [Cooling routing]										

<b>D95</b>	<b>Other source for cooling</b>	<i>see below</i>																					
<b>ASK</b>	IF D94 [EL or CW for cooling] = Some other energy source																						
<p>What was the other energy source used for air conditioning?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%; vertical-align: top;">11</td> <td style="width: 70%;">Electricity</td> <td style="width: 20%; 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>Propane</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>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	Propane	<i>PRCOOL</i>	15	District steam	<i>STCOOL</i>	17	District chilled water	<i>CWCOOL</i>	24	Some other energy source	<i>OTCOOL</i>
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<b>NEXT</b>	IF Some other energy source → D96 [Other type of cooling source] OTHERWISE → D97 [Cooling routing]																						


<b>D96</b>	<b>Other type of cooling source</b>
<b>ASK</b>	IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling]
<p>What was the other energy source used for air conditioning?</p> <p>◆ ENTER the cooling source used</p>	
<b>NEXT</b>	→ D97 [Cooling routing]


<b>D97</b>	<b>Cooling routing</b>
<b>NEXT</b>	<p>IF D91 [Percent cooled] ≠ 0 THEN:</p> <p>IF D92 [Electricity only for cooling] = Yes OR (Electricity IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling]) → D98 [Elec cooling equipment]</p> <p>IF Natural gas IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D101 [Nat gas cooling equipment]</p> <p>IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D103 [Fuel oil cooling equipment]</p> <p>IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment]</p> <p>IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment]</p> <p>IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify]</p> <p>IF District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from]</p> <p>IF D23 [Percent heated] ≠ 0 → D118 [Building automation system]</p> <p>IF D7 [Water heating] = Yes → D128 [Sources for water heating]</p> <p>IF D10 [Cooking] = Yes → D132 [Sources for cooking]</p> <p>IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing]</p> <p>IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar]</p> <p>OTHERWISE → D136 [Electricity generation capability]</p>




<b>D98</b>	<b>Elec cooling equipment</b>	<i>see below</i>														
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (D92 [Electricity only for cooling] = Yes OR (Electricity IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling]))															
<p> SHOW CARD D12</p> <p>Looking at the list of <u>electric</u> cooling equipment types on Show Card D12, 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 border="0" style="width: 100%;"> <tr> <td style="width: 80%;">1 Packaged air conditioning units (such as roof mounted units, or RTUs)</td> <td style="width: 20%; text-align: right;"><i>PKGCL</i></td> </tr> <tr> <td>2 Central chillers that chill water for air conditioning</td> <td style="text-align: right;"><i>CHILLR</i></td> </tr> <tr> <td>3 Heat pumps for cooling</td> <td style="text-align: right;"><i>HTPMPC</i></td> </tr> <tr> <td>4 Residential-type central air conditioners that cool air directly and circulate it without using chilled water</td> <td style="text-align: right;"><i>RCAC</i></td> </tr> <tr> <td>5 Individual room or portable air conditioners</td> <td style="text-align: right;"><i>ACWNWL</i></td> </tr> <tr> <td>6 "Swamp" coolers or evaporative coolers</td> <td style="text-align: right;"><i>EVAPCL</i></td> </tr> <tr> <td>7 Other cooling equipment</td> <td style="text-align: right;"><i>OTCLEQ</i></td> </tr> </table>			1 Packaged air conditioning units (such as roof mounted units, or RTUs)	<i>PKGCL</i>	2 Central chillers that chill water for air conditioning	<i>CHILLR</i>	3 Heat pumps for cooling	<i>HTPMPC</i>	4 Residential-type central air conditioners that cool air directly and circulate it without using chilled water	<i>RCAC</i>	5 Individual room or portable air conditioners	<i>ACWNWL</i>	6 "Swamp" coolers or evaporative coolers	<i>EVAPCL</i>	7 Other cooling equipment	<i>OTCLEQ</i>
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<b>NEXT</b>	IF Other cooling equipment selected → D99 [Elec other cool equip specify] IF Heat pumps selected & NOT Heat pumps for any main or secondary heating equipment → D100 [Heat pump cooling type] IF Natural gas IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D101 [Nat gas cooling equipment] IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D103 [Fuel oil cooling equipment] IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers selected → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one cooling equipment selected → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]															

<b>D99</b>	<b>Elec other cool equip specify</b>
<b>ASK</b>	IF Other cooling equipment IN D98 [Elec cooling equipment]
<p>Please describe the other type of <u>electric</u> cooling equipment.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	<p>IF Heat pumps IN D98 [Elec cooling equipment] &amp;  NOT Heat pumps for any main or secondary heating equipment → D100 [Heat pump cooling type]</p> <p>IF Natural gas IN D93 [Sources for cooling] OR D95 [Other source for cooling]  → D101 [Nat gas cooling equipment]</p> <p>IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling]  → D103 [Fuel oil cooling equipment]</p> <p>IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling]  → D105 [Propane cooling equipment]</p> <p>IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling]  → D107 [District steam cooling equipment]</p> <p>IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling]  → D109 [Other source other cool equip specify]</p> <p>IF Chillers IN D98 [Elec cooling equipment] → D110 [Where is the chiller located]</p> <p>IF District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR  D95 [Other source for cooling] → D113 [Where does CW come from]</p> <p>IF More than one cooling equipment selected IN D98 [Elec cooling equipment]  → D115 [Percent cooled by type]</p> <p>OTHERWISE → D118 [Building automation system]</p>


<b>D100</b>	<b>Heat pump cooling type</b>	<i>see below</i>								
<b>ASK</b>	IF Heat pumps IN D98 [Elec cooling equipment] & NOT Heat pumps for any main or secondary heating equipment									
 SHOW CARD D10  Looking at the list on Show Card D10, please tell me which types of heat pumps are used in this building.  ◆ ENTER all that apply  <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1 Air source heat pump</td> <td style="width: 20%; text-align: right;"><i>HPCAIR</i></td> </tr> <tr> <td>2 Ground source or ground water heat pump (geothermal)</td> <td style="text-align: right;"><i>HPCGRD</i></td> </tr> <tr> <td>3 Combination air source and geothermal</td> <td style="text-align: right;"><i>HPCDUAL</i></td> </tr> <tr> <td>4 Water loop heat pump</td> <td style="text-align: right;"><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 Combination air source and geothermal	<i>HPCDUAL</i>	4 Water loop heat pump	<i>HPCWTR</i>
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<b>NEXT</b>	IF Natural gas IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D101 [Nat gas cooling equipment] IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D103 [Fuel oil cooling equipment] IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] ➔ D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] ➔ D113 [Where does CW come from] IF More than one cooling equipment selected IN D98 [Elec cooling equipment] ➔ D115 [Percent cooled by type] OTHERWISE ➔ D118 [Building automation system]									

<b>D101</b>	<b>Nat gas cooling equipment</b>	<i>see below</i>				
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (Natural gas IN D93 [Sources for cooling] OR D95 [Other source for cooling])					
 SHOW CARD D13 Looking at the list of cooling equipment types on Show Card D13, please tell me which types are fueled by <u>natural gas</u> 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: 70%;">1 Central chillers that chill water for air conditioning</td> <td style="text-align: right;">CHILLR</td> </tr> <tr> <td>2 Other cooling equipment</td> <td style="text-align: right;">OTCLEQ</td> </tr> </table>			1 Central chillers that chill water for air conditioning	CHILLR	2 Other cooling equipment	OTCLEQ
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<b>NEXT</b>	IF Other cooling equipment selected → D102 [Nat gas other cool equip specify] IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D103 [Fuel oil cooling equipment] IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]					


<b>D102</b>	<b>Nat gas other cool equip specify</b>	
<b>ASK</b>	IF Other cooling equipment IN D101 [Nat gas cooling equipment]	
Please describe the other type of cooling equipment that is fueled by <u>natural gas</u> . <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>		
<b>NEXT</b>	IF Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D103 [Fuel oil cooling equipment] IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]	

<b>D103</b>	<b>Fuel oil cooling equipment</b>	<i>see below</i>				
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (Fuel oil/Diesel/Kerosene IN D93 [Sources for cooling] OR D95 [Other source for cooling])					
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene]					
 SHOW CARD D13 <p>Looking at the list of cooling equipment types on Show Card D13, please tell me which types are fueled by <u>{FuelOilType}</u> 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: 80%;">1 Central chillers that chill water for air conditioning</td> <td style="text-align: right;"><i>CHILLR</i></td> </tr> <tr> <td>2 Other cooling equipment</td> <td style="text-align: right;"><i>OTCLEQ</i></td> </tr> </table>			1 Central chillers that chill water for air conditioning	<i>CHILLR</i>	2 Other cooling equipment	<i>OTCLEQ</i>
1 Central chillers that chill water for air conditioning	<i>CHILLR</i>					
2 Other cooling equipment	<i>OTCLEQ</i>					
<b>NEXT</b>	IF Other cooling equipment selected → D104 [Fuel oil other cool equip specify] IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]					

<b>D104</b>	<b>Fuel oil other cool equip specify</b>
<b>ASK</b>	IF Other cooling equipment IN D103 [Fuel oil cooling equipment]
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene]
Please describe the other type of cooling equipment that is fueled by <u>{FuelOilType}</u> . <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	IF Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D105 [Propane cooling equipment] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]

<b>D105</b>	<b>Propane cooling equipment</b>	<i>see below</i>				
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (Propane IN D93 [Sources for cooling] OR D95 [Other source for cooling])					
 SHOW CARD D13  Looking at the list of cooling equipment types on Show Card D13, please tell me which types are fueled by <u>propane</u> 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: 80%;">1 Central chillers that chill water for air conditioning</td> <td style="text-align: right;">CHILLR</td> </tr> <tr> <td>2 Other cooling equipment</td> <td style="text-align: right;">OTCLEQ</td> </tr> </table>			1 Central chillers that chill water for air conditioning	CHILLR	2 Other cooling equipment	OTCLEQ
1 Central chillers that chill water for air conditioning	CHILLR					
2 Other cooling equipment	OTCLEQ					
<b>NEXT</b>	IF Other cooling equipment selected → D106 [Propane other cool equip specify] IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]					

<b>D106</b>	<b>Propane other cool equip specify</b>	
<b>ASK</b>	IF Other cooling equipment IN D105 [Propane cooling equipment]	
Please describe the other type of cooling equipment that is fueled by <u>propane</u> . <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>		
<b>NEXT</b>	IF District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D107 [District steam cooling equipment] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]	


<b>D107</b>	<b>District steam cooling equipment</b>	<i>see below</i>				
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (District steam IN D93 [Sources for cooling] OR D95 [Other source for cooling])					
 SHOW CARD D13  Looking at the list of cooling equipment types on Show Card D13, please tell me which types are fueled by <u>district steam</u> 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: 80%;">1 Central chillers that chill water for air conditioning</td> <td style="text-align: right;">CHILLR</td> </tr> <tr> <td>2 Other cooling equipment</td> <td style="text-align: right;">OTCLEQ</td> </tr> </table>			1 Central chillers that chill water for air conditioning	CHILLR	2 Other cooling equipment	OTCLEQ
1 Central chillers that chill water for air conditioning	CHILLR					
2 Other cooling equipment	OTCLEQ					
<b>NEXT</b>	IF Other cooling equipment selected → D108 [Steam other equip cool specify] IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]					


<b>D108</b>	<b>Steam other equip cool specify</b>	
<b>ASK</b>	IF Other cooling equipment IN D107 [District steam cooling equipment]	
Please describe the other type of cooling equipment that is fueled by <u>district steam</u> . <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>		
<b>NEXT</b>	IF Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D109 [Other source other cool equip specify] IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]	

<b>D109</b>	<b>Other source other cool equip specify</b>
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (Some other energy source IN D93 [Sources for cooling] OR D95 [Other source for cooling])
<p>Please describe the cooling equipment that is fueled by the <u>other energy source</u>.</p> <p>◆ RECORD in open box</p>	
<b>NEXT</b>	IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment] → D110 [Where is the chiller located] IF District chilled water IN D93 [Sources for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]


<b>D110</b>	<b>Where is the chiller located</b>	<i>CHLLOCTN</i>
<b>ASK</b>	IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment]	
<b>FILL</b>	<b>{ChillerNum}</b> IF Chillers reported for only one energy source = "Is the chiller" IF Chillers reported for more than one energy source = "Are the chillers"	
<p>{ChillerNum} located in this building or in another building?</p> <p>1 In this building 2 In another building</p>		
<b>NEXT</b>	→ D111 [Chiller distribution]	




<b>D111</b>	<b>Chiller distribution</b>	<i>see below</i>								
<b>ASK</b>	IF Chillers IN D98 [Elec cooling equipment] OR D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment]									
<b>FILL</b>	<b>{Chillers}</b> IF Chillers reported for only one energy source = "chiller" IF Chillers reported for more than one energy source = "chillers"									
 SHOW CARD D14  Looking at the list of cooling distribution types on Show Card D14, please tell me which one (or ones) are used with the {Chillers} in the building.										
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Central air handlers</td> <td style="width: 50%; text-align: right;"><i>CHLAIR</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>CHLFNCL</i></td> </tr> <tr> <td>3 Chilled beam</td> <td style="text-align: right;"><i>CHLBEAM</i></td> </tr> <tr> <td>4 Other cooling distribution</td> <td style="text-align: right;"><i>CHLOTDIST</i></td> </tr> </table>			1 Central air handlers	<i>CHLAIR</i>	2 Fan coil units	<i>CHLFNCL</i>	3 Chilled beam	<i>CHLBEAM</i>	4 Other cooling distribution	<i>CHLOTDIST</i>
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2 Fan coil units	<i>CHLFNCL</i>									
3 Chilled beam	<i>CHLBEAM</i>									
4 Other cooling distribution	<i>CHLOTDIST</i>									
<b>NEXT</b>	IF D110 [Where is the chiller located] = In this building OR DK/RF → D112 [Type of chiller] IF D110 [Where is the chiller located] = In another building THEN: IF District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]									

<b>D112</b>	<b>Type of chiller</b>	<i>see below</i>						
<b>ASK</b>	IF D110 [Where is the chiller located] = In this building OR DK/RF							
<b>FILL</b>	<b>{Chillers}</b> IF Chillers reported for only one energy source = "chiller is" IF Chillers reported for more than one energy source = "chillers are" <b>{Absorption}</b> IF Chillers reported for only one energy source = "an absorption chiller" IF Chillers reported for more than one energy source = "absorption chillers"							
 SHOW CARD D15  Please look at Show Card D15 and tell me whether the {Chillers} air-cooled, water cooled, or {Absorption}?								
◆ ENTER all that apply								
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 Air-cooled</td> <td style="width: 50%; text-align: right;"><i>CHLAIRCL</i></td> </tr> <tr> <td>2 Water cooled</td> <td style="text-align: right;"><i>CHLWTRCL</i></td> </tr> <tr> <td>3 Absorption</td> <td style="text-align: right;"><i>CHLABSRP</i></td> </tr> </table>			1 Air-cooled	<i>CHLAIRCL</i>	2 Water cooled	<i>CHLWTRCL</i>	3 Absorption	<i>CHLABSRP</i>
1 Air-cooled	<i>CHLAIRCL</i>							
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<b>NEXT</b>	IF District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling] → D113 [Where does CW come from] IF More than one selected cooling source/equipment combination → D115 [Percent cooled by type] OTHERWISE → D118 [Building automation system]							

<b>D113</b>	<b>Where does CW come from</b>	<i>CWLOCTN</i>
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling])	
<p>Does the district chilled water come from a chiller in another building, from a utility, or from a chiller <u>inside</u> this building?</p> <ol style="list-style-type: none"> <li>1 From a chiller in another building</li> <li>2 From a district chilled water utility</li> <li>3 From a chiller <u>inside</u> this building</li> </ol>		
<b>NEXT</b>	➔ D114 [Chilled water distribution]	

<b>D114</b>	<b>Chilled water distribution</b>	<i>see below</i>								
<b>ASK</b>	IF D91 [Percent cooled] ≠ 0 & (District chilled water IN D93 [Sources for cooling] OR D94 [EL or CW for cooling] OR D95 [Other source for cooling])									
<p> SHOW CARD D14</p> <p>Looking at the list of cooling distribution types on Show Card D14, please tell me which one (or ones) are used with the <u>district chilled water</u> in the 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: 80%;">1 Central air handlers</td> <td style="width: 20%; text-align: right;"><i>CWAIR</i></td> </tr> <tr> <td>2 Fan coil units</td> <td style="text-align: right;"><i>CWFNCL</i></td> </tr> <tr> <td>3 Chilled beam</td> <td style="text-align: right;"><i>CWBEAM</i></td> </tr> <tr> <td>4 Other cooling distribution</td> <td style="text-align: right;"><i>CWOTDIST</i></td> </tr> </table>			1 Central air handlers	<i>CWAIR</i>	2 Fan coil units	<i>CWFNCL</i>	3 Chilled beam	<i>CWBEAM</i>	4 Other cooling distribution	<i>CWOTDIST</i>
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2 Fan coil units	<i>CWFNCL</i>									
3 Chilled beam	<i>CWBEAM</i>									
4 Other cooling distribution	<i>CWOTDIST</i>									
<b>NEXT</b>	IF More than one selected cooling source/equipment combination ➔ D115 [Percent cooled by type] OTHERWISE ➔ D118 [Building automation system]									

<b>D115</b>	<b>Percent cooled by type</b> RCACP_EL, PKGCP_EL, CHILP_EL, HTPCP_EL, ACWNWP_EL, EVAPP_EL, OTCLP_EL, CHILP_NG, OTCLP_NG, CHILP_FK, OTCLP_FK, CHILP_PR, OTCLP_PR, CHILP_ST, OTCLP_ST, CHWTP_CW, OTCLP_OT
<b>ASK</b>	For buildings with more than one selected cooling source/equipment combination Question is repeated for each combination
<b>FILL</b>	<p><b>{Introduction}</b>  IF First source/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 source/equipment and D91 [Percent cooled] ≠ 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 source/equipment and D91 [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>{SourceEquipment}</b>  Combination of selected cooling source and equipment, for example: “electric chiller”</p>
 SHOW CARD D16  {Introduction}  {Explanation}  Please look at Show Card D16. What percent of the cooled area in this building is served by the {SourceEquipment}?  ◆ PROBE for estimate if DK	
<b>RANGE</b>	0 to 100
<b>NEXT</b>	IF there are equal maximum percents OR DK/RF → D116 [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) & (A24 [Year of construction] < 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D117 [Main cooling replaced] OTHERWISE → D118 [Building automation system]

<b>D116</b>	<b>Main cooling equipment</b>	<i>MAINCLX</i>
<b>ASK</b>	IF D115 [Percent cooled by type] has equal maximum percents OR DK/RF	
<b>FILL</b>	<p><b>{SourceEquipmentMaxList}</b> = List of the equipments with equal maximum percents, for example "the electric chiller or the heat pump"  <b>{SourceEquipmentMax}</b> = Source/equipment combinations with an equal maximum percent, for example "electric chiller"</p>	
<p>Which do you consider to be your main cooling equipment – {SourceEquipmentMaxList} ?</p> <ul style="list-style-type: none"> <li>◆ Only equipment types with equal percentages are shown here</li> </ul> <ol style="list-style-type: none"> <li>1 {SourceEquipmentMax1}</li> <li>2 {SourceEquipmentMax2}</li> <li>3 {Etc.}</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; (A24 [Year of construction] &lt; 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018) → D117 [Main cooling replaced]  OTHERWISE → D118 [Building automation system]</p>	

<b>D117</b>	<b>Main cooling replaced</b>	<i>NWMNCL</i>
<b>ASK</b>	<p>IF Main cooling equipment known &amp; NOT District chilled water &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; (A24 [Year of construction] &lt; 2000 OR A25 [Year of construction category] ≠ 2000 to 2009 OR 2010 to 2012 OR 2013 to 2018)</p>	
<b>FILL</b>	<p><b>{MainCoolSourceEquipment}</b>  Combination of main cooling source and equipment, for example "electric chiller". If more than one source/equipment combination was selected, the one with the largest percent reported in D115 [Percent cooled by type] is used. If D115 [Percent cooled by type] has equal maximum percents OR DK/RF, the answer from D116 [Main cooling equipment] is used.</p>	
<p>Has the {MainCoolSourceEquipment} been replaced since 2000?</p> <ul style="list-style-type: none"> <li>◆ EXP: [If there is more than one of this equipment type and at least one has been replaced, the answer is "Yes."]</li> </ul> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	→ D118 [Building automation system]	

<b>D118</b>	<b>Building automation system</b>	<i>EMCS</i>
<b>ASK</b>	IF D23 [Percent heated] ≠ 0 OR D91 [Percent cooled] ≠ 0	
<p>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?</p> <p>◆ 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.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → D119 [BAS system controls] IF No OR DK/RF → D120 [Smart thermostats]	

