U.S. Department of Energy

Commercial Buildings Energy Consumption Survey for 2003

BUILDING QUESTIONNAIRE

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ABOUT THIS QUESTIONNAIRE

Background

The 2003 Commercial Buildings Energy Consumption Survey (CBECS) was administered as a computer-assisted personal interview (CAPI) that was programmed using Blaise software. The interview involved many complex skip patterns, driven by different variables such as the type of structure and the building activity.

For the 2003 CBECS, a new methodology was undertaken for interviewing strip shopping centers and enclosed malls. Instead of attempting an interview for the mall as whole, a few establishments within the mall were sub-sampled and the interviews were administered at the establishment-level rather than the mall-level. These establishment interviews have been used to produce estimates for the malls for use in CBECS publications. This document shows the wording and skip patterns for a building interview only. The establishment interviews were similar, but varied somewhat in question wording fills and skip patterns.

This questionnaire is not meant to duplicate the CAPI screens, but to show in as simple a manner as possible the content of the questions, their possible answer choices, and the general flow of the questionnaire. For the most part, the questions are worded exactly as they were within the CAPI instrument, but a few questions that had complex wording fills have been simplified for ease of understanding.

There are a few CBECS-specific interviewing conventions to note which are described in the following paragraphs: the use of Show Cards, the rule to probe only when instructed, and optional text for the interviewer.

Each interviewer had a book of Show Cards to use in conjunction with the interview. These cards displayed lists of answer choices for questions with lengthy answer categories. In some cases, they also included definitions, explanations, diagrams, or pictures. Any question that includes wording such as "looking at this list…" or "which of the ranges on this card…" can be assumed to have been accompanied by a Show Card.

For most surveys, interviewers are instructed to probe on every screen by asking questions such as "Anything else?" or "Can you give an estimate?" The CBECS interviewer, however, is trained otherwise. For some questions, such as square footage, if the respondent doesn't know the answer, the next question provides a range of categories. In such instances, we would prefer to have a range rather than just a guess for the exact number. So, interviewers are instructed to probe only if an instruction tells them to do so. If they don't see the instruction on the screen, they are to enter "Don't know" and continue on with the interview.

Some questions included optional text for the interviewer, either as part of the question or as an explanation or definition. Optional text is always enclosed [in square brackets]. Explanations are preceded with "EXP:" and definitions with "DEF:"

Questions that include a SAS variable in this document (e.g. SQFT8) are those variables that can be found on the public use microdata file. The number codes in the answer lists accompanying these questions are the associated values with that SAS variable. If the SAS variable is located next to the answer choice without any answer codes (such as in Question A20), it can be assumed that the variable is a simple Yes or No.

How to Use This Document

There is a boxed number in **Arial Black 14** font for each item or question in the questionnaire. The corresponding SAS variable (if applicable) for that question is beside the box in **Arial Black 12** font. Interviewer instructions are on the next line in regular Arial 12 font, surrounded by asterisks **. The interviewer sees these instructions during the interview, but does not read them to the respondent. The questions, which the interviewer reads to the respondent, follow the instructions. Questions are indented and in **bold Arial 12** font.

All questions are followed by a table(s) that contains the answer choices and routing for that question. All answer choices are in regular Arial 12 font, except for those in *italics*, which represent choices that are not part of the original list, but may be selected by the respondent during the interview. It is important to remember to follow the rows in the tables from left to right. After reading the question, proceed to the table's leftmost column. In most cases, this will be the answer column. Each row separated by a bold line represents a filter. When the answer is found in the tables' answer column, follow the filter for that particular row. The last column in the row will contain the routing for that particular answer choice. Proceed to the question number beside the arrow ⟶ in that column. Only routing columns contain arrows ⟶ and vice versa.
** **Ex. 1: See Question A9. Answer= "H" shaped. Proceed to Question A10.**

There may be numerous columns between the answer column and the routing column. These columns contain If statements surrounded by brackets{ }. For some answer choices, there is more than one routing possibility depending on the {If} statement(s) that lie between the answer column and routing column. Once one of the {If} statements are satisfied, follow that row filter to either the routing column or the next column of {If} statements.
** **Ex. 2: See Question A10. Answer=1 floor. Proceed to Question A15.**
** **Ex. 2a: Answer=5 floors. Proceed to Question A11.**

Some questions have a fill, meaning the question has different wording depending on which {If} conditions are satisfied. These questions have a table that contains a column labeled (*Column A*). The bolded words in the row with the particular {If} statement that is satisfied should be inserted into the question text in place of *(Column A)*. After reading the question, proceed to the answer column.

** Ex. 3: See Question B4. In B3, 16 (Education) is chosen as one of the activities. Question B4 would read, "About what percent of the total space is used for education?" Answer=70%. Education is assigned as the building activity. Proceed to Question B13.

During the interview, these {If} statements were not seen by the interviewer or respondent, they simply internal decisions made within the computerized survey instrument to determine routing and question fills.

The thickness of the lines in the table that separate each row determine the flow of the filters. <u>When filtering over **do not** cross over the bold lines, proceed from left to right through the columns in that same row.</u> {If} statements will always be separated by bold lines. Answer choices may, in addition to bold lines, be separated by dashed lines or no line. When a line does not separate answer choices, each answer choice may filter over to any row within the next column, excluding rows attached to answer choices that are separated by a bold line.

** Ex. 4: See Question B13.   The building is vacant. Proceed to Question B37 or B25 depending on whether there is more than one activity or not.
** Ex. 4a: The building is a high school. Proceed to Question B32.

When a dashed line separates answer choices, this means the column may filter straight across on one side, but on the other side it filters into more than one row. The side of the column in which it filters straight across will have rows separated by bold lines that are connected to each dashed line for that row. If the dashed line is not attached to the bold lines in the column beside it, that is the side where the answer choice may fill into more than one row.