<b>D119</b>	<b>BAS system controls</b>	<i>see below</i>
<b>ASK</b>	IF D118 [Building automation system] = Yes	
<b>FILL</b>	<p><b>{HeatingCooling}</b>  IF D23 [Percent heated] ≠ 0 AND D91 [Percent cooled] ≠ 0 = “heating, cooling,”  IF D23 [Percent heated] ≠ 0 only = “heating”  IF D91 [Percent cooled] ≠ 0 only = “cooling”</p> <p><b>{Heating}</b>  IF D23 [Percent heated] ≠ 0 = “heating”, OTHERWISE blank</p> <p><b>{Cooling}</b>  IF D91 [Percent cooled] ≠ 0 = “cooling”, OTHERWISE blank</p>	
<p>Does the Building Automation System control the {HeatingCooling} and/or lighting?</p> <p>◆ ENTER all that apply</p> <p>1 {Heating} <span style="float: right;"><i>EMCSHT</i></span>  2 {Cooling} <span style="float: right;"><i>EMCSCL</i></span>  3 Lighting <span style="float: right;"><i>EMCSLT</i></span></p>		
<b>NEXT</b>	IF (D23 [Percent heated] ≠ 0 & Any heating equipment other than Individual space heater OR Fireplace reported) OR (Any cooling equipment other than Individual room air conditioner reported) → D125 [Airflow control] OTHERWISE → D127 [Regular HVAC maintenance]	


<b>D120</b>	<b>Smart thermostats</b>	<i>SMRTTHRM</i>
<b>ASK</b>	IF D118 [Building automation system] = No OR DK/RF	
<p>Does this building use any “smart” or internet-connected thermostats?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF No OR DK/RF:  IF D23 [Percent heated] ≠ 0 → D121 [Reduce heating]  IF D91 [Percent cooled] ≠ 0 → D123 [Reduce cooling]  IF Yes THEN:  IF (D23 [Percent heated] ≠ 0 &amp; Any heating equipment other than Individual space heater OR  Fireplace reported) OR (Any cooling equipment other than Individual room air conditioner  reported → D125 [Airflow control]  OTHERWISE → D127 [Regular HVAC maintenance]</p>	

<b>D121</b>	<b>Reduce heating</b>	<i>RDHTNF</i>
<b>ASK</b>	IF D120 [Smart thermostats] = No OR DK/RF & D23 [Percent heated] ≠ 0	
<b>FILL</b>	<p><b>{TimesNotInFullUse}</b>  IF C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [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”</p>	
<p>{TimesNotInFullUse} a change in the temperature setting for heating?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	<p>IF Yes → D122 [How reduce heating]  IF No OR DK/RF THEN:  IF D91 [Percent cooled] ≠ 0 → D123 [Reduce cooling]  IF Any heating equipment other than Individual space heater OR Fireplace reported  → D125 [Airflow control]  OTHERWISE → D127 [Regular HVAC maintenance]</p>	

<b>D122</b>	<b>How reduce heating</b>	<i>HWRDHT</i>
<b>ASK</b>	IF D121 [Reduce heating] = Yes	
<p>How is the temperature for heating usually changed – 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 Programmable thermostat</li> <li>2 Manually change thermostat</li> <li>3 Manually shut down equipment</li> </ol>		
<b>NEXT</b>	IF D91 [Percent cooled] ≠ 0 → D123 [Reduce cooling] IF Any heating equipment other than Individual space heater OR Fireplace reported → D125 [Airflow control] OTHERWISE → D127 [Regular HVAC maintenance]	

<b>D123</b>	<b>Reduce cooling</b>	<i>RDCLNF</i>
<b>ASK</b>	IF D120 [Smart thermostats] = No OR DK/RF & D91 [Percent cooled] ≠ 0	
<b>FILL</b>	<p><b>{TimesNotInFullUse}</b>          IF C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [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"</p>	
<p>{TimesNotInFullUse} a change in the temperature setting for <u>cooling</u>?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → D124 [How reduce cooling] IF No OR DK/RF THEN: IF (D23 [Percent heated] ≠ 0 & Any heating equipment other than Individual space heater OR Fireplace reported) OR Any cooling equipment other than Individual room air conditioner reported → D125 [Airflow control] OTHERWISE → D127 [Regular HVAC maintenance]	

<b>D124</b>	<b>How reduce cooling</b>	<i>HWRDCL</i>
<b>ASK</b>	IF D123 [Reduce cooling] = Yes	
<p>How is the temperature for cooling usually changed – using a programmable thermostat, manually changing the thermostat, or manually shutting down the equipment?</p> <ul style="list-style-type: none"> <li>◆ DEF: [A programmable thermostat, or "time-clock thermostat" is programmed to automatically change thermostat settings for times when the building is unoccupied.]</li> </ul> <ol style="list-style-type: none"> <li>1 Programmable thermostat</li> <li>2 Manually change thermostat</li> <li>3 Manually shut down equipment</li> </ol>		
<b>NEXT</b>	IF (D23 [Percent heated] ≠ 0 & Any heating equipment other than Individual space heater OR Fireplace reported) OR Any cooling equipment other than Individual room air conditioner reported → D125 [Airflow control] OTHERWISE → D127 [Regular HVAC maintenance]	

<b>D125</b>	<b>Airflow control</b>									
<b>ASK</b>	IF (D23 [Percent heated] ≠ 0 & Any heating equipment other than Individual space heater OR Fireplace reported) OR Any cooling equipment other than Individual room air conditioner reported									
<p> SHOW CARD D17</p> <p>Please look at Show Card D17. Are any of these types of systems used to control the airflow in this building?</p> <ul style="list-style-type: none"> <li>◆ ENTER all that apply</li> </ul> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">1 Variable air volume (VAV) system</td> <td style="width: 30%; text-align: right;">VAV</td> </tr> <tr> <td>2 Dedicated outside air system (DOAS)</td> <td style="text-align: right;">DOAS</td> </tr> <tr> <td>3 Demand controlled ventilation (DCV)</td> <td style="text-align: right;">FKWATR</td> </tr> <tr> <td>4 None of these types</td> <td style="text-align: right;">NOVENT</td> </tr> </table>			1 Variable air volume (VAV) system	VAV	2 Dedicated outside air system (DOAS)	DOAS	3 Demand controlled ventilation (DCV)	FKWATR	4 None of these types	NOVENT
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<b>NEXT</b>	IF Any cooling equipment other than Individual room air conditioner reported → D126 [Economizer cycle] OTHERWISE → D127 [Regular HVAC maintenance]									

<b>D126</b>	<b>Economizer cycle</b>	<i>ECN</i>
<b>ASK</b>	IF Any cooling equipment other than Individual room air conditioner reported	
<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 (Packaged air conditioning units OR Chillers OR Heat pumps for cooling IN D98 [Elec cooling equipment]) OR (Chillers IN D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment]) → D126a [Cooling tower] OTHERWISE → D127 [Regular HVAC maintenance]	



<b>D126a</b>	<b>Cooling tower</b>	<i>CTOWER</i>
<b>ASK</b>	IF (Packaged air conditioning units OR Chillers OR Heat pumps for cooling IN D98 [Elec cooling equipment]) OR (Chillers IN D101 [Nat gas cooling equipment] OR D103 [Fuel oil cooling equipment] OR D105 [Propane cooling equipment] OR D107 [District steam cooling equipment])	
<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>	→ D127 [Regular HVAC maintenance]	

<b>D127</b>	<b>Regular HVAC maintenance</b>	<i>MAINT</i>
<b>ASK</b>	IF D23 [Percent heated] ≠ 0 OR D91 [Percent cooled] ≠ 0	
<b>FILL</b>	<b>{HeatCool}</b> IF Heating only = "heating" IF Cooling only = "cooling" IF Heating & Cooling = "heating and cooling"	
<p>Is there any regularly scheduled maintenance and repair for the {HeatCool} system?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF D7 [Water heating] = Yes → D128 [Sources for water heating] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D128</b>	<b>Sources for water heating</b>	<i>see below</i>																																							
<b>ASK</b>	IF D7 [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 D15 [Fuel oil, diesel, or kerosene]  <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D18 [Other energy source 1] – D20 [Other energy source 3]</p>																																								
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<b>NEXT</b>	IF Some other energy source selected → D129 [Other water heating source] OTHERWISE → D130 [Water heating equipment]																																								

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<b>NEXT</b>	→ D130 [Water heating equipment]																															

<b>D130</b>	<b>Water heating equipment</b>	<i>WTHTEQ</i>
<b>ASK</b>	IF D7 [Water heating] = Yes	
<p>Does this building have centralized water heaters, "point-of-use" water heaters, or both of these types (of water heaters)? Point-of-use water heaters may also be referred to as "tankless" water heaters.</p> <p>1 One or more centralized water heaters  2 One or more "point-of-use" water heaters  3 Both types</p>		
<b>NEXT</b>	IF CBECS Activity = Food service OR Inpatient health OR B15 [Service type] = Dry cleaner or Laundromat OR Car wash → D131 [Booster water heaters] IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	

<b>D131</b>	<b>Booster water heaters</b>	<i>BOOSTWT</i>
<b>ASK</b>	IF D7 [Water heating] = Yes & (CBECS Activity = Food service OR Inpatient health OR B15 [Service type] = Dry cleaner or Laundromat OR Car wash)	
<p>Does this building have any "booster" water heaters, which are used to increase the water temperature up to 195 degrees, often for the purpose of sanitizing?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF D10 [Cooking] = Yes → D132 [Sources for cooking] IF D12 [Manufacturing] = Yes → D134 [Sources for manufacturing] IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]	


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<b>NEXT</b>	IF D17 [Type of solar] = Solar panels → D138 [Generation technologies other than solar] OTHERWISE → D136 [Electricity generation capability]																												


<b>D136</b>	<b>Electricity generation capability</b>	<i>CAPGEN</i>
<b>ASK</b>	IF NOT D17 [Type of solar] = Solar panels	
<p>Does this building have the ability to generate electricity on-site, such as from solar panels or a generator? Please include generation equipment even if it is used for emergency backup purposes.</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → D137 [Generation technologies] OTHERWISE: IF Electricity used → D144 [EV charging stations] IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used → D145 [Natural gas dryers] OTHERWISE → D146 [Any other sources]	

<b>D137</b>	<b>Generation technologies</b>	<i>see below</i>														
<b>ASK</b>	IF D136 [Electricity generation capability] = Yes															
<p> SHOW CARD D18</p> <p>Looking at Show Card D18, 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: none;"> <tr> <td style="width: 80%;">1 Solar panels used to generate electricity</td> <td style="width: 20%;"><i>PVC</i></td> </tr> <tr> <td>2 Reciprocating engine generator</td> <td><i>ENGINE</i></td> </tr> <tr> <td>3 Fuel cells</td> <td><i>FUELCL</i></td> </tr> <tr> <td>4 Large turbines</td> <td><i>LRGTRB</i></td> </tr> <tr> <td>5 Microturbines</td> <td><i>MCROTB</i></td> </tr> <tr> <td>6 Wind turbines</td> <td><i>WINDTRB</i></td> </tr> <tr> <td>7 Other technology to generate electricity on-site</td> <td><i>OTGENTECH</i></td> </tr> </table>			1 Solar panels used to generate electricity	<i>PVC</i>	2 Reciprocating engine generator	<i>ENGINE</i>	3 Fuel cells	<i>FUELCL</i>	4 Large turbines	<i>LRGTRB</i>	5 Microturbines	<i>MCROTB</i>	6 Wind turbines	<i>WINDTRB</i>	7 Other technology to generate electricity on-site	<i>OTGENTECH</i>
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7 Other technology to generate electricity on-site	<i>OTGENTECH</i>															
<b>NEXT</b>	IF Other technology to generate electricity on-site → D139 [Other gener tech specify] IF DK/RF OR (ONLY Solar panels OR Wind turbines) THEN: IF Electricity used → D144 [EV charging stations] IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used → D145 [Natural gas dryers] OTHERWISE → D146 [Any other sources] OTHERWISE → D140 [Cogeneration system]															

<b>D138</b>	<b>Generation technologies other than solar</b>	<i>see below</i>		
<b>ASK</b>	IF D17 [Type of solar] = Solar panels			
 SHOW CARD D19  Earlier you mentioned that solar panels were used to generate electricity for this building. Looking at Show Card D19, were any of the other technologies on the list used on-site for generating electricity?				
<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: 80%; border: none;"> <ol style="list-style-type: none"> <li>1 No other electricity generation technologies used</li> <li>2 Reciprocating engine generator</li> <li>3 Fuel cells</li> <li>4 Large turbines</li> <li>5 Microturbines</li> <li>6 Wind turbines</li> <li>7 Other technology to generate electricity on-site</li> </ol> </td> <td style="width: 20%; border: none; vertical-align: top;"> <i>ENGINE FUELCL LRGTRB MCROTB WINDTRB OTGENTECH</i> </td> </tr> </table>			<ol style="list-style-type: none"> <li>1 No other electricity generation technologies used</li> <li>2 Reciprocating engine generator</li> <li>3 Fuel cells</li> <li>4 Large turbines</li> <li>5 Microturbines</li> <li>6 Wind turbines</li> <li>7 Other technology to generate electricity on-site</li> </ol>	<i>ENGINE FUELCL LRGTRB MCROTB WINDTRB OTGENTECH</i>
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<b>NEXT</b>	IF Other technology to generate electricity on-site → D139 [Other gener tech specify] IF DK/RF OR (ONLY No other technologies OR Wind turbines) THEN: IF Electricity used → D144 [EV charging stations] IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used → D145 [Natural gas dryers] OTHERWISE → D146 [Any other sources] OTHERWISE → D140 [Cogeneration system]			

<b>D139</b>	<b>Other gener tech specify</b>
<b>ASK</b>	IF Other technology to generate electricity on-site IN D137 [Generation technologies] OR D138 [Generation technologies other than solar]
Please describe the other way that this building generates electricity on-site.	
<ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	→ D140 [Cogeneration system]

<b>D140</b>	<b>Cogeneration system</b>	<i>COGEN</i>
<b>ASK</b>	IF Any technology other than Solar panels or Wind turbines in D137 [Generation technologies] OR Any response other than No other technologies or Wind turbines in D138 [Generation technologies other than solar]	
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?		
<ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	→ D141 [Sources for electricity generation]	

<b>D141</b>	<b>Sources for electricity generation</b>	<i>see below</i>																											
<b>ASK</b>	IF Any technology other than Solar panels or Wind turbines in D137 [Generation technologies] OR Any response other than No other technologies or Wind turbines in D138 [Generation technologies other than solar]																												
<b>FILL</b>	<b>{GenrTechList}</b> = List of generation technologies used excluding Solar and Wind <b>{Other1}</b> – <b>{Other3}</b> = Sources specified in D18 [Other energy source 1] – D20 [Other energy source 3]																												
 SHOW CARD D20  Looking at Show Card D20, please tell me which energy sources were used for the {GenrTechList}. <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: 15%;">12</td> <td style="width: 70%;">Natural gas</td> <td style="width: 15%; 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>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>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	Propane	<i>PRGENR</i>	18	Wood	<i>WOGENR</i>	19	Coal	<i>COGENR</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>	➔ D142 [Use of generated electricity]																												

<b>D142</b>	<b>Use of generated electricity</b>	<i>GENUSE</i>
<b>ASK</b>	IF Any technology other than Solar panels or Wind turbines in D137 [Generation technologies] OR Any response other than No other technologies or Wind turbines in D138 [Generation technologies other than solar]	
During 2018, was the electricity generated in this building used: primarily for emergency back-up or testing, only during periods of high electricity demand, or whenever electricity was used? <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 or testing OR During periods of high electricity demand ➔ D143 [Energy for generation] IF Electricity used ➔ D144 [EV charging stations] IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used ➔ D145 [Natural gas dryers] OTHERWISE ➔ D146 [Any other sources]	



<b>D143</b>	<b>Energy for generation</b>	<i>GENR</i>
<b>ASK</b>	IF D142 [Use of generated electricity] = Primarily for emergency back-up or testing OR During periods of high electricity demand	
<p>Was any energy actually <u>used</u> for generating electricity in this building during 2018, even if just a small amount was used for emergency backup or for testing generators?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Electricity used → D144 [EV charging stations] IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used → D145 [Natural gas dryers] OTHERWISE → D146 [Any other sources]	

<b>D144</b>	<b>EV charging stations</b>	<i>GENR</i>
<b>ASK</b>	IF Electricity used	
<p>Are there any electric vehicle charging stations associated with this building, either inside or outside the building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used → D145 [Natural gas dryers] OTHERWISE → D146 [Any other sources]	

<b>D145</b>	<b>Natural gas dryers</b>	<i>NGDRY</i>
<b>ASK</b>	IF B15 [Service type] = Dry cleaner or laundromat & Natural gas used	
<p>Are there any clothes dryers that use natural gas in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	→ D146 [Any other sources]	

<b>D146</b>	<b>Any other sources</b>
<b>ASK</b>	IF D14 [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 {SourcesList}?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	<p>IF Yes → D147 [Other sources]  IF No OR DK/RF:  Check that every energy source given in D14 [Energy sources used] (other than electricity) was assigned an end use. THEN:  IF Yes:  IF Propane used → D150 [Propane amount]  IF Wood used → D152 [Amount wood burned]  IF Heating OR Cooling → D156 [Energy management plan]  OTHERWISE → E1 [Section E Routing]  IF No → D149 [Missed {energy source} use]</p>

<b>D147</b>	<b>Other sources</b>	<i>see below</i>																																	
<b>ASK</b>	IF D146 [Any other sources] =Yes																																		
<b>FILL</b>	<b>{Electricity} – {Coal}</b> = If a source has NOT been mentioned, it appears in this list; if it has, the line is blank																																		
<p>What other sources were used?</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: 15%;">11</td> <td style="width: 65%;">{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/Diesel/Kerosene}</td> <td style="text-align: right;"><i>FKUSED</i></td> </tr> <tr> <td>14</td> <td>{Propane}</td> <td style="text-align: right;"><i>PRUSED</i></td> </tr> <tr> <td>15</td> <td>{District steam}</td> <td style="text-align: right;"><i>STUSED</i></td> </tr> <tr> <td>16</td> <td>{District hot water}</td> <td style="text-align: right;"><i>HWUSED</i></td> </tr> <tr> <td>17</td> <td>{District chilled water}</td> <td style="text-align: right;"><i>CWUSED</i></td> </tr> <tr> <td>18</td> <td>{Wood}</td> <td style="text-align: right;"><i>WOUSED</i></td> </tr> <tr> <td>19</td> <td>{Coal}</td> <td style="text-align: right;"><i>COUSED</i></td> </tr> <tr> <td>20</td> <td>{Solar thermal}</td> <td style="text-align: right;"><i>SOUSED</i></td> </tr> <tr> <td>24</td> <td>Other</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/Diesel/Kerosene}	<i>FKUSED</i>	14	{Propane}	<i>PRUSED</i>	15	{District steam}	<i>STUSED</i>	16	{District hot water}	<i>HWUSED</i>	17	{District chilled water}	<i>CWUSED</i>	18	{Wood}	<i>WOUSED</i>	19	{Coal}	<i>COUSED</i>	20	{Solar thermal}	<i>SOUSED</i>	24	Other	<i>OTUSED</i>
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<b>NEXT</b>	<p>IF District chilled water selected, check that every energy source given in D14 [Energy sources used] (other than electricity) was assigned an end use. THEN:  IF Yes:  IF Propane used → D150 [Propane amount]  IF Wood used → D152 [Amount wood burned]  IF Heating OR Cooling → D156 [Energy management plan]  OTHERWISE → E1 [Section E Routing]  IF No → D149 [Missed {energy source} use]  OTHERWISE → D148 [{Energy source} use]</p>																																		

<b>D148</b>	<b>{Energy source} use</b> <i>see below where {XX} is the energy source abbreviation</i>																
<b>ASK</b>	For each source except District chilled water selected in D147 [Other sources]																
<b>FILL</b>	<p><b>{EnergySource}</b>  IF Electricity IN D147 [Other sources] = "electricity"  IF Natural gas IN D147 [Other sources] = "natural gas"  IF Fuel oil/Diesel/Kerosene IN D147 [Other sources] = "fuel oil/diesel/kerosene"  IF Propane IN D147 [Other sources] = "propane"  IF District steam IN D147 [Other sources] = "district steam"  IF District hot water IN D147 [Other sources] = "district hot water"  IF Wood IN D147 [Other sources] = "wood"  IF Coal IN D147 [Other sources] = "coal"  IF Solar thermal IN D147 [Other sources] = "solar thermal"  IF Other IN D147 [Other sources] = "other fuel"</p> <p><b>{Cooling}</b>  Does not appear as a choice for District hot water, Wood, Coal, OR Solar thermal</p> <p><b>{Electricity generation}</b>  Does not appear as a choice for Electricity, District steam, OR District hot water</p>																
<p>What was the {EnergySource} used for?</p> <table> <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>D149</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 D14 [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 D15 [Fuel oil, diesel, or kerosene]  IF No end use for Propane = "propane"  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 thermal = "solar thermal"  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  <b>{Cooling}</b>  Does not appear as a choice for District hot water, Wood, Coal, OR Solar thermal  <b>{Electricity generation}</b>  Does not appear as a choice for District chilled water, District steam OR District hot water</p>																
<p>I have recorded that {EnergySource} was used in this building but not how it was used. What was the {EnergySource} used for?</p> <table> <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>	IF Propane used → D150 [Propane amount] IF Wood used → D152 [Amount wood burned] IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]																

**NOTE ON USES OF ENERGY:**


In addition to the end uses given in D1 [Heating], D4 [Cooling], D7 [Water heating], D10 [Cooking], and D12 [Manufacturing], it is now possible that an end use was added in D148 [{Energy source} use] OR D149 [Missed {energy source} use]. For the rest of this questionnaire, end uses will just simply be stated, for example: "IF Cooking" would mean: IF D10 [Cooking] =Yes OR Cooking was added as an end use in D148 [{Energy source} use] OR in D149 [Missed {energy source} use].

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

IF D1 [Heating] = Yes OR D4 [Cooling] = Yes OR D7 [Water heating] = Yes OR D10 [Cooking] = Yes OR D12 [Manufacturing] = Yes OR D13 [Any energy used] = Yes, some energy was used OR DK/RF


<b>D150</b>	<b>Propane amount</b>	<i>PRAMTC</i>
<b>ASK</b>	IF Propane used	
 SHOW CARD D21  You mentioned that propane is used in this building. Looking at Show Card D21, which range best describes the amount of propane used in 2018?  1 Less than 100 2 100 to 499 3 500 to 999 4 1,000 or more		
<b>NEXT</b>	IF Amount given → D151 [Propane units] IF DK/RF: IF Wood used → D152 [Amount wood burned] IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D151</b>	<b>Propane units</b>	<i>PRUNIT</i>
<b>ASK</b>	IF D150 [Propane amount] was answered	
◆ VERIFY if volunteered in previous question  Is that in gallons or pounds?  1 Gallons 2 Pounds		
<b>NEXT</b>	IF Wood used → D152 [Amount wood burned] IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D152</b>	<b>Amount wood burned</b>	<i>WOAMT</i>
<b>ASK</b>	IF Wood used	
 SHOW CARD D22  Looking at Show Card D22, which range best describes how much wood was burned in this building in 2018?  1 Less than 1 cord 2 1 to 9 cords 3 10 to 20 cords 4 More than 20 cords		
<b>NEXT</b>	→ D153 [How obtain wood]	

<b>D153</b>	<b>How obtain wood</b>	WOSRC
<b>ASK</b>	IF Wood used	
<p>Did you purchase all the wood, obtain it all free of charge, or was some purchased and some free?</p> <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 → D154 [Expenditures for wood] IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D154</b>	<b>Expenditures for wood</b>	WOEXP
<b>ASK</b>	IF D153 [How obtain wood] = Purchased 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 2018.</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 → D155 [Wood expenditures category] IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]	


<b>D155</b>	<b>Wood expenditures category</b>	WOEXPC
<b>ASK</b>	IF D154 [Expenditures for wood] = DK/RF	
<p> SHOW CARD D23</p> <p>Looking at Show Card D23, which range best describes the total amount spent for the wood used in 2018?</p> <ol style="list-style-type: none"> <li>1 \$1 to \$100</li> <li>2 \$101 to \$500</li> <li>3 \$501 to \$1,000</li> <li>4 \$1,001 to \$2,000</li> <li>5 Over \$2,000</li> </ol>		
<b>NEXT</b>	IF Heating OR Cooling → D156 [Energy management plan] OTHERWISE → E1 [Section E Routing]	

<b>D156</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) OR CBECS Activity = Nursing OR            (B12 [Education type] = Elementary or middle school OR High school &amp;            B41 [On a multibuilding complex] = No) OR B40 [Food court] = Yes → E2 [Type of food area]            IF Water heating → E9 [Large amounts of hot water]            IF CBECS Activity = Lodging OR Inpatient health care → E10 [Laundry onsite]            IF B5 [Office type] = Doctor's or dentist's office OR Mixed-use office            OR B14 [Health care type] = Doctor's or dentist's office            OR CBECS Activity = Outpatient health care → E13 [Medical equipment]            IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service            → E20 [Laboratory equipment]            IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment]            IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink]            IF CBECS Activity = Food sales; Food service; Public order and safety; OR Religious worship            → E26 [Sterilizers or autoclaves]            IF Electricity NOT used &amp; D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity]            OTHERWISE → E28 [Refrigeration]</p>



<b>E2</b>	<b>Type of food area</b>	<i>FDRM</i>																
<b>ASK</b>	IF (Cooking & CBECS Activity ≠ Food service) OR (Any energy used & (CBECS Activity = Nursing OR (B12 [Education type] = Elementary or middle school OR High school & B41 [On a multibuilding complex] = No) OR B40 [Food court] = Yes)																	
<b>FILL</b>	<b>{FoodCourtIntro}</b> IF B40 [Food court] = Yes = "In addition to the food court that was mentioned earlier, which" OTHERWISE = "Which"																	
 <b>SHOW CARD E1</b>  The next questions are about uses of space and equipment in this building.  Please look at Show Card E1. {FoodCourtIntro} of these types of food preparation or serving areas are found 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: 70%;">1 Snack bar or concession stand</td> <td style="width: 30%; text-align: right;"><i>SNACK</i></td> </tr> <tr> <td>2 Employee lounge, breakroom, vending area, or pantry</td> <td style="text-align: right;"><i>BREAKRM</i></td> </tr> <tr> <td>3 Fast food or small restaurant</td> <td style="text-align: right;"><i>FASTFD</i></td> </tr> <tr> <td>4 Cafeteria or large restaurant</td> <td style="text-align: right;"><i>CAF</i></td> </tr> <tr> <td>5 Large kitchen, commercial kitchen, or other large food preparation area</td> <td style="text-align: right;"><i>FDPREP</i></td> </tr> <tr> <td>6 Small kitchen area</td> <td style="text-align: right;"><i>KITCHN</i></td> </tr> <tr> <td>7 Other type of food preparation or serving area</td> <td style="text-align: right;"><i>OTFDRM</i></td> </tr> <tr> <td>8 None of these</td> <td style="text-align: right;"><i>NOFDRM</i></td> </tr> </table>			1 Snack bar or concession stand	<i>SNACK</i>	2 Employee lounge, breakroom, vending area, or pantry	<i>BREAKRM</i>	3 Fast food or small restaurant	<i>FASTFD</i>	4 Cafeteria or large restaurant	<i>CAF</i>	5 Large kitchen, commercial kitchen, or other large food preparation area	<i>FDPREP</i>	6 Small kitchen area	<i>KITCHN</i>	7 Other type of food preparation or serving area	<i>OTFDRM</i>	8 None of these	<i>NOFDRM</i>
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8 None of these	<i>NOFDRM</i>																	
<b>NEXT</b>	IF ONLY Employee lounge, breakroom, vending area, or pantry selected → E3 [Cooking in break room] IF Other type of food preparation or serving area selected → E4 [Other food area] IF Snack bar or concession stand selected → E5 [Snack bar square footage] IF Fast food or small restaurant selected → E6 [Fast food square footage] IF Cafeteria or large restaurant selected → E7 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area selected → E8 [Commercial kitchen square footage] <b>OTHERWISE:</b> 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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] <b>OTHERWISE → E28 [Refrigeration]</b>																	

<b>E3</b>	<b>Cooking in break room</b>	<i>COOKBRK</i>
<b>ASK</b>	IF ONLY Employee lounge/breakroom/pantry 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>	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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E4</b>	<b>Other food area</b>
<b>ASK</b>	IF Other type of food preparation or serving area 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>	IF Snack bar or concession stand IN E2 [Type of food area] → E5 [Snack bar square footage] IF Fast food or small restaurant IN E2 [Type of food area] → E6 [Fast food square footage] IF Cafeteria or large restaurant IN E2 [Type of food area] → E7 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area IN E2 [Type of food area] → E8 [Commercial kitchen square footage] 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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]

<b>E5</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 total square footage of all the snack bar or concession stand areas 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>	IF Fast food or small restaurant IN E2 [Type of food area] → E6 [Fast food square footage] IF Cafeteria or large restaurant IN E2 [Type of food area] → E7 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area IN E2 [Type of food area] → E8 [Commercial kitchen square footage] 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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E6</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 total square footage of all the fast food or small restaurant areas 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>	IF Cafeteria or large restaurant IN E2 [Type of food area] → E7 [Cafeteria square footage] IF Large kitchen, commercial kitchen, or other large food preparation area IN E2 [Type of food area] → E8 [Commercial kitchen square footage] 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 B14 [Health care type] = Doctor's or dentist's office OR CBECs Activity = Outpatient health care → E13 [Medical equipment] IF CBECs Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECs Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECs Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECs Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E7</b>	<b>Cafeteria square footage</b>	<i>CAFSP</i>
<b>ASK</b>	IF Cafeteria or large restaurant IN E2 [Type of food area]	
<p>What is the total square footage of all the cafeteria or large restaurant areas 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>	IF Large kitchen, commercial kitchen, or other large food preparation area IN E2 [Type of food area] → E8 [Commercial kitchen square footage] 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 B14 [Health care type] = Doctor's or dentist's office OR CBECs Activity = Outpatient health care → E13 [Medical equipment] IF CBECs Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECs Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECs Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECs Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E8</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 total square footage of all the commercial kitchen or food preparation areas in this building?</p> <p>◆ EXP: PROBE for estimate if DK</p>		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<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	
<p>{Introduction}</p> <p>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?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	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 B14 [Health care type] = Doctor's or dentist's office OR CBECS Activity = Outpatient health care → E13 [Medical equipment] IF CBECS Activity = Education; Laboratory; Office; Public assembly; Retail; OR Service → E20 [Laboratory equipment] IF CBECS Activity = Nonrefrigerated OR Refrigerated warehouse → E21 [Machine equipment] IF CBECS Activity = Enclosed mall → E25 [Indoor ice rink] IF CBECS Activity = Food sales; Food service; Public order and safety; OR Religious worship → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [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	
<p>Are the linens primarily laundered in this building, in another building on-site, or by an off-site laundry service?</p> <p>◆ EXP: [Linens include sheets, bedding, towels, tablecloths, and napkins.]</p> <ol style="list-style-type: none"> <li>1 In this building</li> <li>2 In another building on-site</li> <li>3 By an off-site laundry service</li> </ol>		
<b>NEXT</b>	IF B14 [Health care type] = Inpatient rehabilitation center → E13 [Medical equipment] IF CBECS Activity = Inpatient health care → E20 [Laboratory equipment] IF (B19 [Lodging type] = Hotel OR Motel, inn, or bed and breakfast) OR (B21 [Residential type] = Hotel OR Motel, inn, or bed and breakfast) → E11 [Conference or event space] IF CBECS Activity = Lodging → E22 [Indoor pool] IF CBECS Activity = Nursing → E26 [Sterilizers or autoclaves]	

<b>E11</b>	<b>Conference or event space</b>	<i>CONFSP</i>
<b>ASK</b>	IF Any energy used & (B19 [Lodging type] = Hotel OR Motel, inn, or bed and breakfast) OR (B21 [Residential type] = Hotel OR Motel, inn, or bed and breakfast)	
<p>Is there any space in this building used for conferences or social events?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → E12 [Percent conference or event space] IF No OR DK/RF → E22 [Indoor pool]	

<b>E12</b>	<b>Percent conference or event space</b>	<i>CONFSP</i>
<b>ASK</b>	IF E11 [Conference or event space] = Yes	
<p>About what percent of the total floorspace in the building is used for these events?</p>		
<b>RANGE</b>	1 to 100	
<b>NEXT</b>	→ E22 [Indoor pool]	

<b>E13</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 OR Inpatient rehabilitation center OR CBECS Activity = Outpatient health care	
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 E13 [Medical equipment] = Yes → E14 [Number of X-ray machines] IF CBECS Activity = Outpatient health care → E19 [Outpatient surgery] IF CBECS Activity = Office → E20 [Laboratory equipment]	
<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 E13 [Medical equipment] = Yes → CHANGE the CBECS Activity = Outpatient health care IF E13 [Medical equipment] = No → KEEP the CBECS Activity = Office	

<b>E14</b>	<b>Number of X-ray machines</b>	<i>XRAYN</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Inpatient health care OR E13 [Medical equipment] = Yes	
How many X-ray machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E15 [Number of CT scan machines]	

<b>E15</b>	<b>Number of CT scan machines</b>	<i>CTSCANN</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Inpatient health care OR E13 [Medical equipment] = Yes	
How many CT scan machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E16 [Number of MRI machines]	

<b>E16</b>	<b>Number of MRI machines</b>	<i>MRIN</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Inpatient health care OR E13 [Medical equipment] = Yes	
How many MRI machines are used in this building?		
<b>RANGE</b>	0 to 999	
<b>NEXT</b>	→ E17 [Number of linear accelerators]	

<b>E17</b>	<b>Number of linear accelerators</b>	<i>LINACCN</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Inpatient health care OR E13 [Medical equipment] = Yes	
<p>How many linear accelerators are used in this building?</p> <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 → E18 [Percent outpatient space] IF CBECS Activity = Outpatient health care → E19 [Outpatient surgery]	

<b>E18</b>	<b>Percent outpatient space</b>	<i>OUTHOSPP</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Inpatient health care	
<b>FILL</b>	<p>{SqFt}</p> <p>IF A6 [Square footage] known = "A6 [Square footage] square feet"</p> <p>IF A6 [Square footage] = DK/RF = "square footage"</p>	
<p>What percent of the {SqFt} in this building is used for outpatient care?</p> <p>◆ DEF: [Outpatient care is medical care or treatment that does not require an overnight stay.]</p>		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	→ E20 [Laboratory equipment]	

<b>E19</b>	<b>Outpatient surgery</b>	<i>OUTSURG</i>
<b>ASK</b>	IF Any energy used & CBECS Activity = Outpatient health care	
<p>Are there any operating rooms used for outpatient surgery in this building?</p> <p>1 Yes</p> <p>2 No</p>		
<b>NEXT</b>	→ E20 [Laboratory equipment]	



<b>E20</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	
<p>Does this building have any specialized laboratory equipment that requires extra energy consumption?</p> <p>◆ EXP: [Some examples are fume hoods, gas chromatographs, centrifuges, spectrometers, and analysis equipment.]</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF CBECS Activity = Education; Laboratory; Retail; OR Service → E21 [Machine equipment] IF CBECS Activity = Public Assembly OR B14 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center → E22 [Indoor pool] IF CBECS Activity = Inpatient health care; Office; OR Outpatient health care → E26 [Sterilizers or autoclaves]	

<b>E21</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	
<p>Does this building have any machine or shop equipment such as woodworking tools, metalworking tools, arc welders, or any other types of power tools?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF CBECS Activity = Education → E22 [Indoor pool] IF CBECS Activity = Laboratory → E26 [Sterilizers or autoclaves] IF Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E22</b>	<b>Indoor pool</b>	<i>POOL</i>
<b>ASK</b>	IF Any energy used & (CBECS Activity = Education; Lodging; OR Public assembly OR B14 [Health care type] = Outpatient rehabilitation center OR Inpatient rehabilitation center)	
<p>Is there an indoor swimming pool in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E23 [Heated pool] IF No OR DK/RF: IF CBECS Activity = Education; Lodging; OR Public assembly → E25 [Indoor ice rink] OTHERWISE → E26 [Sterilizers or autoclaves]	

<b>E23</b>	<b>Heated pool</b>	<i>HTPOOL</i>
<b>ASK</b>	IF E22 [Indoor pool] =Yes	
<p>Is it a heated pool?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E24 [Pool energy source] IF No OR DK/RF: IF CBECS Activity = Education; Lodging; OR Public assembly → E25 [Indoor ice rink] OTHERWISE → E26 [Sterilizers or autoclaves]	


<b>E24</b>	<b>Pool energy source</b>	<i>POOLSRC</i>
<b>ASK</b>	IF E23 [Heated pool] =Yes	
<p>What energy source is used to heat the pool?</p> <p>◆ Read choices if necessary</p> <p>1 Electricity 2 Natural gas 3 Fuel oil/Diesel/Kerosene 4 Propane 5 Solar 6 Some other energy source</p>		
<b>NEXT</b>	IF CBECS Activity = Education; Lodging; OR Public assembly → E25 [Indoor ice rink] OTHERWISE → E26 [Sterilizers or autoclaves]	

<b>E25</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> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF CBECS Activity = Enclosed mall & Electricity NOT used & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] IF CBECS Activity = Enclosed mall & Electricity used → E28 [Refrigeration] OTHERWISE → E26 [Sterilizers or autoclaves]	

<b>E26</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 & D143 [Energy for generation] ≠ Yes → E27 [Verify no electricity] OTHERWISE → E28 [Refrigeration]	

<b>E27</b>	<b>Verify no electricity</b>	<i>NOELEC</i>
<b>ASK</b>	IF Any energy used & Electricity NOT used & D143 [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 → E75 [Window glass type] IF False, electricity is used → E28 [Refrigeration]	

<b>E28</b>	<b>Refrigeration</b>	<i>RFGEQP</i>
<b>ASK</b>	IF Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used	
<p>Is there any refrigeration or freezer equipment used in this building, including vending machines?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E29 [Refrigeration types] IF No OR DK/RF & NOT (B25 [Completely vacant] = Yes & C17 [Months in use] = Zero OR DK/RF) → E41 [Computing equipment] IF C24 [No operating hours] ≠ True, no operating hours & C25 [Total hours open per week] > Zero → E62 [Percent lit when open] OTHERWISE → E65 [Percent lit off hours]	

<b>E29</b>	<b>Refrigeration types</b>	<i>see below</i>																
<b>ASK</b>	IF E28 [Refrigeration] = Yes																	
<p> SHOW CARD E2</p> <p>Looking at Show Card E2, please tell me which types of refrigeration or freezer equipment 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: 80%;">1 Full-size residential-type refrigerators/freezers</td> <td style="text-align: right;"><i>RFGRES</i></td> </tr> <tr> <td>2 Half-size or compact refrigerators</td> <td style="text-align: right;"><i>RFGCOMP</i></td> </tr> <tr> <td>3 Walk-in refrigeration/freezer units</td> <td style="text-align: right;"><i>RFGWI</i></td> </tr> <tr> <td>4 Open refrigerated/freezer cases or cabinets</td> <td style="text-align: right;"><i>RFGOP</i></td> </tr> <tr> <td>5 Closed refrigerated/freezer cases or cabinets</td> <td style="text-align: right;"><i>RFGCL</i></td> </tr> <tr> <td>6 Refrigerated vending machines</td> <td style="text-align: right;"><i>RFGVEN</i></td> </tr> <tr> <td>7 Commercial ice makers</td> <td style="text-align: right;"><i>RFGICE</i></td> </tr> <tr> <td>8 Large cold storage areas</td> <td style="text-align: right;"><i>RFGSTO</i></td> </tr> </table>			1 Full-size residential-type refrigerators/freezers	<i>RFGRES</i>	2 Half-size or compact refrigerators	<i>RFGCOMP</i>	3 Walk-in refrigeration/freezer units	<i>RFGWI</i>	4 Open refrigerated/freezer cases or cabinets	<i>RFGOP</i>	5 Closed refrigerated/freezer cases or cabinets	<i>RFGCL</i>	6 Refrigerated vending machines	<i>RFGVEN</i>	7 Commercial ice makers	<i>RFGICE</i>	8 Large cold storage areas	<i>RFGSTO</i>
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8 Large cold storage areas	<i>RFGSTO</i>																	
<b>NEXT</b>	<p>IF Residential-type selected → E30 [Number residential refrigerators]  IF Compact size selected → E31 [Number compact size refrigerators]  IF Walk-in units selected → E32 [Number walk-in units]  IF Open cases or cabinets selected → E33 [Number open cases]  IF Closed cases or cabinets selected → E34 [Number closed cases]  IF Refrigerated vending machines selected → E35 [Number vending]  IF Commercial ice makers selected → E36 [Number ice makers]  IF Large cold storage areas selected → E37 [Percent cold storage]  IF DK/RF:  IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR  B21 [Residential type] = Hotel ) &amp; (A6 [Square footage] &gt; 100,000 OR  A7 [Square footage category] = 100,0001 to 200,000 square feet;  200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet))  → E38 [Waste heat recovery]  OTHERWISE → E41 [Computing equipment]</p>																	