** Ex.5: See Question D4. Electricity and wood are used in the building. The SAS variable, ELUSED8 gets assigned. Proceed to Question D6.
If fuel oil is used instead of wood, FKUSED8 also gets assigned. Proceed to Question D5.
** Ex 5a: Answer is Don't Know. Proceed to Question D47 or Question E1 depending on whether or not the building has the ability to generate electricity (D3).

Some questions are followed by two tables. This means all appropriate routing information could not be represented in one table. Follow the above directions for filtering through the second table.

Most SAS variables are beside the question number, but some are located in the tables. For those located in the table, the variable is associated with the particular answer choice that applies to the building. (See Ex. 5 above)
DK stands for "Don't Know," and RF for "Refusal."

SECTION A: BUILDING SIZE AND AGE

A1
SQFT8
** DEF: [Total square footage = Length of building multiplied by width of building multiplied by the number of floors.] VERIFY the number <u>digit by digit</u>. **

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?

Answer	{If building square footage<1,001}	⟶ **A3**
	{If building square footage>1,000}	⟶ **A4**
Don't Know		⟶ **A2**

A2
SQFTC8
** If the respondent gives the category code, VERIFY the response by reading the full answer. **

I understand that it may be difficult to give an exact figure for square footage. However, the size of your building is very important in helping understand its use of energy.

Please look at this list and tell me which category best describes the total gross square footage in this building. There are examples provided to help you estimate.

| 01. 1,000 square feet or less | ⟶ **A3** |
| 02. 1,001 to 5,000 square feet
03. 5,001 to 10,000 square feet
04. 10,001 to 25,000 square feet
05. 25,001 to 50,000 square feet
06. 50,001 to 100,000 square feet
07. 100,001 to 200,000 square feet
08. 200,001 to 500,000 square feet
09. 500,001 to 1 million square feet
10. Over 1 million square feet | ⟶ **A4** |

A3   **END OF INTERVIEW**

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.

Thank you for your time and help.

A4   **WLCNS8**

Here is a list of different types of construction materials. Which best describes the major type of exterior wall construction material used on this building?

1. Brick, stone, or stucco 2. Pre-cast concrete panels 3. Concrete block or poured concrete (above grade) 4. Aluminum, asbestos, plastic, or wood siding, shingles, tiles, or shakes 5. Sheet metal panels 6. Window or vision glass (glass that can be seen through) 7. Decorative or constructive glass 8. ** IF VOLUNTEERED ** No one major type 9. ** IF VOLUNTEERED ** Other	⟶ **A5**

A5   **RFCNS8**

Here is a list of different types of roofing materials. Which best describes the building's predominant exterior roof surface?

1. Built-up (tar, felts, or fiberglass and a ballast, such as stone) 2. Slate or tile shingles 3. Wood shingles, shakes, or other wooden materials 4. Asphalt, fiberglass, or other shingles	{If building is freestanding}	⟶ **A6**
5. Metal surfacing 6. Plastic, rubber, or synthetic sheeting (single or multiple ply) 7. Concrete 8. ** IF VOLUNTEERED ** No one major type 9. ** IF VOLUNTEERED ** Other	{Otherwise}	⟶ **A10**

A6   **GLSSPC8**

Which of the ranges on this card best describes the percent of the exterior wall surface of this building that is covered with window glass or glass doors?

1. 10 percent or less 2. 11 to 25 percent 3. 26 to 50 percent 4. 51 to 75 percent 5. 76 to 100 percent	⟶ **A7**

A7   **EQGLSS8**

Is the amount of glass about the same for all sides of the building?

1. Yes	⟶ **A9**
2. No	⟶ **A8**

A8   **SUNGLS8**

Do the sides receiving direct sunlight have more or less glass area than the sides that do not receive direct sunlight?

1. More glass area 2. Less glass area 3. **IF VOLUNTEERED** ** About the same amount	⟶ **A9**

A9 | **BLDSHP8**

Here is a card that shows some common building shapes. Which one most resembles the floorplan of this building at ground level? This is sometimes called the "footprint" of the building.

01. Square 02. Wide rectangle 03. Narrow rectangle 04. Rectangle or square with an interior courtyard 05. "H" shaped 06. "U" shaped 07. "E" shaped 08. "T" shaped 09. "L" shaped 10. "+" or cross shaped 11. Other shape	⟶ **A10**

A10 | **NFLOOR8**
** Probe for estimate if *DK*. **

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?

Answer	{If floors = 1}	⟶ **A15**
	{If floors > 1}	⟶ **A11**

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A11 | **ELEVTR8**

Are there any elevators in this building?

1. Yes	⟶ **A12**
2. No	⟶ **A13**

A12 | **NELVTR8**
** Probe for estimate if *DK.* **

How many elevators are there?

Answer	⟶ **A13**

A13 | **ESCLTR8**

Are there any escalators in this building?

1. Yes	⟶ **A14**
2. No	⟶ **A15**

A14 | **NESLTR8**
** Probe for estimate if *DK.* **

How many escalators are there? Count <u>each</u> one, for example, a pair of up and down escalators should be counted as two.

Answer	⟶ **A15**

A15 **YRCON8**

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.

Answer	{If year>1979 and year< 2003}	⟶ **B1**
	{If *Don't Know*}	⟶ **A16**
	{If 2003}	⟶ **A17**
	{If 2004}	⟶ **A18**
	{If year<1980}	⟶ **A19**

A16 **YRCONC8**

Please look at this card and tell me which range best describes when this building was constructed.

1. Before 1920 2. 1920 to 1945 3. 1946 to 1959 4. 1960 to 1969 5. 1970 to 1979	⟶ **A19**
6. 1980 to 1989 7. 1990 to 1999 8. 2000 to 2003	⟶ **B1**
9. ** IF VOLUNTEERED ** 2004	⟶ **A18**

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A17

MONCON8

** <u>Do not</u> enter a month past when you are interviewing – if the building is not yet ready for occupancy, enter "13." **

In what month of 2003 was this building first ready for occupancy?

01. January 02. February 03. March 04. April 05. May 06. June 07. July 08. August 09. September 10. October 11. November 12. December	→ **B1**
13. ** IF VOLUNTEERED ** Not yet ready for occupancy	→ **A18**

A18

END OF INTERVIEW

Thank you, that's all the questions that I have at this time, since we are only interviewing buildings that are ready for occupancy at this time.

Thank you for your time and help.

A19	**RENOV8**

Has any portion of this building undergone major renovations since 1980?

1. Yes	⟶ **A20**
2. No	⟶ **B1**

A20	** Probe for any others. ENTER all that apply. **

Please look at this card and tell me which types of renovations have been done since 1980.

RENADD8	Addition or annex	
RENRDC8	Reduction of enclosed floorspace	
RENCOS8	Interior or exterior cosmetic improvements	
RENEXT8	Exterior replacement	
RENINT8	Interior wall re-configuration	⟶ **B1**
RENHVC8	HVAC equipment upgrade	
RENLGT8	Lighting upgrade	
RENWIN8	Window replacement	
RENPLB8	Plumbing system upgrade	
RENINS8	Insulation upgrade	
RENOTH8	Other	⟶ **A21**

A21	** Record in open box. **

Please describe the other type of renovation.

Answer	⟶ **B1**

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SECTION B: BUILDING ACTIVITY

| B1 | **ONEACT8** |

Looking at this list of activities, does one <u>single</u> activity account for 75 percent or more of the floorspace in the building?

1. Yes	⟶ **B2**
2. No	⟶ **B3**

B2

Which one of the activities listed accounts for 75 percent or more of the floorspace in the building?

Office/Professional	⟶ **B5**
Data center/Computer "server farm"	⟶ **B6**
Warehouse/Storage	⟶ **B9**
Food sales or service	⟶ **B10**
Retail	⟶ **B11**
Education	⟶ **B13**
Religious worship	⟶ **B30**
Public assembly	⟶ **B14**
Health care	⟶ **B16**
Service	⟶ **B17**
Lodging	⟶ **B18**
Public order and safety	⟶ **B19**
Residential	⟶ **B20**
Industrial	⟶ **B8**
Agricultural	⟶ **B23**
Vacant	⟶ **B24**
Other	⟶ **B21**

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| B3 | **ACT18, ACT28, ACT38**
** Probe for any others (up to three). ** |

Which activities occupy the most space in this building? Choose up to three.

11. Office/Professional 12. Data center/Computer "server farm" 13. Warehouse/Storage 14. Food sales or service 15. Retail 16. Education 17. Religious worship 18. Public assembly 19. Health care 20. Service 21. Lodging 22. Public order and safety 23. Residential 24. Industrial 25. Agricultural 26. Vacant 27. Other	⟶ **B4**

B4	**ACT1PCT8, ACT2PCT8, ACT3PCT8**

About what percentage of the total space is (*Column A*)?

Column A				
{If 11.} **office space**			{If 11.} →	**B5**
{If 12.} **used as a data center**			{If 12.} →	**B6**
{If 13.} **warehouse space**			{If 13.} →	**B9**
{If 14.} **used for food sales or service**			{If 14.} →	**B10**
{If 15.} **used for retail**		{If there is an activity with a maximum percent, assign that as the activity. If there are equal maximum percents, assign activity as the most energy-intensive one (based on 1999 CBECS data)}	{If 15.} →	**B11**
{If 16.} **used for education**			{If 16.} →	**B13**
{If 17.} **used for religious worship**			{If 17.} →	**B30**
{If 18.} **used for public assembly**	Answer		{If 18.} →	**B14**
{If 19.} **used for health care**			{If 19.} →	**B16**
{If 20.} **used for service**			{If 20.} →	**B17**
{If 21.} **used for lodging**			{If 21.} →	**B18**
{If 22.} **used for public order and safety**			{If 22.} →	**B19**
{If 23.} **residential**			{If 23.} →	**B20**
{If 24.} **industrial**			{If 24.} →	**B8**
{If 25.} **agricultural**			{If 25.} →	**B23**
{If 26.} **vacant**			{If 26.} →	**B24**
{If 27.} **used for another activity**			{If 27.} →	**B21**

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Note: Questions **B5** through **B26** are used to verify that the activity selected by the respondent is "correct" by CBECS definition and, in some cases, to place the building into a more detailed subcategory.

Based on the response to the more specific activity questions, the building is placed into one of the following CBECS activities (**PBA8**).

PBA8

01. Vacant
02. Office
03. Data center
04. Laboratory
05. Non-refrigerated warehouse
06. Food sales
07. Public order and safety
08. Outpatient health care
11. Refrigerated warehouse
12. Religious worship
13. Public assembly
14. Education
15. Food service
16. Inpatient health care
17. Nursing
18. Lodging
23. Strip shopping mall
24. Enclosed mall
25. Retail other than mall
26. Service
91. Other

B5

Looking at this list, what type of office is this?

- Administrative or professional office building such as consulting, insurance, law, utility/telephone company, publishing, or college administration - Government office - Mixed-use office - Bank or other financial institution - Doctor's or dentist's office - Sales office such as for vehicles or real estate - Contractor's office such as for construction, plumbing, or HVAC - Non-profit or social services office - Research and development office - City hall or city center - Religious office - Call center	*Activity = Office*	⟶ **B37**
Courthouse or probation office	*Activity = Public order and safety*	
Library	*Activity = Public assembly*	⟶ **B31**
Veterinarian's Office	*Activity = Outpatient health*	
Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
Other type of office		⟶ **B26**

B6

A data center of server farm is a group of networked computer servers that are housed in one location, usually a secure area, and perform no other tasks besides server tasks.

There are usually many computers without screens, stacked in rows of racks, which operate continuously, day and night. Data centers are generally kept very cool and have a backup source of electricity.

Does this accurately describe your building?