<b>E30</b>	<b>Number residential refrigerators</b>	<i>RFGRSN</i>
<b>ASK</b>	IF Residential-type IN E29 [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 9,999	
<b>NEXT</b>	IF Compact size IN E29 [Refrigeration types] → E31 [Number compact size refrigerators] IF Walk-in units IN E29 [Refrigeration types] → E32 [Number walk-in units] IF Open cases or cabinets IN E29 [Refrigeration types] → E33 [Number open cases] IF Closed cases or cabinets IN E29 [Refrigeration types] → E34 [Number closed cases] IF Refrigerated vending machines IN E29 [Refrigeration types] → E35 [Number vending] IF Commercial ice makers IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E31</b>	<b>Number compact size refrigerators</b>	<i>RFGCOMPN</i>
<b>ASK</b>	IF Compact size IN E29 [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 9,999	
<b>NEXT</b>	IF Walk-in units IN E29 [Refrigeration types] → E32 [Number walk-in units] IF Open cases or cabinets IN E29 [Refrigeration types] → E33 [Number open cases] IF Closed cases or cabinets IN E29 [Refrigeration types] → E34 [Number closed cases] IF Refrigerated vending machines IN E29 [Refrigeration types] → E35 [Number vending] IF Commercial ice makers IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E32</b>	<b>Number walk-in units</b>	<i>RFGWIN</i>
<b>ASK</b>	IF Walk-in units IN E29 [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 9,999	
<b>NEXT</b>	IF Open cases or cabinets IN E29 [Refrigeration types] → E33 [Number open cases] IF Closed cases or cabinets IN E29 [Refrigeration types] → E34 [Number closed cases] IF Refrigerated vending machines IN E29 [Refrigeration types] → E35 [Number vending] IF Commercial ice makers IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E33</b>	<b>Number open cases</b>	<i>RFGOPN</i>
<b>ASK</b>	IF Open cases or cabinets IN E29 [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 IN E29 [Refrigeration types] → E34 [Number closed cases] IF Refrigerated vending machines IN E29 [Refrigeration types] → E35 [Number vending] IF Commercial ice makers IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E34</b>	<b>Number closed cases</b>	<i>RFGLN</i>
<b>ASK</b>	IF Closed cases or cabinets IN E29 [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 IN E29 [Refrigeration types] → E35 [Number vending] IF Commercial ice makers IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E35</b>	<b>Number vending</b>	<i>RFVNN</i>
<b>ASK</b>	IF Refrigerated vending machines IN E29 [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 IN E29 [Refrigeration types] → E36 [Number ice makers] IF Large cold storage areas IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E36</b>	<b>Number ice makers</b>	<i>RFIGN</i>
<b>ASK</b>	IF Commercial ice makers IN E29 [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 IN E29 [Refrigeration types] → E37 [Percent cold storage] IF CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	


<b>E37</b>	<b>Percent cold storage</b>	<i>RFGSTP</i>
<b>ASK</b>	IF Large cold storage areas IN E29 [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 Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)) → E38 [Waste heat recovery] OTHERWISE → E41 [Computing equipment]	

<b>E38</b>	<b>Waste heat recovery</b>	<i>WHRECOV</i>
<b>ASK</b>	IF E28 [Refrigeration] = Yes & (CBECS Activity = Food sales OR Food service OR ((B19 [Lodging type] = Hotel OR B21 [Residential type] = Hotel ) & (A6 [Square footage] > 100,000 OR A7 [Square footage category] = 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; Over 1 million square feet)))	
<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 → E39 [Waste heat use] IF No OR DK/RF → E41 [Computing equipment]	


<b>E39</b>	<b>Waste heat use</b>	
<b>ASK</b>	IF E38 [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 <span style="float: right;"><i>WHHT2</i></span>          2 Water heating <span style="float: right;"><i>WHWT</i></span>          3 Some other use <span style="float: right;"><i>WHOT</i></span></p>		
<b>NEXT</b>	IF Some other use → E40 [Other waste heat use] OTHERWISE → E41 [Computing equipment]	




<b>E40</b>	<b>Other waste heat use</b>
<b>ASK</b>	IF E39 [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>	→ E41 [Computing equipment]

<b>E41</b>	<b>Computing equipment</b>	<i>see below</i>										
<b>ASK</b>	IF Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used & NOT (B25 [Completely vacant] = Yes & C17 [Months in use] = Zero OR DK/RF)											
<b>FILL</b>	<b>{RetailFill}</b> IF CBECS Activity = Retail = "Include demonstration or floor models if they are turned on." OTHERWISE = BLANK											
<p> SHOW CARD E3</p> <p>Please look at Show Card E3. Which of these types of computing equipment are used in this building?          {RetailFill}</p> <p>◆ PROBE for any others</p> <p>◆ ENTER all that apply</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 80%;">1 Desktop computers</td> <td style="width: 20%; text-align: right;"><i>PCTERM</i></td> </tr> <tr> <td>2 Laptop computers</td> <td style="text-align: right;"><i>LPTP</i></td> </tr> <tr> <td>3 Tablets</td> <td style="text-align: right;"><i>TABLET</i></td> </tr> <tr> <td>4 Servers</td> <td style="text-align: right;"><i>SERVER</i></td> </tr> <tr> <td>5 None of these types</td> <td></td> </tr> </table>			1 Desktop computers	<i>PCTERM</i>	2 Laptop computers	<i>LPTP</i>	3 Tablets	<i>TABLET</i>	4 Servers	<i>SERVER</i>	5 None of these types	
1 Desktop computers	<i>PCTERM</i>											
2 Laptop computers	<i>LPTP</i>											
3 Tablets	<i>TABLET</i>											
4 Servers	<i>SERVER</i>											
5 None of these types												
<b>NEXT</b>	IF Desktop computers selected → E42 [Number of computers] IF Laptop computers selected → E44 [Number of laptops] IF Tablets selected → E48 [Tablets charged in building] IF Servers selected → E50 [Server units] OTHERWISE → E56 [Other equipment types]											

<b>E42</b>	<b>Number of computers</b>	<i>PCTERMN</i>
<b>ASK</b>	IF Desktop computers IN E41 [Computing equipment]	
<b>FILL</b>	<b>{RetailFill}</b> IF CBECs Activity = Retail = "(Include demonstration or floor models if they are turned on.)" OTHERWISE = BLANK	
How many desktop computers are used in this building? {RetailFill}		
<b>RANGE</b>	0 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E43 [Computers category] IF Laptop computers IN E41 [Computing equipment] → E44 [Number of laptops] OTHERWISE → E46 [Multiple monitors]	

<b>E43</b>	<b>Computers category</b>	<i>PCTRMC</i>
<b>ASK</b>	IF E42 [Number of computers] = DK/RF	
 SHOW CARD E4  Looking at Show Card E4, which category best describes the number of desktop computers used in this building?  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		
<b>NEXT</b>	IF Laptop computers IN E41 [Computing equipment] → E44 [Number of laptops] OTHERWISE → E46 [Multiple monitors]	

<b>E44</b>	<b>Number of laptops</b>	<i>LAPTPN</i>
<b>ASK</b>	IF Laptop computers IN E41 [Computing equipment]	
<b>FILL</b>	<b>{RetailFill}</b> IF CBECs Activity = Retail = "(Include demonstration or floor models if they are turned on.)" OTHERWISE = BLANK	
How many laptop computers are used in this building? {RetailFill}		
<b>RANGE</b>	0 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E45 [Laptops category] OTHERWISE → E46 [Multiple monitors]	

<b>E45</b>	<b>Laptops category</b>	<i>LAPTPC</i>
<b>ASK</b>	IF E44 [Number of laptops] = DK/RF	
 SHOW CARD E4  Looking at Show Card E4, which category best describes the number of laptop computers used in this building?  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		
<b>NEXT</b>	→ E46 [Multiple monitors]	

<b>E46</b>	<b>Multiple monitors</b>	<i>MLTMON</i>
<b>ASK</b>	IF Desktop computers OR Laptop computers IN E41 [Computing equipment]	
<b>FILL</b>	<b>{Computers}</b> IF (E42 [Number of computers] = 1 & NOT Laptop computers IN E41 [Computing equipment]) OR (E44 [Number of laptops] = 1 & NOT Desktop computers IN E41 [Computing equipment]) = "Does the computer" OTHERWISE = "Do any of the computers"	
{Computers} use more than one monitor?  1 Yes 2 No		
<b>NEXT</b>	IF Yes & NOT ((E42 [Number of computers] = 1 & NOT Laptop computers IN E41 [Computing equipment]) OR (E44 [Number of laptops] = 1 & NOT Desktop computers IN E41 [Computing equipment])) → E47 [Multiple monitor category] IF Tablets IN E41 [Computing equipment] → E48 [Tablets charged in building] IF Servers IN E41 [Computing equipment] → E50 [Server units] OTHERWISE → E53 [Computer areas]	


<b>E47</b>	<b>Multiple monitor category</b>	<i>MLTMNC</i>
<b>ASK</b>	IF E46 [Multiple monitors] = Yes & NOT ((E42 [Number of computers] = 1 & NOT Laptop computers IN E41 [Computing equipment]) OR (E44 [Number of laptops] = 1 & NOT Desktop computers IN E41 [Computing equipment]))	
<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> <p>1 All 2 Most 3 Some 4 A few</p>		
<b>NEXT</b>	IF Tablets IN E41 [Computing equipment] → E48 [Tablets charged in building] IF Servers IN E41 [Computing equipment] → E50 [Server units] OTHERWISE → E53 [Computer areas]	


<b>E48</b>	<b>Tablets charged in building</b>	<i>TABCHRG</i>
<b>ASK</b>	IF Tablets IN E41 [Computing equipment]	
<p>Are any of the tablets charged in this building?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → E49 [Number of tablets] IF Servers IN E41 [Computing equipment] → E50 [Server units] OTHERWISE → E53 [Computer areas]	

<b>E49</b>	<b>Number of tablets</b>	<i>TABLETN</i>
<b>ASK</b>	IF E48 [Tablets charged in building] = Yes	
<p>About how many tablets are charged in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9,999,999	
<b>NEXT</b>	IF Servers IN E41 [Computing equipment] → E50 [Server units] OTHERWISE → E53 [Computer areas]	


<b>E50</b>	<b>Server units</b>	<i>SRVUNIT</i>
<b>ASK</b>	IF Servers IN E41 [Computing equipment]	
<p>The next question is about how many servers are used in this building. Would you prefer to provide the number of servers or the number of server <u>racks</u>?</p> <p>1 Servers 2 Server racks</p>		
<b>NEXT</b>	IF DK/RF → E52 [Servers category] OTHERWISE → E51 [Number of servers or racks]	


<b>E51</b>	<b>Number of servers or racks</b>	<i>SERVERN</i>
<b>ASK</b>	IF E50 [Server units] given	
<b>FILL</b>	{ServerUnits} = "E50 [Server units]"	
How many {ServerUnits} are there in this building?		
<b>RANGE</b>	1 to 9,999,999	
<b>NEXT</b>	IF DK/RF → E52 [Servers category] OTHERWISE → E53 [Computer areas]	

<b>E52</b>	<b>Servers category</b>	<i>SERVERC</i>
<b>ASK</b>	IF E50 [Server units] = DK/RF OR E51 [Number of servers or racks] = DK/RF	
<b>FILL</b>	{ServerUnits} IF E50 [Server units] given = "E50 [Server units]" OTHERWISE = "servers"	
 SHOW CARD E5  Looking at Show Card E5, which category best describes the number of {ServerUnits} in this building?  1 1 to 4 2 5 to 24 3 25 to 499 4 500 or more		
<b>NEXT</b>	→ E53 [Computer areas]	

<b>E53</b>	<b>Computer areas</b>	<i>see below</i>
<b>ASK</b>	IF Desktop computers OR Laptop computers OR Servers IN E41 [Computing equipment]	
 SHOW CARD E6 Please look at Show Card E6 and tell me if any of these types of computer areas are found in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply <ul style="list-style-type: none"> <li>1 Server closet <span style="float: right;"><i>SRVRCLST</i></span></li> <li>2 Data center <span style="float: right;"><i>DATA CNTR</i></span></li> <li>3 Computer-based training room <span style="float: right;"><i>TRNGRM</i></span></li> <li>4 Student or public computer center <span style="float: right;"><i>STDNRM</i></span></li> <li>5 Trading floor <span style="float: right;"><i>TRDFLR</i></span></li> <li>6 None of these types</li> </ul> </li> </ul>		
<b>NEXT</b>	IF Data center selected → E54 [Data center square footage] OTHERWISE → E56 [Other equipment types]	

<b>E54</b>	<b>Data center square footage</b>	<i>DCNTRSF</i>
<b>ASK</b>	IF Data center IN E53 [Computer areas]	
What is the square footage of the data center you just mentioned?		
<b>RANGE</b>	10 to 999,999,999	
<b>NEXT</b>	→ E55 [Data center characteristics]	

<b>E55</b>	<b>Data center characteristics</b>	<i>see below</i>
<b>ASK</b>	IF Data center IN E53 [Computer areas]	
 SHOW CARD E7 Still thinking about the data center space in this building, please look at Show Card E7. Which of these characteristics describe the data center? <ul style="list-style-type: none"> <li>◆ ENTER all that apply <ul style="list-style-type: none"> <li>1 Raised floor <span style="float: right;"><i>DCRSDFLR</i></span></li> <li>2 Separate cooling system <span style="float: right;"><i>DCSEPCL</i></span></li> <li>3 Humidity control <span style="float: right;"><i>DCHMCNTL</i></span></li> <li>4 Uninterruptible power supply (UPS) <span style="float: right;"><i>DCUPS</i></span></li> <li>5 Controlled access <span style="float: right;"><i>DCCNTLAC</i></span></li> <li>6 None of these</li> </ul> </li> </ul>		
<b>NEXT</b>	→ E56 [Other equipment types]	

<b>E56</b>	<b>Other equipment types</b>	<i>see below</i>
<b>ASK</b>	IF Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used & NOT (B25 [Completely vacant] = Yes & C17 [Months in use] = Zero OR DK/RF)	
 SHOW CARD E8  Please look at Show Card E8 and tell me which of these other equipment types are used in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply <ul style="list-style-type: none"> <li>1 Large floor-standing office devices (any combination of printer/copier/ scanner/FAX machine) <span style="float: right;"><i>LGOFFDEV</i></span></li> <li>2 Smaller desktop office devices (any combination of printer/copier/ scanner/FAX machine) <span style="float: right;"><i>SMOFFDEV</i></span></li> <li>3 Interactive whiteboards <span style="float: right;"><i>WBOARDS</i></span></li> <li>4 Televisions or video displays <span style="float: right;"><i>TVVIDEO</i></span></li> <li>5 Point-of-sales devices or cash registers <span style="float: right;"><i>RGSTR</i></span></li> <li>6 None of these types</li> </ul> </li> </ul>		
<b>NEXT</b>	IF Large floor-standing office devices selected → E57 [Number of large office devices] IF Smaller desktop office devices selected → E58 [Number of small office devices] IF Interactive whiteboards selected → E59 [Number of interactive whiteboards] IF Televisions or video displays selected → E60 [Number of TV or video displays] IF Point-of-sales devices or cash registers selected → E61 [Number of cash registers] OTHERWISE → E62 [Percent lit when open]	

<b>E57</b>	<b>Number of large office devices</b>	<i>LGOFFDEVN</i>
<b>ASK</b>	IF Large floor-standing office devices IN E56 [Other equipment types]	
About how many large floor-standing office devices are used in this building? (Include devices that contain any combination of printers, copiers, scanners, or FAX machines.) <ul style="list-style-type: none"> <li>◆ PROBE for estimate if DK</li> </ul>		
<b>RANGE</b>	1 to 9,999,999	
<b>NEXT</b>	IF Smaller desktop office devices IN E56 [Other equipment types] → E58 [Number of small office devices] IF Interactive whiteboards IN E56 [Other equipment types] → E59 [Number of interactive whiteboards] IF Televisions or video displays IN E56 [Other equipment types] → E60 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E56 [Other equipment types] → E61 [Number of cash registers] OTHERWISE → E62 [Percent lit when open]	

<b>E58</b>	<b>Number of small office devices</b>	<i>SMOFFDEV</i>
<b>ASK</b>	IF Smaller desktop office devices IN E56 [Other equipment types]	
<p>About how many small desktop office devices are used in this building? (Include devices that contain any combination of printers, copiers, scanners, or FAX machines.)</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9,999,999	
<b>NEXT</b>	IF Interactive whiteboards IN E56 [Other equipment types] → E59 [Number of interactive whiteboards] IF Televisions or video displays IN E56 [Other equipment types] → E60 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E56 [Other equipment types] → E61 [Number of cash registers] OTHERWISE → E62 [Percent lit when open]	


<b>E59</b>	<b>Number of interactive whiteboards</b>	<i>WBOARDSN</i>
<b>ASK</b>	IF Interactive whiteboards IN E56 [Other equipment types]	
<p>About 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>	IF Televisions or video displays IN E56 [Other equipment types] → E60 [Number of TV or video displays] IF Point-of-sales devices or cash registers IN E56 [Other equipment types] → E61 [Number of cash registers] OTHERWISE → E62 [Percent lit when open]	

<b>E60</b>	<b>Number of TV or video displays</b>	<i>TVVIDEON</i>
<b>ASK</b>	IF Televisions or video displays IN E56 [Other equipment types]	
<b>FILL</b>	<b>{RetailFill}</b> IF CBECS Activity = Retail = "(Include demonstration or floor models if they are turned on.)" OTHERWISE = BLANK	
<p>About how many televisions or video displays are used in this building? {RetailFill}</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9,999	
<b>NEXT</b>	IF Point-of-sales devices or cash registers IN E56 [Other equipment types] → E61 [Number of cash registers] OTHERWISE → E62 [Percent lit when open]	




<b>E61</b>	<b>Number of cash registers</b>	<i>RGSTRN</i>
<b>ASK</b>	IF Point-of-sales devices or cash registers IN E56 [Other equipment types]	
<p>About how many point-of-sales devices or cash registers are used in this building?</p> <p>◆ PROBE for estimate if DK</p>		
<b>RANGE</b>	1 to 9,999	
<b>NEXT</b>	→ E62 [Percent lit when open]	


<b>E62</b>	<b>Percent lit when open</b>	<i>LTOHRP</i>
<b>ASK</b>	IF C24 [No operating hours] ≠ True, no operating hours & C25 [Total hours open per week] > Zero & (Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used)	
<b>FILL</b>	<p><b>{SqFt}</b>  IF A6 [Square footage] known = "A6 [Square footage] square feet"  IF A6 [Square footage] = DK/RF = "square footage"</p>	
<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> <p>◆ DEF: ["Normally open" means the hours when the usual activities occur.]</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 → E63 [Lit when open category] IF Percent given: IF C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [Weekly hours category] = 168 → E64 [Lights off during 24 hours] OTHERWISE → E65 [Percent lit off hours]	

<b>E63</b>	<b>Lit when open category</b>	<i>LOHRPC</i>
<b>ASK</b>	IF E62 [Percent lit when open] = DK/RF	
 SHOW CARD E9  Looking at Show Card E9, what is your best estimate of the percent of the square feet in this building that is lit when the building is normally open?  1 1 to 25 percent 2 26 to 50 percent 3 51 to 75 percent 4 76 to 100 percent 5 Not lit at all when it is normally open		
<b>NEXT</b>	IF C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [Weekly hours category] = 168 → E64 [Lights off during 24 hours] OTHERWISE → E65 [Percent lit off hours]	


<b>E64</b>	<b>Lights off during 24 hours</b>	<i>LTNR24</i>
<b>ASK</b>	IF C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [Weekly hours category] = 168 & (Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used)	
Are there any periods during a normal 24-hour day when some of the lights are turned off?  1 Yes 2 No		
<b>NEXT</b>	IF Yes → E65 [Percent lit off hours] IF No OR DK/RF: IF E62 [Percent lit when open] > 0 OR E63 [Lit when open category] ≠ Not lit → E67 [Lighting types] OTHERWISE → E71 [Percent of exterior lighted]	


<b>E65</b>	<b>Percent lit off hours</b>	<i>LTNHRP</i>
<b>ASK</b>	IF (C21 [Open 24 hours a day] ≠ Yes & C25 [Total hours open per week] ≠ 168 & C26 [Weekly hours category] ≠ 168) OR E64 [Lights off during 24 hours] = Yes & (Electricity used OR D143 [Energy for generation] = Yes OR E27 [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 C21 [Open 24 hours a day] = Yes OR C25 [Total hours open per week] = 168 OR C26 [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"	
What percent of the {SqFt} is lit during off hours, that is {OffHours}? Exclude the space lit by emergency lighting.		
◆ If lit square footage is known but not the percent, RECORD square footage in comments, then code DK		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	IF DK/RF → E66 [Lit off hours category] IF 1-100 → E67 [Lighting types] IF Zero: IF E62 [Percent lit when open] > 0 OR E63 [Lit when open category] ≠ Not lit → E67 [Lighting types] OTHERWISE → E71 [Percent of exterior lighted]	