Yes	Activity = Data Center	⟶ **B37**
No		⟶ **B7**

B7

Then, for the purposes of this study, I am going to classify your building as an office.

Activity = Office	⟶ **B37**

B8

Is this building used primarily as a warehouse or distribution center?

Yes	⟶ **B9**
No	⟶ **B22**

B9

Looking at this list, what type of warehouse is this?

▪ Non-refrigerated warehouse	*Activity = Non-refrigerated warehouse*	
▪ Refrigerated warehouse	*Activity = Refrigerated warehouse*	
▪ Distribution or shipping center ▪ Self storage center	*Activity = Non-refrigerated warehouse*	⟶ **B37**
▪ Vehicle storage and/or maintenance (car barn)	*Activity = Service*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	
	{If only one activity}	⟶ **B25**
▪ Other type of warehouse		⟶ **B26**

B10

Looking at this list, what type of food sales or service is this?

▪ Restaurant or cafeteria ▪ Fast food ▪ Bar	*Activity = Food service*	⟶ **B33**
▪ Grocery store or food market ▪ Gas station with a convenience store ▪ Convenience store	*Activity = Food sales*	⟶ **B37**
▪ Beer, wine, or liquor store	*Activity = Retail*	
▪ Reception hall ▪ Catering service	*Activity = Food service*	⟶ **B33**
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of food sales or service		⟶ **B26**

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B11

Looking at this list, what type of retail is this?

▪ Store such as a department store, furniture, clothing, hardware, drugstore, bookstore, building supplies, lumber, home improvement, farm equipment, lawn and garden, floral, crafts, gifts, antiques, pawn shop, or wholesale club		⟶ **B12**
▪ Bank or other financial institution	*Activity = Office*	⟶ **B37**
▪ Convenience store	*Activity = Food sales*	
▪ Beer, wine or liquor store ▪ Rental center such a for videos, DVDs, equipment, or vehicles ▪ Dealership or showroom for vehicles or boats ▪ Studio or gallery	*Activity = Retail*	
▪ Grocery store or food market	*Activity = Food sales*	
▪ Photo processing shop ▪ Copy center or printing shop	*Activity = Service*	
▪ Distribution or shipping center	*Activity = Non-refrigerated warehouse*	
▪ Gas station with a convenience store	*Activity = Food sales*	
▪ Gas station (without a convenience store) ▪ Post office or postal center	*Activity = Service*	
▪ Recreation such as gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports	*Activity = Public assembly*	⟶ **B31**
▪ Repair shop	*Activity = Service*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of retail		⟶ **B26**

B12

Is this a discount store, drugstore, home center or hardware store, department store, or some other type of store?

▪ Discount store ▪ Drugstore ▪ Home center or hardware store ▪ Department store ▪ Some other type of store	*Activity = Retail*	⟶ **B37**

B13

Looking at this list, what type of education is this?

▪ Elementary or middle school ▪ High school ▪ College or university ▪ Preschool or daycare ▪ Adult education ▪ Career or vocational training ▪ Religious education	*Activity = Education*	⟶ **B32**
▪ Library	*Activity = Public assembly*	⟶ **B31**
▪ Laboratory	*Activity = Laboratory*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of classroom education		⟶ **B26**

B14

Looking at this list, what type of public assembly is this?

▪ Social or meeting such as a community center, lodge, meeting hall, convention center, or senior center ▪ Recreation such as a gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports	*Activity = Public assembly*	⟶ **B31**
▪ Entertainment or culture such as a museum, theater, cinema, sports arena, casino, or night club		⟶ **B15**
▪ Library	*Activity = Public assembly*	⟶ **B31**
▪ Religious worship	*Activity = Religious worship*	⟶ **B30**
▪ Funeral home ▪ Student activities center ▪ Armory ▪ Exhibition hall ▪ Broadcasting studio ▪ Transportation terminal	*Activity = Public assembly*	⟶ **B31**
▪ Elementary or middle school ▪ High school	*Activity = Education*	⟶ **B32**
▪ Restaurant or cafeteria ▪ Fast food ▪ Bar	*Activity = Food service*	⟶ **B33**
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of public assembly		⟶ **B26**

B15

Is this building a cinema [or movie theater]?

Yes No	*Activity = Public assembly*	⟶ **B31**

B16

Looking at this list, what type of health care is this?

▪ Doctor's or dentist's office ▪ Clinic or other outpatient health care building	*Activity = Outpatient health care*	⟶ **B37**
▪ Hospital (inpatient)	*Activity = Inpatient health care*	⟶ **B34**
▪ Outpatient rehabilitation center	*Activity = Outpatient health care*	⟶ **B37**
▪ Inpatient rehabilitation center	*Activity = Inpatient health care*	⟶ **B34**
▪ Nursing home, assisted living center, or other residential care building	*Activity = Nursing*	⟶ **B35**
▪ Retirement home	*Activity = Lodging*	⟶ **B36**
▪ Veterinarian's office	*Activity = Outpatient health care*	⟶ **B37**
▪ Laboratory	*Activity = Laboratory*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	
	{If only one activity}	⟶ **B25**
▪ Other type of health care		⟶ **B26**

B17

Looking at this list, what type of service is this?