<b>E66</b>	<b>Lit off hours category</b>	<i>LNHRPC</i>
<b>ASK</b>	IF E65 [Percent lit off hours] = DK/RF	
 SHOW CARD E9  Looking at Show Card E9, what is your best estimate of the percent lit during off hours?  1 1 to 25 percent 2 26 to 50 percent 3 51 to 75 percent 4 76 to 100 percent 5 Not lit at all during off hours		
<b>NEXT</b>	IF 1 to 100 percent OR DK/RF → E67 [Lighting types] IF Not lit at all: IF E62 [Percent lit when open] > 0 OR E63 [Lit when open category] ≠ Not lit → E67 [Lighting types] OTHERWISE → E71 [Percent of exterior lighted]	

<b>E67</b>	<b>Lighting types</b>	<i>see below</i>																					
<b>ASK</b>	IF E62 [Percent lit when open] > 0 OR E63 [Lit when open category] = 1 to 100 OR DK/RF OR E65 [Percent lit off hours] > 0 OR E66 [Lit off hours category] = 1 to 100 OR DK/RF																						
 SHOW CARD E10  Looking at Show Card E10, what types of lighting were used to light any of the space in this building? <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-left: 20px;">1</td> <td>Fluorescent lighting other than compact fluorescent bulbs</td> <td style="text-align: right;"><i>FLUOR</i></td> </tr> <tr> <td style="padding-left: 20px;">2</td> <td>Compact fluorescent bulbs</td> <td style="text-align: right;"><i>CFLR</i></td> </tr> <tr> <td style="padding-left: 20px;">3</td> <td>Incandescent light bulbs, other than halogen bulbs</td> <td style="text-align: right;"><i>BULB</i></td> </tr> <tr> <td style="padding-left: 20px;">4</td> <td>Halogen bulbs</td> <td style="text-align: right;"><i>HALO</i></td> </tr> <tr> <td style="padding-left: 20px;">5</td> <td>High intensity discharge (HID) lights such as high pressure sodium, metal halide or mercury vapor</td> <td style="text-align: right;"><i>HID</i></td> </tr> <tr> <td style="padding-left: 20px;">6</td> <td>Light-emitting diode (LED) lights</td> <td style="text-align: right;"><i>LED</i></td> </tr> <tr> <td style="padding-left: 20px;">7</td> <td>Other type of lighting</td> <td style="text-align: right;"><i>OTLT</i></td> </tr> </table> </li> </ul>			1	Fluorescent lighting other than compact fluorescent bulbs	<i>FLUOR</i>	2	Compact fluorescent bulbs	<i>CFLR</i>	3	Incandescent light bulbs, other than halogen bulbs	<i>BULB</i>	4	Halogen bulbs	<i>HALO</i>	5	High intensity discharge (HID) lights such as high pressure sodium, metal halide or mercury vapor	<i>HID</i>	6	Light-emitting diode (LED) lights	<i>LED</i>	7	Other type of lighting	<i>OTLT</i>
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7	Other type of lighting	<i>OTLT</i>																					
<b>NEXT</b>	IF Other type of lighting selected → E68 [Other bulb type] IF More than one type selected → E69 [Percent lit by bulb type] OTHERWISE → E70 [Lighting controls]																						

<b>E68</b>	<b>Other bulb type</b>	<i>OTLTX</i>
<b>ASK</b>	IF Other type of lighting IN E67 [Lighting types]	
What type of bulb is the other type of lighting? <ul style="list-style-type: none"> <li>◆ RECORD in space below</li> </ul>		
<b>NEXT</b>	IF More than one type selected IN E67 [Lighting types] → E69 [Percent lit by bulb type] OTHERWISE → E70 [Lighting controls]	

<b>E69</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 E67 [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 E62 [Percent lit when open] <math>\neq</math> 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 E62 [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 E67 [Lighting types] = “fluorescent lighting”  IF Compact fluorescent bulbs IN E67 [Lighting types] = “compact fluorescent bulbs”  IF Incandescent light bulbs IN E67 [Lighting types] = “incandescent bulbs”  IF Halogen bulbs IN E67 [Lighting types] = “halogen lighting”  IF High intensity discharge (HID) lights IN E67 [Lighting types] = “high intensity discharge lights”  IF Light-emitting diode (LED) lights IN E67 [Lighting types] = “LED lights”  IF Other type of lighting IN E67 [Lighting types] = “other lighting type”</p>	
 SHOW CARD E11  {Introduction}  {Explanation}  Please look at Show Card E11. What percent of the lighted area in this building is lit by the {BulbType}?  ◆ PROBE for estimate if DK		
<b>RANGE</b>	0 to 100	
<b>NEXT</b>	➔ E70 [Lighting controls]	


<b>E70</b>	<b>Lighting controls</b>	<i>see below</i>																
<b>ASK</b>	IF (E62 [Percent lit when open] > 0 OR E63 [Lit when open category] ≠ Not lit OR E65 [Percent lit off hours] > 0 OR E66 [Lit off hours category] ≠ Not lit)																	
 SHOW CARD E12  Looking at Show Card E12, 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: 70%;">1 Scheduling</td> <td style="width: 30%; 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 Plug-load control</td> <td style="text-align: right;"><i>PLGCTRL</i></td> </tr> <tr> <td>7 Demand responsive lighting</td> <td style="text-align: right;"><i>DRLGHT</i></td> </tr> <tr> <td>8 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 Plug-load control	<i>PLGCTRL</i>	7 Demand responsive lighting	<i>DRLGHT</i>	8 None of these	
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7 Demand responsive lighting	<i>DRLGHT</i>																	
8 None of these																		
<b>NEXT</b>	→ E71 [Percent of exterior lighted]																	


<b>E71</b>	<b>Percent of exterior lighted</b>	<i>LTEXPC</i>
<b>ASK</b>	IF (Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used)	
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?		
<ul style="list-style-type: none"> <li>1 Less than 10 percent</li> <li>2 10 to 25 percent</li> <li>3 25 to 50 percent</li> <li>4 More than 50 percent</li> </ul>		
<b>NEXT</b>	→ E72 [Lighted parking area]	

<b>E72</b>	<b>Lighted parking area</b>	<i>PKLT</i>
<b>ASK</b>	IF (Electricity used OR D143 [Energy for generation] = Yes OR E27 [Verify no electricity] = False, electricity is used)	
Is there an indoor or outdoor parking area associated with the building that is lighted with fixtures powered through the building's electrical service?		
<ul style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ul>		
<b>NEXT</b>	IF Yes → E73 [Indoor or outdoor lighted parking] OTHERWISE → E75 [Window glass type]	

<b>E73</b>	<b>Indoor or outdoor lighted parking</b>	<i>PKLTINOUT</i>
<b>ASK</b>	IF E72 [Lighted parking area] = Yes	
<p>Is this lighted parking area part of the building, such as an indoor parking level, is it separate, such as an outdoor parking lot or parking garage, or does this building have both of these types of lighted parking areas?</p> <ol style="list-style-type: none"> <li>1 Part of the building (indoor)</li> <li>2 Outdoor parking (lot or garage)</li> <li>3 Both indoor and outdoor parking</li> </ol>		
<b>NEXT</b>	IF DK/RF → E75 [Window glass type] OTHERWISE → E74 [Vehicle parking capacity]	

<b>E74</b>	<b>Vehicle parking capacity</b>	<i>PKLTN</i>
<b>ASK</b>	IF E73 [Indoor or outdoor lighted parking] given	
<p>What is the vehicle capacity of this lighted parking area, that is, the number of parking spaces?</p>		
<b>RANGE</b>	1 to 999,999	
<b>NEXT</b>	→ E75 [Window glass type]	

<b>E75</b>	<b>Window glass type</b>	<i>WINTYP</i>
<b>ASK</b>	All Buildings	
<p> SHOW CARD E13</p> <p>The picture on Show Card E13 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 → E76 [Daylighting features] IF No windows OR DK/RF → F1 [Section F Routing]	

<b>E76</b>	<b>Daylighting features</b>	<i>see below</i>										
<b>ASK</b>	IF E75 [Window glass type] ≠ (No windows OR DK/RF)											
 SHOW CARD E13  Looking at the list at the bottom of Show Card E13, please tell me which of these daylighting or conservation features are present in this building. <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply             <table style="margin-left: 40px; border: none;"> <tr> <td>1 Tinted window glass</td> <td style="text-align: right;"><i>TINT</i></td> </tr> <tr> <td>2 Reflective window glass</td> <td style="text-align: right;"><i>REFL</i></td> </tr> <tr> <td>3 External overhangs or awnings</td> <td style="text-align: right;"><i>AWN</i></td> </tr> <tr> <td>4 Skylights or atriums designed to provide light</td> <td style="text-align: right;"><i>SKYLT</i></td> </tr> <tr> <td>5 IF VOLUNTEERED: None of these</td> <td></td> </tr> </table> </li> </ul>			1 Tinted window glass	<i>TINT</i>	2 Reflective window glass	<i>REFL</i>	3 External overhangs or awnings	<i>AWN</i>	4 Skylights or atriums designed to provide light	<i>SKYLT</i>	5 IF VOLUNTEERED: None of these	
1 Tinted window glass	<i>TINT</i>											
2 Reflective window glass	<i>REFL</i>											
3 External overhangs or awnings	<i>AWN</i>											
4 Skylights or atriums designed to provide light	<i>SKYLT</i>											
5 IF VOLUNTEERED: None of these												
<b>NEXT</b>	→ E77 [Percent daylight]											

<b>E77</b>	<b>Percent daylight</b>	<i>DAYLTP</i>
<b>ASK</b>	IF E75 [Window glass type] ≠ (No windows OR DK/RF)	
What percent of the building receives enough outside light so that the interior lights do not need to be turned on? <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 [Provide electricity figures] OTHERWISE → G1 [Section G Routing]

<b>F2</b>	<b>Provide electricity figures</b>	<i>ELFIGS</i>
<b>ASK</b>	IF Electricity used	
<p>The next questions are about electricity usage in the building during calendar year 2018. This can be reported as either annual or monthly information. Are you able to provide electricity usage information for this building for 2018?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → F3 [Annual or monthly electricity] IF No OR DK/RF → F25 [Number electricity suppliers]	

<b>F3</b>	<b>Annual or monthly electricity</b>	<i>ELANNMON</i>
<b>ASK</b>	IF F2 [Provide electricity figures] = Yes	
<p>Do you prefer to report the annual total electricity usage for 2018, or monthly electricity usage information?</p> <p>1 Prefer to report <u>annual total</u> electricity usage 2 Prefer to report <u>monthly</u> electricity usage</p>		
<b>NEXT</b>	<p>IF (Prefer to report annual total OR Prefer to report monthly) &amp; (D17 [Type of solar] = Solar panels used to generate electricity OR (Solar panels used to generate electricity OR Wind turbines IN D137 [Generation technologies]) OR (Wind turbines IN D138 [Generation technologies other than solar]) OR D142 [Use of generated electricity] = Whenever electricity was used) → F4 [Report generated electricity] IF Prefer to report annual total → F5 [Electricity consumption] IF Prefer to report monthly → F11 [Monthly electricity data] IF DK/RF → F25 [Number electricity suppliers]</p>	

<b>F4</b>	<b>Report generated electricity</b>	<i>ELGENREP</i>
<b>ASK</b>	IF Prefer to report annual total OR Prefer to report monthly IN F3 [Annual or monthly electricity] & (D17 [Type of solar] = Solar panels used to generate electricity OR (Solar panels used to generate electricity OR Wind turbines IN D137 [Generation technologies]) OR (Wind turbines IN D138 [Generation technologies other than solar]) OR D142 [Use of generated electricity] = Whenever electricity was used)	
<p>Earlier you mentioned that this building has on-site electricity generation. If possible, we would like to collect the combined purchased and generated electricity usage for this building. Are you able to report the combined purchased and generated electricity usage, or are you able to report only the purchased electricity usage?</p> <ol style="list-style-type: none"> <li>1 Can report combined purchased and generated electricity usage</li> <li>2 Can report only purchased electricity usage</li> </ol>		
<b>NEXT</b>	IF F3 [Annual or monthly electricity] = Prefer to report annual total THEN: IF Can report combined purchased and generated OR DK/RF → F5 [Electricity consumption] IF Can report only purchased → F7 [Purchased electricity consumption] IF F3 [Annual or monthly electricity] = Prefer to report monthly → F11 [Monthly electricity data]	

<b>F5</b>	<b>Electricity consumption</b>	<i>ELCNS</i>
<b>ASK</b>	IF F3 [Annual or monthly electricity] = Prefer to report annual total & NOT F4 [Reported generated electricity] = Can report only purchased	
<p>Please give me the total number of kilowatthours of electricity used in calendar year 2018.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	1 to 99,999,999,999,999	
<b>NEXT</b>	IF DK/RF → F25 [Number electricity suppliers] IF F4 [Report generated electricity] = Can report combined purchased and generated → F6 [Able to report purchased electricity] OTHERWISE → F7 [Electricity expenditures]	

<b>F6</b>	<b>Able to report purchased electricity</b>	<i>REPSUP</i>
<b>ASK</b>	IF F4 [Report generated electricity] = Can report combined purchased and generated & F5 [Electricity consumption] ≠ DK/RF	
<b>FILL</b>	{Reported} = "F5 [Electricity consumption]"	
<p>You reported {Reported} kilowatthours used in this building in 2018. Are you able to report how much of this total was purchased from an electricity supplier, not including what was generated on-site?</p> <ol style="list-style-type: none"> <li>1 Yes</li> <li>2 No</li> </ol>		
<b>NEXT</b>	IF Yes → F7 [Purchased electricity consumption] IF No OR DK/RF → F8 [Electricity expenditures]	

<b>F7</b>	<b>Purchased electricity consumption</b>	<i>ELCNSSUP</i>
<b>ASK</b>	IF F4 [Report generated electricity] = Can report only purchased OR F6 [Able to report purchased electricity] = Yes	
Please give me the total number of kilowatthours of electricity <u>purchased</u> in calendar year 2018.		
◆ VERIFY number <u>digit by digit</u>		
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	IF DK/RF & F4 [Report generated electricity] = Can report only purchased → F25 [Number electricity suppliers] OTHERWISE → F8 [Electricity expenditures]	

<b>F8</b>	<b>Electricity expenditures</b>	<i>ELEXP</i>
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given	
Please give me the total dollars spent on electricity in calendar year 2018. This should include state and local taxes and all charges such as: fuel adjustment, system, distribution, and demand.		
◆ Do <u>not</u> enter cents		
◆ VERIFY number <u>digit by digit</u>		
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	→ F9 [Starting date for electricity figures]	

<b>F9</b>	<b>Starting date for electricity figures</b>	<i>ELSTDAT</i>
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given	
What is the starting date for these electricity usage figures?		
◆ ENTER date as MMDDYYYY		
◆ If the day is not known, ENTER "15" for DD		
<b>NEXT</b>	→ F10 [Ending date for electricity figures]	

<b>F10</b>	<b>Ending date for electricity figures</b>	<i>ELENDAT</i>
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given	
<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>◆ 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 C6 [Number of businesses category] ≠ Zero OR One THEN: IF CBECS Activity ≠ Enclosed mall → F12 [All occupants electricity included] IF CBECS Activity = Enclosed mall → F14 [Electricity covers whole mall] OTHERWISE → F18 [Other bldgs electricity included]	

<b>F11</b>	<b>Monthly electricity data</b>	<i>kWh_1217, ELCOST_1217, etc.</i>																																													
<b>ASK</b>	IF F3 [Annual or monthly electricity] = Prefer to report monthly																																														
<p>Please complete the grid below to report the monthly electricity usage in this building during 2018.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Month</th> <th style="width: 30%;">kWh</th> <th style="width: 40%;">Cost (\$)</th> </tr> </thead> <tbody> <tr><td>December 2017</td><td></td><td></td></tr> <tr><td>January 2018</td><td></td><td></td></tr> <tr><td>February 2018</td><td></td><td></td></tr> <tr><td>March 2018</td><td></td><td></td></tr> <tr><td>April 2018</td><td></td><td></td></tr> <tr><td>May 2018</td><td></td><td></td></tr> <tr><td>June 2018</td><td></td><td></td></tr> <tr><td>July 2018</td><td></td><td></td></tr> <tr><td>August 2018</td><td></td><td></td></tr> <tr><td>September 2018</td><td></td><td></td></tr> <tr><td>October 2018</td><td></td><td></td></tr> <tr><td>November 2018</td><td></td><td></td></tr> <tr><td>December 2018</td><td></td><td></td></tr> <tr><td>January 2019</td><td></td><td></td></tr> </tbody> </table>			Month	kWh	Cost (\$)	December 2017			January 2018			February 2018			March 2018			April 2018			May 2018			June 2018			July 2018			August 2018			September 2018			October 2018			November 2018			December 2018			January 2019		
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<b>NEXT</b>	IF No data given → F25 [Number electricity suppliers] IF C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One THEN: IF CBECS Activity ≠ Enclosed mall → F12 [All occupants electricity included] IF CBECS Activity = Enclosed mall → F14 [Electricity covers whole mall] OTHERWISE → F18 [Other bldgs electricity included]																																														

<b>F12</b>	<b>All occupants electricity included</b>	<i>ELALL</i>
<b>ASK</b>	IF (F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given OR F11 [Monthly electricity data] given) & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity ≠ Enclosed mall	
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 → F13 [Sq ft not included] OTHERWISE → F18 [Other bldgs electricity included]	

<b>F13</b>	<b>Sq ft not included</b>	<i>ELNISF</i>
<b>ASK</b>	IF F12 [All occupants electricity included] = No	
What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?		
◆ PROBE for estimate if DK		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	→ F20 [Include other major electricity]	

<b>F14</b>	<b>Electricity covers whole mall</b>	<i>ELMALLINC</i>
<b>ASK</b>	IF (F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given OR F11 [Monthly electricity data] given) & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity = Enclosed mall	
<b>FILL</b>	<b>{FoodCourt}</b> IF B40 [Food court] = Yes = "food court," OTHERWISE = BLANK	
Do these figures include the energy for the entire mall building, including the anchor stores, {FoodCourt} common areas, and individual stores?		
1 Yes 2 No		
<b>NEXT</b>	IF No → F15 [Not included in mall electricity] OTHERWISE → F18 [Other bldgs electricity included]	

<b>F15</b>	<b>Not included in mall electricity</b>	<i>see below</i>															
<b>ASK</b>	IF F14 [Electricity covers whole mall] = No																
<p>Which of these is <u>not</u> included?</p> <p>◆ ENTER all that apply</p> <table> <tr> <td>1</td> <td>Anchor stores</td> <td><i>ELMLLANC</i></td> </tr> <tr> <td>2</td> <td>Food court</td> <td><i>ELMLLFC</i></td> </tr> <tr> <td>3</td> <td>Common areas</td> <td><i>ELMLLCOM</i></td> </tr> <tr> <td>4</td> <td>Individual stores</td> <td><i>ELMLLST</i></td> </tr> <tr> <td>5</td> <td>Other</td> <td><i>ELMLLOT</i></td> </tr> </table>			1	Anchor stores	<i>ELMLLANC</i>	2	Food court	<i>ELMLLFC</i>	3	Common areas	<i>ELMLLCOM</i>	4	Individual stores	<i>ELMLLST</i>	5	Other	<i>ELMLLOT</i>
1	Anchor stores	<i>ELMLLANC</i>															
2	Food court	<i>ELMLLFC</i>															
3	Common areas	<i>ELMLLCOM</i>															
4	Individual stores	<i>ELMLLST</i>															
5	Other	<i>ELMLLOT</i>															
<b>NEXT</b>	IF Other selected → F16 [Other not included in mall electricity] OTHERWISE → F17 [Mall sq ft not included]																


<b>F16</b>	<b>Other not included in mall electricity</b>	
<b>ASK</b>	IF Other IN F15 [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>	→ F17 [Mall sq ft not included]	

<b>F17</b>	<b>Mall sq ft not included</b>	<i>ELNMLLSF</i>
<b>ASK</b>	IF F14 [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>	→ F20 [Include other major electricity]	

<b>F18</b>	<b>Other bldgs electricity included</b>	<i>ELOTBD</i>
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given OR F11 [Monthly electricity data] given & NOT (F12 [All occupants electricity included] = No OR F14 [Electricity covers whole mall] = No)	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → F19 [Sq ft of other included] OTHERWISE → F20 [Include other major electricity]	

<b>F19</b>	<b>Sq ft of other included</b>	<i>ELOTSF</i>
<b>ASK</b>	IF F18 [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>	→ F20 [Include other major electricity]	

<b>F20</b>	<b>Include other major electricity</b>	<i>ELOTUS</i>
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given OR F11 [Monthly electricity data] given	
<p>Do these figures include charges for any <u>other</u> major electricity usage outside the building, such as electric vehicle charging stations, parking lot lights, exterior lights, signs or billboards, large pumps, or swimming pools?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → F21 [Outside uses included in electricity] OTHERWISE → F23 [Anything unusual about electricity use]	