▪ Auto service or auto repair shop ▪ Vehicle storage and/or maintenance (car barn)	*Activity = Service*	
▪ Contractor's office such as construction, plumbing, or HVAC	*Activity = Office*	⟶ **B37**
▪ Repair shop ▪ Dry cleaner or laundromat ▪ Post office or postal center	*Activity = Service*	
▪ Bank or other financial institution	*Activity = Office*	
▪ Restaurant or cafeteria ▪ Fast food ▪ Bar	*Activity = Food service*	⟶ **B33**
▪ Car wash	*Activity = Service*	
▪ Gas station with a convenience store	*Activity = Food sales*	
▪ Gas station (without a convenience store)	*Activity = Service*	
▪ Telephone switching facilities	*Activity = Other*	
▪ Photo processing shop ▪ Beauty parlor or barber shop ▪ Tanning salon	*Activity = Service*	⟶ **B37**
▪ Airplane hangar	*Activity = Other*	
▪ Copy center or printing shop	*Activity = Service*	
▪ Distribution or shipping center	*Activity = Non-refrigerated warehouse*	
▪ Kennel	*Activity = Service*	
▪ Library	*Activity = Public assembly*	⟶ **B31**
▪ Non-profit or social services office	*Activity = Office*	⟶ **B37**
▪ Preschool or daycare	*Activity = Education*	⟶ **B32**
▪ Recreation such as a gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports	*Activity = Public assembly*	⟶ **B31**
Continued on the next page		

▪ Rental center such as for videos, DVDs, equipment, or vehicles	*Activity = Retail*	⟶ **B37**
▪ Self storage center	*Activity = Non-refrigerated warehouse*	
▪ Student activities center	*Activity = Public assembly*	⟶ **B31**
▪ Indoor parking garage	{If more than one activity (**B4**)} *Activity = Other*	⟶ **B37**
	{If only one activity}	⟶ **B28**
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of service		⟶ **B26**

B18

Looking at this list, what type of lodging is this?

▪ Motel or inn ▪ Hotel ▪ Dormitory, fraternity, or sorority ▪ Retirement home	*Activity = Lodging*	⟶ **B36**
▪ Nursing home, assisted living center, or other residential care building	*Activity = Nursing*	⟶ **B35**
▪ Convent or monastery ▪ Shelter, orphanage, or children's home ▪ Halfway house	*Activity = Lodging*	⟶ **B36**
▪ Jail, reformatory, or penitentiary	*Activity = Public order and safety*	⟶ **B37**
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	
	{If only one activity}	⟶ **B25**
▪ Other type of lodging		⟶ **B26**

B19

Looking at this list, what type of public order and safety is this?

▪ Police station ▪ Fire station ▪ Combination police and fire station ▪ Jail, reformatory, or penitentiary ▪ Courthouse or probation office	*Activity = Public order and safety*	⟶ **B37**
▪ Halfway house	*Activity = Lodging*	⟶ **B36**
▪ Armory	*Activity = Public assembly*	⟶ **B31**
▪ City hall or city center	*Activity = Office*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**
▪ Other type of public order and safety		⟶ **B26**

B20

Looking at this list, what type of residential is this?

▪ Hotel ▪ Motel or inn ▪ Retirement home ▪ Shelter, orphanage or children's home ▪ Convent or monastery ▪ Dormitory, fraternity, or sorority	*Activity = Lodging*	⟶ **B36**
▪ Nursing home, assisted living center, or other residential care building	*Activity = Nursing*	⟶ **B35**
▪ Halfway house	*Activity = Lodging*	⟶ **B36**
▪ Other type of residential		⟶ **B27**

B21

Looking at this list, what type of other activity is this?

▪ Airplane hangar	*Activity = Other*	⟶ **B37**
▪ Broadcasting studio	*Activity = Public Assembly*	⟶ **B31**
▪ Crematorium	*Activity = Other*	⟶ **B37**
▪ Entertainment or culture such as a museum, theater, cinema, sports arena, casino, or nightclub ▪ Funeral home	*Activity = Public Assembly*	⟶ **B31**
▪ Laboratory	*Activity = Laboratory*	⟶ **B37**
▪ Recreation such as a gymnasium, health club, bowling alley, ice rink, field house, or indoor racquet sports	*Activity = Public Assembly*	⟶ **B31**
▪ Telephone switching facilities	*Activity = Other*	⟶ **B37**
▪ Transportation terminal	*Activity = Public Assembly*	⟶ **B31**
▪ Vehicle storage and/or maintenance (car barn)	*Activity = Service*	⟶ **B37**
▪ Veterinarian's office	*Activity = Outpatient health care*	
▪ Vacant	{If more than one activity (**B4**)} *Activity = Other*	
	{If only one activity}	⟶ **B25**
▪ Indoor parking garage	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B28**
▪ Agricultural building with some retail space ▪ Manufacturing or industrial building with some retail space	*Activity = Other*	⟶ **B37**
▪ Other type of building		⟶ **B26**
▪ 50% commercial (for coding only)	*Activity = Other*	⟶ **B37**

B22

Is any of the space in this building used for retail sales of the products that are made here?

Yes	*Activity = Other*	⟶ **B37**
No		⟶ **B29**

B23

Is any of the space in this building used for retail sales of the products that are grown here?

Yes	*Activity = Other*	⟶ **B37**
No		⟶ **B29**

B24

Was the vacant space used for or intended to be used for either agricultural, industrial, manufacturing, or residential purposes or as a parking garage?

Yes		⟶ **B27**
No	{If more than one activity (**B4**)} *Activity = Vacant*	⟶ **B37**
	{If only one activity}	⟶ **B25**

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B25 VACANT8

Is this building <u>completely</u> vacant?

| 1. Yes
2. No | *Activity = Vacant* | ⟶ **B37** |

B26

Please describe this other type of activity.

Answer	{If the previous question was **B5**} *Activity = Office*	
	{If the previous question was **B9**} *Activity = Non-refrigerated warehouse*	
	{If the previous question was **B10**} *Activity = Food sales*	
	{If the previous question was **B11**} *Activity = Retail*	
	{If the previous question was **B13**} *Activity = Education*	
	{If the previous question was **B14**} *Activity = Public Assembly*	⟶ **B37**
	{If the previous question was **B16**} *Activity = Outpatient health care*	
	{If the previous question was **B17**} *Activity = Service*	
	{If the previous question was **B18**} *Activity = Lodging*	
	{If the previous question was **B19**} *Activity = Public order and safety*	
	{If the previous question was **B21**} *Activity = Other*	

B27

END OF INTERVIEW

Thank you, that's all the questions that I have at this time, since we are only interviewing commercial structures.