<b>F21</b>	<b>Outside uses included in electricity</b>	<i>see below</i>																					
<b>ASK</b>	IF F20 [Include other major electricity] = Yes																						
 SHOW CARD F1  Looking at the list on Show Card F1, please tell me which of these outside uses is included in the electricity figures.  ◆ ENTER all that apply  <table border="0"> <tr> <td>1</td> <td>Electric vehicle charging stations</td> <td><i>ELOUTVCS</i></td> </tr> <tr> <td>2</td> <td>Parking lot lights</td> <td><i>ELOUTPRK</i></td> </tr> <tr> <td>3</td> <td>Exterior lights</td> <td><i>ELOUTLTS</i></td> </tr> <tr> <td>4</td> <td>Signs or billboards</td> <td><i>ELOUTSGN</i></td> </tr> <tr> <td>5</td> <td>Large pumps</td> <td><i>ELOUTPMP</i></td> </tr> <tr> <td>6</td> <td>Swimming pools</td> <td><i>ELOUTSWM</i></td> </tr> <tr> <td>7</td> <td>Other</td> <td><i>ELOUTOT</i></td> </tr> </table>			1	Electric vehicle charging stations	<i>ELOUTVCS</i>	2	Parking lot lights	<i>ELOUTPRK</i>	3	Exterior lights	<i>ELOUTLTS</i>	4	Signs or billboards	<i>ELOUTSGN</i>	5	Large pumps	<i>ELOUTPMP</i>	6	Swimming pools	<i>ELOUTSWM</i>	7	Other	<i>ELOUTOT</i>
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7	Other	<i>ELOUTOT</i>																					
<b>NEXT</b>	IF Other selected → F22 [Other type of outside electricity use] OTHERWISE → F23 [Anything unusual about electricity use]																						

<b>F22</b>	<b>Other type of outside electricity use</b>
<b>ASK</b>	IF Other IN F21 [Outside uses included in electricity]
Please describe this other type of outside electricity use.  ◆ RECORD in space below	
<b>NEXT</b>	→ F23 [Anything unusual about electricity use]

<b>F23</b>	<b>Anything unusual about electricity use</b>	<i>ELUNUSUAL</i>				
<b>ASK</b>	IF F5 [Electricity consumption] given OR F7 [Purchased electricity consumption] given OR F11 [Monthly electricity data] given					
Is there anything about this building that would make the electricity consumption higher or lower than average?  <table border="0"> <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 → F24 [What is unusual about electricity use] OTHERWISE → F25 [Number electricity suppliers]					



<b>F24</b>	<b>What is unusual about electricity use</b>
<b>ASK</b>	IF F23 [Anything unusual about electricity use] = Yes
<p>Describe what is unusual about the building.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	→ F25 [Number electricity suppliers]

<b>F25</b>	<b>Number electricity suppliers</b>	<i>ELNUMSP</i>
<b>ASK</b>	IF Electricity used	
<b>FILL</b>	<p><b>{SuppliersIntro}</b>  IF (F2 [Provide electricity figures] = No OR DK/RF) OR F3 [Annual or monthly electricity] = DK/RF OR F5 [Electricity consumption] = DK/RF OR F7 [Purchased electricity consumption] = DK/RF OR F11 [Monthly electricity data] not given = "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 = "The next questions are about your electricity supplier or suppliers."</p>	
<p>{SuppliersIntro}</p> <p>How many different companies supplied electricity to this building during calendar year 2018?</p>		
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	IF 1 to 4 → F26 [Electricity suppliers] IF DK/RF → F29 [Electricity bill available]	

<b>F26</b>	<b>Electricity suppliers</b>	<i>EL1LKP—EL4LKP</i>
<b>ASK</b>	IF F25 [Number electricity suppliers] = 1 to 4	
<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 2018?</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 <b>** NOT ON LIST</b> will be highlighted, then press [ENTER] two times</li> </ul>		
<b>NEXT</b>	IF NOT ON LIST selected → F28 [Supplier name] IF Supplier found in look-up table → F27 [Verify electricity supplier] IF DK/RF → F29 [Electricity bill available]	

<b>F27</b>	<b>Verify electricity supplier</b>
<b>ASK</b>	IF Supplier found in F26 [Electricity suppliers] look-up table
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F26 [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 → F30 [Number electricity accounts] IF No → F26 [Electricity suppliers]

<b>F28</b>	<b>Supplier name</b>	<i>EL1NEW—EL4NEW</i>
<b>ASK</b>	IF NOT ON LIST selected in F26 [Electricity suppliers]	
<ul style="list-style-type: none"> <li>◆ ENTER the name of the supplier</li> </ul>		
<b>NEXT</b>	IF Name given → F30 [Number electricity accounts] IF DK/RF → F35 [Electricity bill available]	

<b>F29</b>	<b>Electricity bill available</b>	<i>ELBILL</i>
<b>ASK</b>	IF F25 [Number electricity suppliers] = DK/RF OR F26 [Electricity suppliers] = DK/RF	
<p>Can you provide a copy of one electricity bill? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>	IF Only one supplier OR Last supplier OR DK/RF Number of suppliers → G1 [Section G Routing] IF More suppliers left to answer for → Back to F26 [Electricity suppliers] for next supplier	

<b>F30</b>	<b>Number electricity accounts</b>	<i>EL1NAC—EL4NAC</i>
<b>ASK</b>	IF Supplier found in F26 [Electricity suppliers] look-up table OR F28 [Supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from F26 [Electricity suppliers] look-up table OR F28 [Supplier name]	
How many different electricity accounts does this building have with {Supplier}?		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → F31 [Electricity account number] IF More than 10 accounts OR DK/RF → F35 [Electricity bill available]	

<b>F31</b>	<b>Electricity account number</b>	<i>EL1AC1—EL4AC10</i>
<b>ASK</b>	IF F30 [Number electricity accounts] = 1 to 10	
<b>FILL</b>	<b>{Number}</b> IF Only one account = “number” OTHERWISE = “numbers” <b>{Supplier}</b> = Supplier name from F26 [Electricity suppliers] look-up table OR F28 [Supplier name]	
Please give me the electricity account {Number} for {Supplier}.		
◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	IF F2 [Provide electricity figures] = No OR DK/RF) OR F3 [Annual or monthly electricity] = DK/RF OR F5 [Electricity consumption] = DK/RF OR F7 [Purchased electricity consumption] = DK/RF OR F11 [Monthly electricity data] not given → F32 [Bills cover only building] OTHERWISE → F35 [Electricity bill available]	

<b>F32</b>	<b>Bills cover only building</b>	<i>EL10TB—EL40TB</i>
<b>ASK</b>	IF F30 [Number electricity accounts] = 1 to 10 & ((F2 [Provide electricity figures] = No OR DK/RF) OR F3 [Annual or monthly electricity] = DK/RF OR F5 [Electricity consumption] = DK/RF OR F7 [Purchased electricity consumption] = DK/RF OR F11 [Monthly electricity data] not 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 F26 [Electricity suppliers] look-up table OR F28 [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 → F33 [Sq ft of others included] IF Just this building OR DK/RF → F34 [Include other major electricity]	

<b>F33</b>	<b>Sq ft of others included</b>	<i>EL10TS—EL40TS</i>
<b>ASK</b>	IF F32 [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>	→ F34 [Include other major electricity]	

<b>F34</b>	<b>Include other major electricity</b>	<i>EL10TU—EL40TU</i>
<b>ASK</b>	IF F30 [Number electricity accounts] = 1 to 10 & ((F2 [Provide electricity figures] = No OR DK/RF) OR F3 [Annual or monthly electricity] = DK/RF OR F5 [Electricity consumption] = DK/RF OR F7 [Purchased electricity consumption] = DK/RF OR F11 [Monthly electricity data] not 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 electric vehicle charging stations, parking lot lights, exterior lights, signs or billboards, large pumps or swimming pools?  1 Yes 2 No	
<b>NEXT</b>	→ F35 [Electricity bill available]	


<b>F35</b>	<b>Electricity bill available</b>	<i>EL1BILL—EL4BILL</i>
<b>ASK</b>	IF F25 [Number electricity suppliers] = 1 to 4 & NOT F26 [Electricity suppliers] = DK/RF	
<b>FILL</b>	<b>{Supplier}</b> IF F26 [Electricity suppliers] given = "F26 [Electricity suppliers]" IF F28 [Supplier name] given = "F28 [Supplier name]" IF F28 [Supplier name] = DK/RF = "this supplier"	
	<p>Can you provide a copy of one electricity bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>	IF More suppliers left to answer for → Back to F26 [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 [Provide natural gas figures] OTHERWISE → H1 [Section H Routing]

<b>G2</b>	<b>Provide natural gas figures</b>	<i>NGFIGS</i>
<b>ASK</b>	IF Natural gas used	
<p>The next questions are about natural gas usage in this building during calendar year 2018. This can be reported as either annual or monthly information. Are you able to provide natural gas usage information for this building for 2018?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → G3 [Annual or monthly natural gas] IF No OR DK/RF → G25 [Number natural gas suppliers]	

<b>G3</b>	<b>Annual or monthly natural gas</b>	<i>NGANNMON</i>
<b>ASK</b>	IF G2 [Provide natural gas figures] = Yes	
<p>Do you prefer to report the annual total natural gas usage for 2018, or monthly natural gas usage information?</p> <p>1 Prefer to report <u>annual total</u> natural gas usage 2 Prefer to report <u>monthly</u> natural gas usage</p>		
<b>NEXT</b>	IF DK/RF → G25 [Number natural gas suppliers] OTHERWISE → G4 [Units for natural gas]	

<b>G4</b>	<b>Units for natural gas</b>	<i>NGUNIT</i>
<b>ASK</b>	IF G3 [Annual or monthly natural gas] ≠ DK/RF	
 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 Million Btu (MMBtu)</li> <li>7 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 THEN: IF G3 [Annual or monthly natural gas] = Prefer to report annual total → G6 [Natural gas consumption] IF G3 [Annual or monthly natural gas] = Prefer to report monthly → G10 [Monthly natural gas data]	

<b>G5</b>	<b>Other natural gas units</b>	<i>NGUNITX</i>
<b>ASK</b>	IF G4 [Units for natural gas] = Some other units	
What are the other units?  ◆ ENTER the units		
<b>NEXT</b>	IF G3 [Annual or monthly natural gas] = Prefer to report annual total → G6 [Natural gas consumption] IF G3 [Annual or monthly natural gas] = Prefer to report monthly → G10 [Monthly natural gas data]	

<b>G6</b>	<b>Natural gas consumption</b>	<i>NGCNS</i>
<b>ASK</b>	IF G3 [Annual or monthly natural gas] = Prefer to report annual total	
Please give me the total amount of natural gas used in calendar year 2018.  ◆ VERIFY number <u>digit by digit</u>		
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	IF DK/RF → G25 [Number natural gas suppliers] OTHERWISE → G7 [Natural gas expenditures]	

<b>G7</b>	<b>Natural gas expenditures</b>	<i>NGEXP</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given	
<p>Please give me the total dollars spent on natural gas in calendar year 2018. This should include state and local taxes and all charges such as: fuel adjustment, system, demand, and distribution.</p> <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>	→ 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	
<p>What is the starting date for these natural gas 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>	→ 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	
<p>What is the ending date [for these natural gas usage figures]?</p> <ul style="list-style-type: none"> <li>◆ ENTER date as MMDDYYYY</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 C6 [Number of businesses category] ≠ Zero OR One THEN: IF CBECS Activity ≠ Enclosed mall → G11 [All occupants natural gas included] IF CBECS Activity = Enclosed mall → G13 [Natural gas covers whole mall] OTHERWISE → G17 [Other bldgs natural gas included]	



<b>G10</b>	<b>Monthly natural gas data</b>	NGCNS_1217, NGCOST_1217, etc.																																													
<b>ASK</b>	IF G3 [Annual or monthly natural gas] = Prefer to report monthly																																														
<b>FILL</b>	<b>{Units}</b> IF G4 [Units for natural gas] given = "G4 [Units for natural gas]" OTHERWISE = "Usage"																																														
Please complete the grid below to report the monthly natural gas usage in this building during 2018.																																															
<table border="1"> <thead> <tr> <th>Month</th> <th>{Units}</th> <th>Cost (\$)</th> </tr> </thead> <tbody> <tr><td>December 2017</td><td></td><td></td></tr> <tr><td>January 2018</td><td></td><td></td></tr> <tr><td>February 2018</td><td></td><td></td></tr> <tr><td>March 2018</td><td></td><td></td></tr> <tr><td>April 2018</td><td></td><td></td></tr> <tr><td>May 2018</td><td></td><td></td></tr> <tr><td>June 2018</td><td></td><td></td></tr> <tr><td>July 2018</td><td></td><td></td></tr> <tr><td>August 2018</td><td></td><td></td></tr> <tr><td>September 2018</td><td></td><td></td></tr> <tr><td>October 2018</td><td></td><td></td></tr> <tr><td>November 2018</td><td></td><td></td></tr> <tr><td>December 2018</td><td></td><td></td></tr> <tr><td>January 2019</td><td></td><td></td></tr> </tbody> </table>			Month	{Units}	Cost (\$)	December 2017			January 2018			February 2018			March 2018			April 2018			May 2018			June 2018			July 2018			August 2018			September 2018			October 2018			November 2018			December 2018			January 2019		
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<b>NEXT</b>	IF No data given → G25 [Number natural gas suppliers] IF C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One THEN: IF CBECS Activity ≠ Enclosed mall → G11 [All occupants natural gas included] IF CBECS Activity = Enclosed mall → G13 [Natural gas covers whole mall] OTHERWISE → G17 [Other bldgs natural gas included]																																														

<b>G11</b>	<b>All occupants natural gas included</b>	NGALL
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] given) & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity ≠ Enclosed mall	
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 → G12 [Sq ft not included] OTHERWISE → G17 [Other bldgs natural gas included]	

<b>G12</b>	<b>Sq ft not included</b>	<i>NGNISF</i>
<b>ASK</b>	IF G11 [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>	→ G20 [Include other major natural gas]	

<b>G13</b>	<b>Natural gas covers whole mall</b>	<i>NGMLLINC</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] given) & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One) & CBECS Activity = Enclosed mall	
<b>FILL</b>	<b>{FoodCourt}</b> IF B40 [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 → G14 [Not included in mall natural gas] OTHERWISE → G17 [Other bldgs natural gas included]	

<b>G14</b>	<b>Not included in mall natural gas</b>	<i>NGMALLEXC</i>										
<b>ASK</b>	IF G13 [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>NGMLLANC</i></td> </tr> <tr> <td>2 Food court</td> <td style="text-align: right;"><i>NGMLLFC</i></td> </tr> <tr> <td>3 Common areas</td> <td style="text-align: right;"><i>NGMLLCOM</i></td> </tr> <tr> <td>4 Individual stores</td> <td style="text-align: right;"><i>NGMLLST</i></td> </tr> <tr> <td>5 Other</td> <td style="text-align: right;"><i>NGMLLOT</i></td> </tr> </table>			1 Anchor stores	<i>NGMLLANC</i>	2 Food court	<i>NGMLLFC</i>	3 Common areas	<i>NGMLLCOM</i>	4 Individual stores	<i>NGMLLST</i>	5 Other	<i>NGMLLOT</i>
1 Anchor stores	<i>NGMLLANC</i>											
2 Food court	<i>NGMLLFC</i>											
3 Common areas	<i>NGMLLCOM</i>											
4 Individual stores	<i>NGMLLST</i>											
5 Other	<i>NGMLLOT</i>											
<b>NEXT</b>	IF Other selected → G15 [Other not included in mall natural gas] OTHERWISE → G16 [Mall sq ft not included]											

<b>G15</b>	<b>Other not included in mall natural gas</b>
<b>ASK</b>	IF Other IN G14 [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>	→ G16 [Mall sq ft not included]


<b>G16</b>	<b>Mall sq ft not included</b>	<i>NGNMLLSF</i>
<b>ASK</b>	IF G13 [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>	→ G20 [Include other major natural gas]	

<b>G17</b>	<b>Other bldgs natural gas included</b>	<i>NGOTBD</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] given) & G11 [All occupants natural gas included] ≠ No & G13 [Natural gas covers whole mall] ≠ No	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → G18 [Sq ft of other included] IF No OR DK/RF: IF B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → G19 [Central plant natural gas included] OTHERWISE → G20 [Include other major natural gas]	

<b>G18</b>	<b>Sq ft of other included</b>	<i>NGOTSF</i>
<b>ASK</b>	IF G17 [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 B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building → G19 [Central plant natural gas included] OTHERWISE → G20 [Include other major natural gas]	

<b>G19</b>	<b>Central plant natural gas included</b>	<i>PLTNGINC</i>
<b>ASK</b>	IF (G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] given) & B49 [Central physical plant] = Yes & B54 [Central plant in building] = In another building	
<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>	➔ G20 [Include other major natural gas]	

<b>G20</b>	<b>Include other major natural gas</b>	<i>NGOTUS</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] 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>	IF Yes ➔ G21 [Outside uses included in natural gas] OTHERWISE ➔ G23 [Anything unusual about natural gas use]	

<b>G21</b>	<b>Outside uses included in natural gas</b>	<i>see below</i>												
<b>ASK</b>	IF G20 [Include other major natural gas] = Yes													
<p> SHOW CARD G2</p> <p>Looking at the list on Show Card G2, please tell me which of these outside uses is included in the natural gas figures.</p> <p>◆ ENTER all that apply</p> <table border="0"> <tr> <td>1 Kilns</td> <td><i>NGOUTKLN</i></td> </tr> <tr> <td>2 Gas space heaters</td> <td><i>NGOUTHTR</i></td> </tr> <tr> <td>3 Exterior decorative lights</td> <td><i>NGOUTLTS</i></td> </tr> <tr> <td>4 Compressed natural gas vehicles</td> <td><i>NGOUTVEH</i></td> </tr> <tr> <td>5 Pumps not used in the building</td> <td><i>NGOUTPMP</i></td> </tr> <tr> <td>6 Other</td> <td><i>NGOUTOT</i></td> </tr> </table>			1 Kilns	<i>NGOUTKLN</i>	2 Gas space heaters	<i>NGOUTHTR</i>	3 Exterior decorative lights	<i>NGOUTLTS</i>	4 Compressed natural gas vehicles	<i>NGOUTVEH</i>	5 Pumps not used in the building	<i>NGOUTPMP</i>	6 Other	<i>NGOUTOT</i>
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5 Pumps not used in the building	<i>NGOUTPMP</i>													
6 Other	<i>NGOUTOT</i>													
<b>NEXT</b>	IF Other selected ➔ G22 [Other type of outside natural gas use] OTHERWISE ➔ G23 [Anything unusual about natural gas use]													

<b>G22</b>	<b>Other type of outside natural gas use</b>
<b>ASK</b>	IF Other IN G21 [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>	→ G23 [Anything unusual about natural gas use]

<b>G23</b>	<b>Anything unusual about natural gas use</b>	<i>NGUNUSUAL</i>
<b>ASK</b>	IF G6 [Natural gas consumption] given OR G10 [Monthly natural gas data] given	
<p>Is there anything about this building that would make the natural gas consumption higher or lower than average?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → G24 [What is unusual about natural gas use] OTHERWISE → G25 [Number natural gas suppliers]	

<b>G24</b>	<b>What is unusual about natural gas use</b>
<b>ASK</b>	IF G23 [Anything unusual about natural gas use] = Yes
<p>Describe what is unusual about the building.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	→ G25 [Number natural gas suppliers]

<b>G25</b>	<b>Number natural gas suppliers</b>	<i>NGNUMSP</i>
<b>ASK</b>	IF Natural gas used	
<b>FILL</b>	<p><b>{SuppliersIntro}</b>  IF (G2 [Provide natural gas figures] = No OR DK/RF) OR  G3 [Annual or monthly natural gas] = DK/RF OR G6 [Natural gas consumption] = DK/RF OR  G10 [Monthly natural gas data] not given = "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 = "The next questions are about your natural gas supplier or suppliers."</p>	
<p>{SuppliersIntro}</p> <p>How many different companies supplied natural gas to this building during calendar year 2018?</p>		
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	IF 1 to 4 → G26 [Natural gas suppliers] IF DK/RF → G29 [Natural gas bill available]	

<b>G26</b>	<b>Natural gas suppliers</b>	<i>NG1LKP—NG2LKP</i>
<b>ASK</b>	IF G25 [Number natural gas suppliers] = 1 to 4	
<b>FILL</b>	<p><b>{FirstNext}</b>  IF Only one supplier = BLANK  IF First supplier given = "first"  OTHERWISE = "next"</p>	
<p>What is the name of the {FirstNext} supplier that provided natural gas in calendar year 2018?</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 → G28 [Supplier name] IF Supplier found in look-up table → G27 [Verify natural gas supplier] IF DK/RF → G29 [Natural gas bill available]	

<b>G27</b>	<b>Verify natural gas supplier</b>
<b>ASK</b>	IF Supplier found in G26 [Natural gas suppliers] look-up table
<b>FILL</b>	{Supplier} = Supplier name from G26 [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 → G30 [Number natural gas accounts] IF No → G26 [Natural gas suppliers]