Thank you for your time and help.

B28

END OF INTERVIEW

Thank you, that's all the questions that I have at this time, since this study does not cover parking garages.

Thank you for your time and help.

B29

END OF INTERVIEW

Thank you, that's all the questions that I have at this time, since we are only interviewing structures intended for commercial use.

Thank you for your time and help.

B30

RWSEAT8
** Probe for estimate if *DK.* **

What is the total seating capacity of the religious worship areas in this building?

Answer	$\longrightarrow$ **B37**

B31

PBSEAT8
** Probe for estimate if *DK.* **

What is the fixed seating capacity of the public assembly areas in this building?

Answer	$\longrightarrow$ **B37**

B32 **EDSEAT8**
** Probe for estimate if *DK.* **

How many students can be seated in all of the classrooms in this building at one time?

Answer	→ **B37**

B33 **FDSEAT8**
** Probe for estimate if *DK.* **

What is the total seating capacity of the food service areas in this building?

Answer	→ **B37**

B34 **HCBED8**
** Probe for estimate if *DK.* **

What is the inpatient licensed bed capacity in this building?

Answer	→ **B37**

B35 **NRSBED8**
** Probe for estimate if *DK.* **

What is the skilled or residential care licensed bed capacity in this building?

Answer	→ **B37**

B36 **LODGRM8**
** Probe for estimate if *DK.* **

How many guest rooms or occupant rooms are there in this building?

Answer	→ **B37**

B37 | **FACIL8**
** 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.] **

Is this building part of a multibuilding campus or complex?

1. Yes	⟶ **B38**
2. No	⟶ **C1**

B38 | **FEDFAC8**

Is this <u>campus or complex</u> owned by the Federal government?

1. Yes 2. No	⟶ **B39**

B39 | **FACACT8**

Looking at this list, what is the primary business or function of this group of buildings as a whole?

01. College, university, or junior college 02. Primary or secondary school [GRADES K-12] 03. Other type of school 04. Office complex 05. Retail complex 06. Religious campus or complex 07. Hospital or health care complex 08. Lodging or resort complex 09. Post office complex 10. Other type of government complex	⟶ **B43**
11. Industrial complex	⟶ **B40**
12. Transportation complex such as a terminal, depot, or airport 13. Other type of campus of complex	⟶ **B43**

B40

MANIND8
** DEF: [Manufacturing industrial complexes involve the production or processing of goods, merchandise, raw materials, or food.] **

Is it a <u>manufacturing</u> industrial complex?

1. Yes	⟶ **B41**
2. No	⟶ **B43**

B41

MANFAC8

Does this building have the same owner and operator as the manufacturing campus or complex?

1. Yes	⟶ **B42**
2. No	⟶ **B43**

B42

END OF INTERVIEW

Thank you, that's all the questions that I have at this time, since this study does not include buildings on manufacturing facilities.

Thank you for your time and help.

B43

PLANT8

Does this campus or complex have a central physical plant that produces district hot water, district steam, district chilled water, or electricity?

1. Yes	⟶ **B44**
2. No	⟶ **C1**

B44 FACDST8

Does the central physical plant produce…

District steam?

1. Yes	
2. No	⟶ **B45**

B45 FACDHW8

[Does the central physical plant produce…]

District hot water?

1. Yes	
2. No	⟶ **B46**

B46 FACDCW8

[Does the central physical plant produce…]

District chilled water?

1. Yes	
2. No	⟶ **B47**

B47 FACELC8

[Does the central physical plant produce…]

Electricity?

1. Yes	
2. No	⟶ **B48**

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B48 **BLDPLT8**

Is the central physical plant for this campus or complex located in the building?

1. Yes 2. No	⟶ **C1**

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SECTION C. OCCUPANCY AND OPERATING HOURS

C1 | **GOVOWN8**

Is this building owned by a government agency?

1. Yes	⟶ **C2**
2. No	⟶ **C3**

C2 | **GOVTYP8**

Is it owned by the Federal government, a State government, or a local government?

1. Federal 2. State 3. Local	{If Activity = Education}	⟶ **C5**
	{If Activity is not Education}	⟶ **C6**

C3 | **OWNER8**

Looking at this list, please tell me which of these best describes the owner of this building.

1. Property management company 2. Other corporation, partnership, or LLC 3. Religious organization 4. Other non-profit organization 5. Privately-owned school 6. Individual owner(s)	⟶ **C5**
7. Other	⟶ **C4**

C4

Please describe this other owner.

Answer	⟶ **C5**

C5 OWNOCC8

Does (*Column A*) occupy any space in the building?

Column A			
{If **C2**=1} **the Federal government**		{If **B25**=Yes}	→ **C10**
{If **C2**=2} **the State government**	1. Yes		
{If **C2**=3} **the local government**	2. No		
{If **C3**=1 or **C3**=2} **this company**		{Otherwise}	→ **C6**
{If **C3**=3 or **C3**=4 or **C3**=5} **this organization**			
{If **C3**=6} **this owner**			

C6 NOCC8

How many businesses or organizations are there in the building?

	{If Answer=0}	→ **C7**
Answer	{If *Don't Know*}	→ **C9**
	{Otherwise}	→ **C10**

C7

I do not have this building recorded as being completely vacant. At this time, is any space occupied by a company, business, school, organization, non-profit company, religious organization, government agency or establishment?

Yes	→ **C8**
No	→ **C10**
Don't Know	→ **C9**

C8

How many businesses or organizations are there?

Answer	{If *Don't Know*}	⟶ **C9**
	{Otherwise}	⟶ **C10**

C9   **NOCCAT8**

Which category on this list best describes the number of businesses or organizations that currently occupy this building?

01. Zero 02. One 03. 2 to 5 04. 6 to 10 05. 11 to 20 06. 21 to 50 07. 51 to 100 08. More than 100	⟶ **C10**

C10   **MONUSE8**

Thinking of the past 12 months, for how many months was this building in use?

Answer	{If Answer=0}		
	{If Answer=1-3}	{If unoccupied (**B25**=Yes or **C7=No** or **C9**=Zero)}	⟶ **D1**
		{Otherwise}	⟶ **C12**
	{If Answer=4-12}		⟶ **C11**

C11 **PORVAC8**

Was any space in the building vacant or unoccupied for at least 3 <u>consecutive</u> months during the past 12 months?

| 1. Yes
2. No | {If unoccupied (**B25**=Yes or **C7**=No or **C9**=Zero)} | ⟶ **D1** |
| | {Otherwise} | ⟶ **C12** |

C12 **OPEN248**

Now I have some questions about the hours that this building is normally open.

"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.

Is this building normally open 24 hours a day, seven days a week?

| 1. Yes | ⟶ **C18** |
| 2. No | ⟶ **C13** |

C13 **OPNMF8**

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?

| 1. All five days
2. Some of these days
3. Not open at all Monday through Friday | ⟶ **C14** |

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C14	**OPNWE8** ** EXP: [If only open one day of the weekend, consider to be open.] **

Is this building normally open at all on the weekend?

1. Yes		→ **C16**
2. No	{If **C13**=1 or 2}	
	{If **C13**=3}	→ **C15**

C15	

I would just like to confirm that this building does not have any normal operating hours?

True, no operating hours	→ **C18**
False, there are operating hours	→ **C16**

C16	**WKHRS8** ** DEF: ["Normally open" means the hours when the usual activities occur.] EXP: [If the hours vary for different parts of the building, ask for the hours for most of the building, based on square footage.] **

How many total hours per week is the building normally open?

Answer	→ **C18**
Don't Know	→ **C17**

C17 **WKHRSC8**
** DEF: ["Normally open" means the hours when the usual activities occur.] EXP: [If the hours vary for different parts of the building, ask for the hours for most of the building, based on square footage.] **

Which category on this list best describes the total hours per week that the building is normally open?

1. Zero 2. 1 to 39 3. 40 to 48 4. 49 to 60 5. 61 to 84 6. 85 to 167 7. 168	⟶ **C18**

C18 **NWKER8**
** 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.] **

How many employees work <u>in the building</u> during the main shift, that is, when most employees are present?

Answer	⟶ **D1**
Don't Know	⟶ **C19**

C19 **NWKERC8**

Which category on this list best describes how many employees work <u>in the building</u> during the main shift?

01. None 02. 1 to 4 03. 5 to 9 04. 10 to 19 05. 20 to 49 06. 50 to 99 07. 100 to 249 08. 250 to 499 09. 500 to 999 10. 1,000 to 2,499 11. 2,500 to 4,999 12. 5,000 or More	⟶ **D1**

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SECTION D: ENERGY USE AND EQUIPMENT

D1

** Probe for any others. ENTER all that apply. **

Looking at the first list on this card, please tell me if energy was used for any of these purposes in this building in the past 12 months.

HT18	Heating the building	
COOL8	Air conditioning	
WATR8	Domestic water heating	
COOK8	Commercial or institutional cooking or food serving	⟶ **D3**
MANU8	Manufacturing	
	** IF VOLUNTEERED ** None of these uses, but some energy used	
	** IF VOLUNTEERED ** No energy used in the past 12 months	⟶ **D2**

D2

I just need to double check, is it correct that <u>no energy</u> was used in this building in the past 12 months?

True, no energy was used	⟶ **E51**
False, some energy was used in the past 12 months	(Return to) ⟶ **D1**

D3

CAPGEN8

Does this building have the ability to generate electricity, including for emergency backup?

1. Yes 2. No	⟶ **D4**

D4 ** EXP: [Include fuel oil, diesel, or kerosene if it was purchased or delivered in the past 12 months, even if it was not used during that time.] EXP: [Do not include any fuels used in vehicles outside the building.] Probe for any others. ENTER all that apply. **

Looking at the second list on this card, please tell me which of these energy sources were used <u>in this building</u> for any purpose in the past 12 months.

ELUSED8	Electricity	{If fuel oil, diesel or kerosene selected}	⟶ **D5**
NGUSED8	Natural gas		
FKUSED8	Fuel oil, diesel or kerosene		
PRUSED8	Bottled gas, also known as LPG or propane	{If wood, coal, or solar thermal panels selected}	⟶ **D6**
STUSED8	District steam piped in from a separate building or utility		
HWUSED8	District hot water piped in from a separate building or utility	{If other source or sources selected}	⟶ **D7**
CWUSED8	District chilled water piped in from a separate building or utility	{Otherwise}	⟶ **D4a** (Next page)
	Wood, coal, or solar thermal panels		
OTUSED8	Other source or sources		
	Don't Know	{If D3=Yes}	⟶ **D47**
		{Otherwise}	⟶ **E1**

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D4a						
{If heating (**D1**)}						⟶ **D10**
{If no heating (**D1**)}	{If cooling (**D1**)}					⟶ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
					{If **D3**= No}	⟶ **D53**

D5	**FKTYPE8**

** VERIFY if volunteered in previous question. ENTER all that apply. **

You mentioned fuel oil, diesel, or kerosene. Which of these were used [in this building in the past 12 months]?

1. Fuel oil 2. Diesel 3. Kerosene	{If wood coal, or solar thermal panels selected}	⟶ **D6**
	{If other source or sources selected}	⟶ **D7**
	{Otherwise}	⟶ **D5a** (Below)

D5a

{If heating (**D1**)}						⟶ **D10**
{If no heating (**D1**)}	{If cooling (**D1**)}					⟶ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
					{If **D3**= No}	⟶ **D53**

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D6

You mentioned wood, coal, or solar thermal panels. Which of these were used in this building in the past 12 months?