<b>G28</b>	<b>Supplier name</b>	<i>NG1NEW—NG4NEW</i>
<b>ASK</b>	IF NOT ON LIST selected in G26 [Natural gas suppliers]	
<ul style="list-style-type: none"> <li>◆ ENTER the name of the supplier</li> </ul>		
<b>NEXT</b>	IF Name given → G30 [Number natural gas accounts] IF DK/RF → G35 [Natural gas bill available]	

<b>G29</b>	<b>Natural gas bill available</b>	<i>NGBILL</i>
<b>ASK</b>	IF G25 [Number natural gas suppliers] = DK/RF OR G26 [Natural gas suppliers] = DK/RF	
<p>Can you provide a copy of one natural gas bill? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>	IF Only one supplier OR Last supplier OR DK/RF Number of suppliers → H1 [Section H Routing] IF More suppliers left to answer for → Back to G26 [Natural gas suppliers] for next supplier	

<b>G30</b>	<b>Number natural gas accounts</b>	<i>NG1NAC—NG4NAC</i>
<b>ASK</b>	IF Supplier found in G26 [Natural gas suppliers] look-up table OR G28 [Supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = Supplier name from G26 [Natural gas suppliers] look-up table OR G28 [Supplier name]	
How many different natural gas accounts does this building have with {Supplier}?		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → G31 [Natural gas account number] IF More than 10 accounts OR DK/RF → G35 [Natural gas bill available]	

<b>G31</b>	<b>Natural gas account number</b>	<i>NG1AC1—NG4AC10</i>
<b>ASK</b>	IF G30 [Number natural gas accounts] = 1 to 10	
<b>FILL</b>	<b>{Number}</b> IF Only one account = “number” OTHERWISE = “numbers” <b>{Supplier}</b> = Supplier name from G26 [Natural gas suppliers] look-up table OR G28 [Supplier name]	
Please give me the natural gas account {Number} for {Supplier}.		
◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	IF (G2 [Provide natural gas figures] = No OR DK/RF) OR G3 [Annual or monthly natural gas] = DK/RF OR G6 [Natural gas consumption] = DK/RF OR G10 [Monthly natural gas data] not given → G32 [Bills cover only building] OTHERWISE → G35 [Natural gas bill available]	

<b>G32</b>	<b>Bills cover only building</b>	<i>NG1OTB—NG4OTB</i>
<b>ASK</b>	IF G30 [Number natural gas accounts] = 1 to 10 & ((G2 [Provide natural gas figures] = No OR DK/RF) OR G3 [Annual or monthly natural gas] = DK/RF OR G6 [Natural gas consumption] = DK/RF OR G10 [Monthly natural gas data] not 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 G26 [Natural gas suppliers] look-up table OR G28 [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 → G33 [Sq ft of others included] IF Just this building OR DK/RF → G34 [Include other major natural gas]	



<b>G33</b>	<b>Sq ft of others included</b>	<i>NG10TS—NG40TS</i>
<b>ASK</b>	IF G32 [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>	➔ G34 [Include other major natural gas]	

<b>G34</b>	<b>Include other major natural gas</b>	<i>NG10TU—NG40TU</i>
<b>ASK</b>	IF G30 [Number natural gas accounts] = 1 to 10 & ((G2 [Provide natural gas figures] = No OR DK/RF) OR G3 [Annual or monthly natural gas] = DK/RF OR G6 [Natural gas consumption] = DK/RF OR G10 [Monthly natural gas data] not 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 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?  1 Yes 2 No		
<b>NEXT</b>	➔ G35 [Natural gas bill available]	

<b>G35</b>	<b>Natural gas bill available</b>	<i>NG1BILL—NG4BILL</i>
<b>ASK</b>	IF G25 [Number natural gas suppliers] = 1 to 4 & NOT G26 [Natural gas suppliers] = DK/RF	
<b>FILL</b>	<p><b>{Supplier}</b>  IF G26 [Natural gas suppliers] given = "G26 [Natural gas suppliers]"  IF G28 [Supplier name] given = "G28 [Supplier name]"  IF G28 [Supplier name] = DK/RF = "this supplier"</p>	
<p>Can you provide a copy of one natural gas bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>	IF More suppliers left to answer for → Back to G26 [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 [Provide fuel oil figures] OTHERWISE → I1 [Section I Routing]

<b>H2</b>	<b>Provide fuel oil figures</b>	<i>FKFIGS</i>
<b>ASK</b>	IF Fuel oil used	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>The next questions are about {FuelOilType} purchases for this building during calendar year 2018. Are you able to report how much {FuelOilType} was purchased for this building during 2018?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → H3 [Fuel oil purchases] IF No OR DK/RF → H5 [Purchased before 2018]	

<b>H3</b>	<b>Fuel oil purchases</b>	<i>FKCNS</i>
<b>ASK</b>	IF H2 [Provide fuel oil figures] = Yes	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>Please give me the total number of gallons of {FuelOilType} purchased in calendar year 2018.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	0 to 99,999,999,999	
<b>NEXT</b>	→ H4 [Fuel oil expenditures]	

<b>H4</b>	<b>Fuel oil expenditures</b>	<i>FKEXP</i>
<b>ASK</b>	IF H2 [Provide fuel oil figures] = Yes	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>Please give me the total dollars spent on {FuelOilType} in calendar year 2018, including state and local taxes.</p> <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 (H3 [Fuel oil purchases] = Zero OR DK/RF) & (H4 [Fuel oil expenditures] = Zero OR DK/RF) → H5 [Purchased before 2018] OTHERWISE → H6 [Starting date for fuel oil figures]	

<b>H5</b>	<b>Purchased before 2018</b>	<i>FKSTORD</i>
<b>ASK</b>	IF H2 [Provide fuel oil figures] = No OR DK/RF OR (H3 [Fuel oil purchases] = Zero OR DK/RF) & (H4 [Fuel oil expenditures] = Zero OR DK/RF)	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>Was any of the {FuelOilType} used in 2018 purchased or delivered in 2017 or before?</p> <p>1 Yes  2 No</p>		
<b>NEXT</b>	IF Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source] OR (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used) → H17 [Fuel oil bill available] OTHERWISE → I1 [Section I Routing]	

<b>H6</b>	<b>Starting date for fuel oil figures</b>	<i>FKSTDAT</i>
<b>ASK</b>	IF H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<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>	→ H7 [Ending date for fuel oil figures]	

<b>H7</b>	<b>Ending date for fuel oil figures</b>	<i>FKENDAT</i>
<b>ASK</b>	IF H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<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 C6 [Number of businesses category] ≠ Zero OR One → H8 [All occupants fuel oil included] OTHERWISE → H10 [Other bldgs fuel oil included]	

<b>H8</b>	<b>All occupants fuel oil included</b>	<i>FKALL</i>
<b>ASK</b>	IF (H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0) & (C5 [Number of businesses] > 1 OR C6 [Number of businesses category] ≠ Zero OR One)	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [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 → H9 [Sq ft not included] OTHERWISE → H10 [Other bldgs fuel oil included]	

<b>H9</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> <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>	→ H12 [Include other major fuel oil]	

<b>H10</b>	<b>Other bldgs fuel oil included</b>	<i>FKOTBD</i>
<b>ASK</b>	IF (H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0) & NOT H8 [All occupants fuel oil included] = No	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → H11 [Sq ft of other included] OTHERWISE → H12 [Include other major fuel oil]	

<b>H11</b>	<b>Sq ft of other included</b>	<i>FKOTSF</i>
<b>ASK</b>	IF H10 [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>	→ H12 [Include other major fuel oil]	

<b>H12</b>	<b>Include other major fuel oil</b>	<i>FKOTUS</i>
<b>ASK</b>	IF H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [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>	→ H13 [Anything unusual about fuel oil use]	

<b>H13</b>	<b>Anything unusual about fuel oil use</b>	<i>FKUNUSUAL</i>
<b>ASK</b>	IF H3 [Fuel oil purchases] > 0 OR H4 [Fuel oil expenditures] > 0	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>Is there anything about this building that would make the {FuelOilType} consumption higher or lower than average?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → H14 [What is unusual about fuel oil use] OTHERWISE: IF Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source] OR (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used) → H15 [Number fuel oil suppliers] OTHERWISE → H17 [Fuel oil bill available]	

<b>H14</b>	<b>What is unusual about fuel oil use</b>
<b>ASK</b>	IF H13 [Anything unusual about fuel oil use] = Yes
<p>Describe what is unusual about the building.</p> <p>◆ RECORD in space below</p>	
<b>NEXT</b>	IF Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source] OR (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used) → H15 [Number fuel oil suppliers] OTHERWISE → H17 [Fuel oil bill available]

<b>H15</b>	<b>Number fuel oil suppliers</b>	<i>FKNUMSP</i>
<b>ASK</b>	IF Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source] OR (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used)	
<b>FILL</b>	<b>{SuppliersIntro}</b> IF H2 [Provide fuel oil figures] = No OR 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 = "The next questions are about your fuel oil supplier or suppliers." <b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
{SuppliersIntro}  How many different companies supplied {FuelOilType} to this building during calendar year 2018?		
<b>RANGE</b>	1 to 4	
<b>NEXT</b>	IF 1 to 4 → H16 [Fuel oil supplier name] IF DK/RF → H17 [Fuel oil bill available]	

<b>H16</b>	<b>Fuel oil supplier name</b>	<i>FK1SUP—FK4SUP</i>
<b>ASK</b>	IF H15 [Number fuel oil suppliers] = 1 to 4	
<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 D15 [Fuel oil, diesel, or kerosene]	
What is the name of the {FirstNext} supplier that provided {FuelOilType} during 2018?  ◆ ENTER the name of the supplier		
<b>NEXT</b>	IF Name given → H18 [Street address] IF DK/RF → H17 [Fuel oil bill available]	



<b>H17</b>	<b>Fuel oil bill available</b>	<i>FKBILL</i>
<b>ASK</b>	IF NOT (Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source]) & NOT (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used) OR H15 [Number fuel oil suppliers] = DK/RF OR H16 [Fuel oil supplier name] = DK/RF	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene]	
<p>Can you provide a copy of one {FuelOilType} bill? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>	IF NOT (Fuel oil IN D25 [Source for main heating] OR D26 [Other source for main heating] OR D27 [Which other sources for heating] OR D29 [Other source for heating] OR D128 [Sources for water heating] OR D129 [Other water heating source]) & NOT (D141 [Sources for electricity generation] = Fuel oil & D142 [Use of generated electricity] = Whenever electricity was used) → I1 [Section I Routing] IF Only one supplier OR Last supplier OR DK/RF Number of suppliers → I1 [Section I Routing] IF More suppliers left to answer for → Back to H16 [Fuel oil supplier name] for next supplier	

<b>H18</b>	<b>Street address</b>	<i>FK1AD1—FK4AD1</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
<b>FILL</b>	<b>{Supplier}</b> = H16 [Fuel oil supplier name]	
What is the address for {Supplier}, beginning with the street?		
<b>NEXT</b>	→ H19 [P.O. Box or Suite]	

<b>H19</b>	<b>P.O. Box or Suite</b>	<i>FK1AD2—FK4AD2</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
Is there a post office box or suite number?		
<ul style="list-style-type: none"> <li>◆ If not, press [ENTER]</li> </ul>		
<b>NEXT</b>	→ H20 [City]	

<b>H20</b>	<b>City</b>	<i>FK1CTY—FK4CTY</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
What is the city?		
<b>NEXT</b>	➔ H21 [State abbreviation]	

<b>H21</b>	<b>State abbreviation</b>	<i>FK1STA—FK4STA</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
What is the state?		
◆ ENTER the two letter abbreviation		
<b>NEXT</b>	➔ H22 [ZIP code]	

<b>H22</b>	<b>ZIP code</b>	<i>FK1ZIP—FK4ZIP</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
And what is the zip code?		
<b>NEXT</b>	➔ H23 [Number fuel oil accounts]	

<b>H23</b>	<b>Number fuel oil accounts</b>	<i>FK1NAC—FK4NAC</i>
<b>ASK</b>	IF Name given in H16 [Fuel oil supplier name]	
<b>FILL</b>	{FuelOilType} = Type or types specified in D15 [Fuel oil, diesel, or kerosene] {Supplier} = "H16 [Fuel oil supplier name]"	
How many different {FuelOilType} accounts does this building have with {Supplier}?		
<b>NEXT</b>	IF 1 to 10 accounts ➔ H24 [Fuel oil account number] IF More than 10 accounts OR DK/RF ➔ H28 [Fuel oil bill available]	

<b>H24</b>	<b>Fuel oil account number</b>	<i>FK1AC1—FK4AC10</i>
<b>ASK</b>	IF H23 [Number fuel oil accounts] = 1 to 10	
<b>FILL</b>	<b>{Number}</b> IF Only one account = "number" OTHERWISE = "numbers" <b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene] <b>{Supplier}</b> = "H16 [Fuel oil supplier name]"	
Please give me the {FuelOilType} account {Number} for {Supplier}.  ◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	IF H2 [Provide fuel oil figures] = No OR DK/RF → H25 [Bills cover only building] OTHERWISE → H28 [Fuel oil bill available]	

<b>H25</b>	<b>Bills cover only building</b>	<i>FK10TB—FK40TB</i>
<b>ASK</b>	IF H23 [Number fuel oil accounts] = 1 to 10 & (H2 [Provide fuel oil figures] = No OR DK/RF)	
<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> = H16 [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 → H26 [Sq ft of others included] IF Just this building OR DK/RF → H27 [Include other major fuel oil]	

<b>H26</b>	<b>Sq ft of others included</b>	<i>FK10TS—FK40TS</i>
<b>ASK</b>	IF H25 [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>	→ H27 [Include other major fuel oil]	


<b>H27</b>	<b>Include other major fuel oil</b>	<i>FK10TU—FK40TU</i>
<b>ASK</b>	IF H23 [Number fuel oil accounts] = 1 to 10 & (H2 [Provide fuel oil figures] = No OR DK/RF)	
<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 fuel oil usage outside the building, such as for kilns, welding, pumps, or motors?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	➔ H28 [Fuel oil bill available]	

<b>H28</b>	<b>Fuel oil bill available</b>	<i>FK1BILL—FK4BILL</i>
<b>ASK</b>	IF H15 [Number fuel oil suppliers] = 1 to 4 & NOT H16 [Fuel oil supplier name] = DK/RF	
<b>FILL</b>	<b>{FuelOilType}</b> = Type or types specified in D15 [Fuel oil, diesel, or kerosene] <b>{Supplier}</b> = “H16 [Fuel oil supplier name]”	
<p>Can you provide a copy of one {FuelOilType} bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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 H16 [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 [Provide district steam figures] OTHERWISE → J1 [Section J Routing]

<b>I2</b>	<b>Provide district steam figures</b>	<i>STFIGS</i>
<b>ASK</b>	IF District steam used	
<p>The next questions are about district steam usage in this building during calendar year 2018. Are you able to report how much district steam was used in this building during 2018?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → I3 [Units for district steam] IF No OR DK/RF: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → I13 [District steam supplier name] OTHERWISE → J1 [Section J Routing]	

<b>I3</b>	<b>Units for district steam</b>	<i>STUNIT</i>
<b>ASK</b>	IF I2 [Provide district steam figures] = Yes	
<p> SHOW CARD I1</p> <p>Please look at Show Card I1 and tell me the units in which your district steam is measured.</p> <p>1 Thousand pounds 2 Pounds 3 Million Btu (MMBtu) 4 IF VOLUNTEERED: Some other units</p>		
<b>NEXT</b>	IF Some other units → I4 [Other district steam units] OTHERWISE → I5 [District steam consumption]	

<b>I4</b>	<b>Other district steam units</b>	<i>STUNITX</i>
<b>ASK</b>	IF I3 [Units for district steam] = Some other units	
<p>What are the other units?</p>		
<b>NEXT</b>	→ I5 [District steam consumption]	

<b>I5</b>	<b>District steam consumption</b>	<i>STCNS</i>
<b>ASK</b>	IF I2 [Provide district steam figures] = Yes	
<p>Please give me the total amount of district steam used in calendar year 2018.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	IF DK/RF THEN: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → I13 [District steam supplier name] OTHERWISE → J1 [Section J Routing] OTHERWISE → I6 [District steam expenditures]	

<b>I6</b>	<b>District steam expenditures</b>	<i>STEXP</i>
<b>ASK</b>	IF I5 [District steam consumption] given	
<p>Please give me the total dollars spent on district steam in calendar year 2018, including state and local taxes.</p> <p>◆ Do <u>not</u> enter cents</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	0 to 999,999,999	
<b>NEXT</b>	→ I7 [Starting date for district steam figures]	

<b>I7</b>	<b>Starting date for district steam figures</b>	<i>STSTDAT</i>
<b>ASK</b>	IF I5 [District steam consumption] given	
<p>What is the starting date for these district steam usage figures?</p> <p>◆ ENTER date as MMDDYYYY</p> <p>◆ If the day is not known, ENTER "15" for DD</p>		
<b>NEXT</b>	→ I8 [Ending date for district steam figures]	

<b>I8</b>	<b>Ending date for district steam figures</b>	<i>STENDAT</i>
<b>ASK</b>	IF I5 [District steam consumption] given	
	<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>◆ 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 C6 [Number of businesses category] ≠ Zero OR One → I9 [All occupants steam included] OTHERWISE → I11 [Other bldgs steam included]	

<b>I9</b>	<b>All occupants steam included</b>	<i>STALL</i>
<b>ASK</b>	IF I5 [District steam consumption] given & (C5 [Number of businesses] >1 OR C6 [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 → I10 [Sq ft not included] OTHERWISE → I11 [Other bldgs steam included]	

<b>I10</b>	<b>Sq ft not included</b>	<i>STNISF</i>
<b>ASK</b>	IF I9 [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> <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>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → I13 [District steam supplier name] OTHERWISE → J1 [Section J Routing]	

<b>I11</b>	<b>Other bldgs steam included</b>	<i>STOTBD</i>
<b>ASK</b>	IF I5 [District steam consumption] given & NOT I9 [All occupants steam included] = No	
<p>Is any consumption from other buildings included in these figures?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → I12 [Sq ft of other included] OTHERWISE: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → I13 [District steam supplier name] OTHERWISE → J1 [Section J Routing]	

<b>I12</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>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → I13 [District steam supplier name] OTHERWISE → J1 [Section J Routing]	

<b>I13</b>	<b>District steam supplier name</b>	<i>STSUP</i>
<b>ASK</b>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes	
<b>FILL</b>	<p><b>{SuppliersIntro}</b>          IF (I2 [Provide district steam figures] = No OR DK/RF) OR I5 [District steam consumption] = DK/RF          = "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."          OTHERWISE = "The next questions are about your district steam supplier."</p>	
<p>{SuppliersIntro}</p> <p>What is the name of the supplier that provided district steam in calendar year 2018?</p> <p>◆ ENTER the name of the supplier</p>		
<b>NEXT</b>	IF Name given → I15 [Street address] IF DK/RF → I14 [District steam bill available]	



<b>I14</b>	<b>District steam bill available</b>	<i>STBILL</i>
<b>ASK</b>	IF I13 [District steam supplier name] = DK/RF	
<p>Can you provide a copy of one district steam bill? There is information on some utility bills that may help energy researchers who use these data.</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, directions for scanning or uploading the bill will be provided at the end of the interview.</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>Street address</b>	<i>STAD1</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<b>FILL</b>	{Supplier} = "I13 [District steam supplier name]"	
<p>What is the address for {Supplier}, beginning with the street?</p>		
<b>NEXT</b>	➔ I16 [P.O. Box or Suite]	

<b>I16</b>	<b>P.O. Box or Suite</b>	<i>STAD2</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<p>Is there a post office box or suite number?</p> <ul style="list-style-type: none"> <li>◆ If not, press [ENTER]</li> </ul>		
<b>NEXT</b>	➔ I17 [City]	

<b>I17</b>	<b>City</b>	<i>STCTY</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<p>What is the city?</p>		
<b>NEXT</b>	➔ I18 [State abbreviation]	

<b>I18</b>	<b>State abbreviation</b>	<i>STSTA</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<p>What is the state?</p> <p>◆ ENTER the two letter abbreviation</p>		
<b>NEXT</b>	➔ I19 [ZIP code]	

<b>I19</b>	<b>ZIP code</b>	<i>STZIP</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<p>And what is the ZIP code?</p>		
<b>NEXT</b>	➔ I20 [Number district steam accounts]	

<b>I20</b>	<b>Number district steam accounts</b>	<i>STNAC</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<b>FILL</b>	{Supplier} = "I13 [District steam supplier name]"	
<p>How many different district steam accounts does this building have with {Supplier}?</p>		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts ➔ I21 [District steam account number] IF More than 10 accounts OR DK/RF ➔ I24 [District steam bill available]	

<b>I21</b>	<b>District steam account number</b>	<i>STAC1—STAC10</i>
<b>ASK</b>	IF I20 [Number district steam accounts] = 1 to 10	
<b>FILL</b>	{Number} IF Only one account = "number" OTHERWISE = "numbers" {Supplier} = "I13 [District steam supplier name]"	
<p>Please give me the district steam account {Number} for {Supplier}.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>NEXT</b>	IF (I2 [Provide district steam figures] = No OR DK/RF) OR I5 [District steam consumption] = DK/RF ➔ I22 [Bills cover only building] OTHERWISE ➔ I24 [District steam bill available]	

<b>I22</b>	<b>Bills cover only building</b>	<i>STOTB</i>
<b>ASK</b>	IF I20 [Number district steam accounts] = 1 to 10 & ((I2 [Provide district steam figures] = No OR DK/RF) OR I5 [District steam consumption] = DK/RF)	
<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> = "I13 [District steam 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 → I23 [Sq ft of others included] IF Just this building OR DK/RF → I24 [District steam bill available]	

<b>I23</b>	<b>Sq ft of others included</b>	<i>STOTS</i>
<b>ASK</b>	IF I22 [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>	→ I24 [District steam bill available]	

<b>I24</b>	<b>District steam bill available</b>	<i>STBILL2</i>
<b>ASK</b>	IF I13 [District steam supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = "I13 [District steam supplier name]"	
	Can you provide a copy of one district steam bill from {Supplier}? There is information on some utility bills that may help energy researchers who use these data.  ◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]  ◆ If available, directions for scanning or uploading the bill will be provided at the end of the interview.  1 Yes, bill available 2 No, will not be able to provide bill	
<b>NEXT</b>	→ J1 [Section J Routing]	

**SECTION J. DISTRICT HOT WATER**

<b>J1</b>	<b>Section J Routing</b>
<b>NEXT</b>	IF District hot water used → J2 [Provide district hot water figures] OTHERWISE → K1 [Section K Routing]

<b>J2</b>	<b>Provide district hot water figures</b>	<i>HWFIGS</i>
<b>ASK</b>	IF District hot water used	
<p>The next questions are about district hot water usage in this building during calendar year 2018. Are you able to report how much district hot water was used in this building during 2018?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → J3 [District hot water consumption] IF No OR DK/RF: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → J11 [District hot water supplier name] OTHERWISE → K1 [Section K Routing]	

<b>J3</b>	<b>District hot water consumption</b>	<i>HWCNS</i>
<b>ASK</b>	IF J2 [Provide district hot water figures] = Yes	
<p>Please give me the total amount, in million Btu, of district hot water used in calendar year 2018.</p> <p>◆ VERIFY number <u>digit by digit</u></p>		
<b>RANGE</b>	1 to 99,999,999,999	
<b>NEXT</b>	IF DK/RF THEN: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → J11 [District hot water supplier name] OTHERWISE → K1 [Section K Routing] OTHERWISE → J4 [District hot water expenditures]	

<b>J4</b>	<b>District hot water expenditures</b>	<i>HWEXP</i>
<b>ASK</b>	IF J3 [District hot water consumption] given	
<p>Please give me the total dollars spent on district hot water in calendar year 2018, including state and local taxes.</p> <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>	➔ J5 [Starting date for district hot water figures]	

<b>J5</b>	<b>Starting date for district hot water figures</b>	<i>HWSTDAT</i>
<b>ASK</b>	IF J3 [District hot water consumption] given	
<p>What is the starting date for these district hot water 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>	➔ J6 [Ending date for district hot water figures]	

<b>J6</b>	<b>Ending date for district hot water figures</b>	<i>HWENDAT</i>
<b>ASK</b>	IF J3 [District hot water consumption] given	
<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>◆ 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 C6 [Number of businesses category] ≠ Zero OR One ➔ J7 [All occupants hot water included] OTHERWISE ➔ J9 [Other bldgs hot water included]	

<b>J7</b>	<b>All occupants hot water included</b>	<i>HWALL</i>
<b>ASK</b>	IF J3 [District hot water consumption] given & (C5 [Number of businesses] >1 OR C6 [Number of businesses category] ≠ Zero OR One)	
Do these figures include the district hot water for all of the businesses or organizations in this building?		
1 Yes 2 No		
<b>NEXT</b>	IF No → J8 [Sq ft not included] OTHERWISE → J9 [Other bldgs hot water included]	

<b>J8</b>	<b>Sq ft not included</b>	<i>HWNISF</i>
<b>ASK</b>	IF J7 [All occupants hot water included] = No	
What is the approximate square footage of the space in the building that is <u>not</u> included in these figures?		
◆ PROBE for estimate if DK		
<b>RANGE</b>	1 to 999,999,999	
<b>NEXT</b>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → J11 [District hot water supplier name] OTHERWISE → K1 [Section K Routing]	

<b>J9</b>	<b>Other bldgs hot water included</b>	<i>HWOTBD</i>
<b>ASK</b>	IF J3 [District hot water consumption] given & NOT J7 [All occupants hot water included] = No	
Is any consumption from other buildings included in these figures?		
1 Yes 2 No		
<b>NEXT</b>	IF Yes → J10 [Sq ft of other included] OTHERWISE: IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → J11 [District hot water supplier name] OTHERWISE → K1 [Section K Routing]	

<b>J10</b>	<b>Sq ft of other included</b>	<i>HWOTSF</i>
<b>ASK</b>	IF J9 [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>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes → J11 [District hot water supplier name] OTHERWISE → K1 [Section K Routing]	

<b>J11</b>	<b>District hot water supplier name</b>	<i>HWSUP</i>
<b>ASK</b>	IF D21 [From central plant] = No OR D22 [Purchase from offsite] = Yes	
<b>FILL</b>	<p><b>{SuppliersIntro}</b>  IF (J2 [Provide district hot water figures] = No OR DK/RF) OR  J3 [District hot water consumption] = DK/RF = "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."  OTHERWISE = "The next questions are about your district hot water supplier."</p>	
<p>{SuppliersIntro}</p> <p>What is the name of the supplier that provided district hot water in calendar year 2018?</p> <p>◆ ENTER the name of the supplier</p>		
<b>NEXT</b>	IF Name given → J13 [Street address] IF DK/RF → J12 [District hot water bill available]	

<b>J12</b>	<b>District hot water bill available</b>	<i>HWBILL</i>
<b>ASK</b>	IF J11 [District hot water supplier name] = DK/RF	
<p>Can you provide a copy of one district hot water bill? There is information on some utility bills that may help energy researchers who use these data.</p> <p>◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.]</p> <p>◆ If available, directions for scanning or uploading the bill will be provided at the end of the interview.</p> <p>1 Yes, bill available 2 No, will not be able to provide bill</p>		
<b>NEXT</b>	→ K1 [Section K Routing]	

<b>J13</b>	<b>Street address</b>	<i>HWAD1</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
<b>FILL</b>	{Supplier} = "J11 [District hot water supplier name]"	
What is the address for {Supplier}, beginning with the street?		
<b>NEXT</b>	→ J14 [P.O. Box or Suite]	

<b>J14</b>	<b>P.O. Box or Suite</b>	<i>HWAD2</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
Is there a post office box or suite number?		
◆ If not, press [ENTER]		
<b>NEXT</b>	→ J15 [City]	

<b>J15</b>	<b>City</b>	<i>HWCTY</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
What is the city?		
<b>NEXT</b>	→ J16 [State abbreviation]	

<b>J16</b>	<b>State abbreviation</b>	<i>HWSTA</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
What is the state?		
◆ ENTER the two letter abbreviation		
<b>NEXT</b>	→ J17 [ZIP code]	

<b>J17</b>	<b>ZIP code</b>	<i>HWZIP</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
And what is the ZIP code?		
<b>NEXT</b>	→ J18 [Number district hot water accounts]	



<b>J18</b>	<b>Number district hot water accounts</b>	<i>HWNAC</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
<b>FILL</b>	<b>{Supplier}</b> = "J11 [District hot water supplier name]"	
How many different district hot water accounts does this building have with {Supplier}?		
<b>RANGE</b>	1 to 999	
<b>NEXT</b>	IF 1 to 10 accounts → J19 [District hot water account number] IF More than 10 accounts OR DK/RF → J22 [District hot water bill available]	

<b>J19</b>	<b>District hot water account number</b>	<i>HWAC1—HWAC10</i>
<b>ASK</b>	IF J18 [Number district hot water accounts] = 1 to 10	
<b>FILL</b>	<b>{Number}</b> IF Only one account = "number" OTHERWISE = "numbers" <b>{Supplier}</b> = "J11 [District hot water supplier name]"	
Please give me the district hot water account {Number} for {Supplier}.		
◆ VERIFY number <u>digit by digit</u>		
<b>NEXT</b>	IF (J2 [Provide district hot water figures] = No OR DK/RF) OR J3 [District hot water consumption] = DK/RF → J20 [Bills cover only building] OTHERWISE → J22 [District hot water bill available]	

<b>J20</b>	<b>Bills cover only building</b>	<i>HWOTB</i>
<b>ASK</b>	IF J18 [Number district hot water accounts] = 1 to 10 & ((J2 [Provide district hot water figures] = No OR DK/RF) OR J3 [District hot water consumption] = DK/RF)	
<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> = "J11 [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 → J21 [Sq ft of others included] IF Just this building OR DK/RF → J22 [District hot water bill available]	

<b>J21</b>	<b>Sq ft of others included</b>	<i>HWOTS</i>
<b>ASK</b>	IF J20 [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>	→ J22 [District hot water bill available]	

<b>J22</b>	<b>District hot water bill available</b>	<i>HWBILL2</i>
<b>ASK</b>	IF J11 [District hot water supplier name] given	
Can you provide a copy of one district hot water bill from {Supplier}? (There is information on some utility bills that may help energy researchers who use these data.) ◆ EXP: [Examples of these items include miscellaneous charges, past months data, and units of measure.] ◆ If available, directions for scanning or uploading the bill will be provided at the end of the interview. 1 Yes, bill available 2 No, will not be able to provide bill		
<b>NEXT</b>	→ K1 [Section K Routing]	

**SECTION K. TENANT BILLING AND METERING**

<b>K1</b>	<b>Section K Routing</b>
<b>NEXT</b>	IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet; 100,001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Electricity used → K2 [Electricity billing arrangement] OTHERWISE → L1 [Response effort]

<b>K2</b>	<b>Electricity billing arrangement</b> <span style="float: right;"><i>ELBLARR</i></span>
<b>ASK</b>	IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet; 100,001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Electricity used
<b>FILL</b>	<p><b>{Heating}</b> IF Electricity used for heating = "space heating, " OTHERWISE = BLANK</p> <p><b>{WaterHeating}</b> IF Electricity used for water heating = "water heating, " OTHERWISE = BLANK</p> <p><b>{Cooling}</b> IF Electricity used for cooling = "cooling, " OTHERWISE = BLANK</p> <p><b>{Data Center}</b> IF Data center IN E53 [Computer areas] = "data center, " OTHERWISE = BLANK</p>
<p>We are almost finished. I just have a few questions about energy billing and metering in this building.</p> <p>Thinking about all of the electricity used by the tenants in this building, including any for lighting, plug load, {Heating}{WaterHeating}{Cooling}{DataCenter} or other uses, how are the costs for this electricity billed? Is the cost for electricity included in the rent, are tenants separately billed for electricity, or is it a combination of these arrangements?</p> <ol style="list-style-type: none"> <li>1 Included in tenants' rent</li> <li>2 Tenants separately billed for electricity</li> <li>3 Combination of these arrangements</li> </ol>	
<b>NEXT</b>	IF DK/RF → K6 [Elec tenant info job title] OTHERWISE → K3 [Electricity tenant metering]

<b>K3</b>	<b>Electricity tenant metering</b>	<i>ELTNMET</i>
<b>ASK</b>	IF K2 [Electricity billing arrangement] given	
<p>Are there meters dedicated to tracking some or all of the electricity used within individual tenant spaces? These meters may be installed by the utility, the building's management, the tenant, or someone else.</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K4 [Which electricity uses metered] IF DK/RF → K6 [Elec tenant info job title] IF No: IF Natural gas used → K7 [Natural gas billing arrangement] OTHERWISE → K11 [Tenant list available]	

<b>K4</b>	<b>Which electricity uses metered</b>	<i>see below</i>																					
<b>ASK</b>	IF K3 [Electricity tenant metering] = Yes																						
<b>FILL</b>	<p><b>{Heating}</b> IF Electricity used for heating = "Space heating" OTHERWISE = BLANK</p> <p><b>{WaterHeating}</b> IF Electricity used for water heating = "Water heating" OTHERWISE = BLANK</p> <p><b>{Cooling}</b> IF Electricity used for cooling = "Cooling" OTHERWISE = BLANK</p> <p><b>{Data Center}</b> IF Data center IN E53 [Computer areas] = "Data center" OTHERWISE = BLANK</p>																						
<p>Which uses of electricity are measured by meters dedicated to tracking electricity used within individual tenant spaces?</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: 15%;">1</td> <td style="width: 60%;">Lighting</td> <td style="width: 25%; text-align: right;"><i>ELMTLT</i></td> </tr> <tr> <td>2</td> <td>Plug load</td> <td style="text-align: right;"><i>ELMTPL</i></td> </tr> <tr> <td>3</td> <td>{Heating}</td> <td style="text-align: right;"><i>ELMTHT</i></td> </tr> <tr> <td>4</td> <td>{WaterHeating}</td> <td style="text-align: right;"><i>ELMTWH</i></td> </tr> <tr> <td>5</td> <td>{Cooling}</td> <td style="text-align: right;"><i>ELMTCL</i></td> </tr> <tr> <td>6</td> <td>{DataCenter}</td> <td style="text-align: right;"><i>ELMTDC</i></td> </tr> <tr> <td>7</td> <td>Other</td> <td style="text-align: right;"><i>ELMTOT</i></td> </tr> </table>			1	Lighting	<i>ELMTLT</i>	2	Plug load	<i>ELMTPL</i>	3	{Heating}	<i>ELMTHT</i>	4	{WaterHeating}	<i>ELMTWH</i>	5	{Cooling}	<i>ELMTCL</i>	6	{DataCenter}	<i>ELMTDC</i>	7	Other	<i>ELMTOT</i>
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5	{Cooling}	<i>ELMTCL</i>																					
6	{DataCenter}	<i>ELMTDC</i>																					
7	Other	<i>ELMTOT</i>																					
<b>NEXT</b>	→ K5 [Metered electricity data access]																						

<b>K5</b>	<b>Metered electricity data access</b>	<i>ELMTDATA</i>
<b>ASK</b>	IF K3 [Electricity tenant metering] = Yes	
	<p>Who has access to the metered electricity data for the tenant spaces: the tenants, the landlord, and/or someone else?</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply <ul style="list-style-type: none"> <li>1 Tenant</li> <li>2 Landlord</li> <li>3 Someone else</li> </ul> </li> </ul>	
<b>NEXT</b>	IF DK/RF → K6 [Elec tenant info job title] OTHERWISE: IF Natural gas used → K7 [Natural gas billing arrangement] OTHERWISE → K11 [Tenant list available]	

<b>K6</b>	<b>Elec tenant info job title</b>
<b>ASK</b>	IF K2 [Electricity billing arrangement] = DK/RF OR K3 [Electricity tenant metering] = DK/RF OR K5 [Metered electricity data access] = DK/RF
	<p>What is the job title of the person who I would be able to get this information from?</p> <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>
<b>NEXT</b>	IF Natural gas used → K7 [Natural gas billing arrangement] OTHERWISE → K11 [Tenant list available]

<b>K7</b>	<b>Natural gas billing arrangement</b>	<i>NGBLARR</i>
<b>ASK</b>	IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) & C9 [Number of tenants] > 0 & (A6 [Square footage] > 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet; 100,001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) & Natural gas used	
	<p>Is the cost for natural gas included in the rent, are tenants separately billed for natural gas, or is it a combination of these arrangements?</p> <ul style="list-style-type: none"> <li>1 Included in tenants' rent</li> <li>2 Tenants separately billed for electricity</li> <li>3 Combination of these arrangements</li> </ul>	
<b>NEXT</b>	IF DK/RF → K10 [Nat gas tenant info job title] OTHERWISE → K8 [Natural gas tenant metering]	

<b>K8</b>	<b>Natural gas tenant metering</b>	<i>NGTNMET</i>
<b>ASK</b>	IF K7 [Natural gas billing arrangement] given	
<p>Are there meters dedicated to tracking some or all of the natural gas used within individual tenant spaces?</p> <p>1 Yes 2 No</p>		
<b>NEXT</b>	IF Yes → K9 [Metered natural gas data access] IF DK/RF → K10 [Nat gas tenant info job title] IF No → K11 [Tenant list available]	

<b>K9</b>	<b>Metered natural gas data access</b>	<i>NGMTDATA</i>
<b>ASK</b>	IF K8 [Natural gas tenant metering] = Yes	
<p>Who has access to the metered electricity data for the tenant spaces: the tenants, the landlord, and/or someone else?</p> <ul style="list-style-type: none"> <li>◆ PROBE for any others</li> <li>◆ ENTER all that apply</li> </ul> <p>1 Tenant 2 Landlord 3 Someone else</p>		
<b>NEXT</b>	IF DK/RF → K10 [Nat gas tenant info job title] OTHERWISE → K11 [Tenant list available]	

<b>K10</b>	<b>Nat gas tenant info job title</b>
<b>ASK</b>	IF K7 [Natural gas billing arrangement] = DK/RF OR K8 [Natural gas tenant metering] = DK/RF OR K9 [Metered natural gas data access] = DK/RF
<p>What is the job title of the person who I would be able to get this information from?</p> <ul style="list-style-type: none"> <li>◆ RECORD in open box</li> </ul>	
<b>NEXT</b>	→ K11 [Tenant list available]

<b>K11</b>	<b>Tenant list available</b>	<i>TENLSTAV</i>
<b>ASK</b>	<p>IF (CBECS Activity = Office OR Retail OR B9 [Warehouse type] = Nonrefrigerated warehouse; Refrigerated warehouse; OR Distribution or shipping center) &amp; C9 [Number of tenants] &gt; 0 &amp; (A6 [Square footage] &gt; 10,000 OR A7 [Square footage category] = 10,001 to 25,000 square feet; 25,001 to 50,000 square feet; 50,001 to 100,000 square feet; 100,0001 to 200,000 square feet; 200,001 to 500,000 square feet; 500,001 to 1 million square feet; OR Over 1 million square feet) &amp; Electricity used</p> <p>Is there a list of tenants available for this building?</p> <p>1 Yes 2 No</p>	
<b>NEXT</b>	→ L1 [Response effort]	

**SECTION L. SURVEY CLOSEOUT**

<b>L1</b>	<b>Response effort</b>	<i>REFFORT</i>
<b>ASK</b>	All Buildings	
Including yourself, please tell me how many people were needed to compile the information for this interview.		
<b>RANGE</b>	1 to 99	
<b>NEXT</b>	IF F29 [Electricity bill available] = Yes OR F35 [Electricity bill available] = Yes OR G29 [Natural gas bill available] = Yes OR G35 [Natural gas bill available] = Yes OR H17 [Fuel oil bill available] = Yes OR H28 [Fuel oil bill available] = Yes OR I14 [District steam bill available] = Yes OR I24 [District steam bill available] = Yes OR J12 [District hot water bill available] = Yes OR J22 [District hot water bill available] = Yes → L2 [Interview complete with bills] OTHERWISE → L3 [Interview complete]	

<b>L2</b>	<b>Interview complete with bills</b>	
<b>ASK</b>	IF F29 [Electricity bill available] = Yes OR F35 [Electricity bill available] = Yes OR G29 [Natural gas bill available] = Yes OR G35 [Natural gas bill available] = Yes OR H17 [Fuel oil bill available] = Yes OR H28 [Fuel oil bill available] = Yes OR I14 [District steam bill available] = Yes OR I24 [District steam bill available] = Yes OR J12 [District hot water bill available] = Yes OR J22 [District hot water bill available] = Yes	
That completes our interview. Thank you so much for your time and help. <ul style="list-style-type: none"> <li>◆ Provide instructions about scanning or uploading any available energy bills.</li> <li>◆ ENTER "1", [ENTER], then [F10] to Exit</li> </ul>		
<b>NEXT</b>	INTERVIEW COMPLETE	

<b>L3</b>	<b>Interview complete</b>	
<b>ASK</b>	IF NOT (F29 [Electricity bill available] = Yes OR F35 [Electricity bill available] = Yes OR G29 [Natural gas bill available] = Yes OR G35 [Natural gas bill available] = Yes OR H17 [Fuel oil bill available] = Yes OR H28 [Fuel oil bill available] = Yes OR I14 [District steam bill available] = Yes OR I24 [District steam bill available] = Yes OR J12 [District hot water bill available] = Yes OR J22 [District hot water bill available] = Yes)	
That completes our interview. Thank you so much for your time and help. <ul style="list-style-type: none"> <li>◆ ENTER "1", [ENTER], then [F10] to Exit</li> </ul>		
<b>NEXT</b>	INTERVIEW COMPLETE	