WOUSED8	Wood	{If other source or sources selected}	⟶ **D7**
COUSED8	Coal		
SOUSED8	Solar thermal panels	{Otherwise}	⟶ **D6a** (Below)

D6a						
{If heating (**D1**)}						⟶ **D10**
{If no heating (**D1**)}	{If cooling (**D1**)}					⟶ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
					{If **D3**= No}	⟶ **D53**

D7	** ENTER the first energy source used. **

What was the first other energy source used [in this building in the past 12 months]?

Answer	→ **D8**

D8	** ENTER the next energy source. Press ENTER if there are no others. **

Were there any other energy sources used [in this building in the past 12 months]?

Answer	{If more sources were selected}	→ **D9**
	{If no other sources}	→ **D8a** (Below)

D8a

{If heating (**D1**)}						→ **D10**
{If no heating (**D1**)}	{If cooling (**D1**)}					→ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				→ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			→ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		→ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	→ **D47**
					{If **D3**= No}	→ **D53**

D9

**ENTER the next energy source. Press ENTER if there are no others. **

Were there any other energy sources used in this building in the past 12 months?

Answer	{If no heating (**D1**)}						
	{If heating (**D1**)}						→ **D10**
		{If cooling (**D1**)}					→ **D25**
		{If no cooling (**D1**)}	{If water heating (**D1**)}				→ **D39**
			{If no water heating (**D1**)}	{If cooking (**D1**)}			→ **D43**
				{If no cooking (**D1**)}	{If manufacturing (**D1**)}		→ **D45**
					{If no manufacturing (**D1**)}	{If **D3**= Yes}	→ **D47**
						{If **D3**= No}	→ **D53**

D10 ** DEF: [The main energy source for heating is the energy source used to heat most of the square footage in the building most of the time.] EXP: [Do not include electricity if it is used only to run fan motors.] Only sources already selected are shown here. **

What was the main energy source for heating? [Was it *(list of all energy sources used)*?]

ELHT18	Electricity			
NGHT18	Natural gas		{If more than one source used}	→ **D12**
FKHT18	Fuel oil, Diesel, or Kerosene			
PRHT18	Bottled gas			
STHT18	District steam			
HWHT18	District hot water	Answer		
WOHT18	Wood			
COHT18	Coal		{If only one energy source used}	→ **D13**
SOHT18	Solar			
OTHT18	Other fuel 1			
OTHT18	Other fuel 2			
OTHT18	Other fuel 3			
	Some other energy source			→ **D11**

D11

What was the other energy source used for <u>main</u> space heating?

ELHT18	Electricity	
NGHT18	Natural gas	
FKHT18	Fuel oil/Diesel/Kerosene	
PRHT18	Bottled gas	
STHT18	District steam	⟶ **D12**
HWHT18	District hot water	
WOHT18	Wood	
COHT18	Coal	
SOHT18	Solar	
OTHT18	Some other energy source	

D12 | **HT28**

** EXP: [Do not include electricity if it is used only to run fan motors.] Only sources already selected are shown here. Probe for any others. ENTER all that apply. **

Which other energy sources, if any, were used for heating? […(*list of energy sources used, not including the main space heating source*)?]

ELHT28	Electricity		
NGHT28	Natural gas		
FKHT28	Fuel oil, Diesel, or Kerosene		
PRHT28	Bottled gas		
STHT28	District steam		
HWHT28	District hot water	Answer	⟶ **D15**
WOHT28	Wood		
COHT28	Coal		
SOHT28	Solar		
OTHT28	Other fuel 1		
OTHT28	Other fuel 2		
OTHT28	Other fuel 3		
	Some other energy source		⟶ **D14**
	No other sources for heating		⟶ **D15**

D13 | **HT28**

Were there any other energy sources used for heating?

1. Yes	⟶ **D14**
2. No	⟶ **D15**

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D14

What was the other energy source used for secondary space heating?

ELHT28	Electricity	
NGHT28	Natural gas	
FKHT28	Fuel oil/Diesel/Kerosene	
PRHT28	Bottled gas	
STHT28	District steam	⟶ **D15**
HWHT28	District hot water	
WOHT28	Wood	
COHT28	Coal	
SOHT28	Solar	
OTHT28	Some other energy source	

D15 **HEATP8**
** If heated square footage is known, but not the percent, RECORD square footage in comments, then code *DK*. Probe for estimate if *DK*. **

What percentage of *(Column A)* in this building was heated to at least 50 degrees Fahrenheit in the past 12 months, including basements and enclosed garages if they were heated to at least 50 degrees?

Column A			
{If **A1**=Answer} **the {Answer} square feet**	Answer	{If Answer=0}	⟶ **D16**
{If **A1**=*DK*} **the floorspace**		{Otherwise}	⟶ **D17**

D16

HTLS508
** EXP: [Areas may be heated to less than 50 degrees to prevent pipes from freezing.] **

Was any of the building heated to less than 50 degrees Fahrenheit?

1. Yes						⟶ **D17**
2. No	{If cooling (**D1**)}					⟶ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
					{If **D3**= No}	⟶ **D53**

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| **D17** | ** RECORD in comments any extra information about the heating system that is volunteered. Probe for any others. ENTER all that apply. ** |

Looking at this list of heating equipment types, please tell me which types are used in this building.

		{If more than one is selected}		$\longrightarrow$ **D18**
FURNAC8	Furnaces that heat air directly, without using steam or hot water			
BOILER8	Boilers inside the building that produce steam or hot water	{If only one is selected}	{If Heat pump is selected}	$\longrightarrow$ **D20**
PKGHT8	Packaged heating units, other than heat pumps		{If District steam is not chosen & **A15**<1990 or **A16** does not equal 2000-2003}	$\longrightarrow$ **D22**
SLFCON8	Individual space heaters, other than heat pumps		{Otherwise}	$\longrightarrow$ **D23**
HTPMPH8	Heat pumps			
STHW8	District steam or hot water piped in from outside the building			
OTHTEQ8	Other heating equipment			

| **D18** | **FURNP8, BOILP8, PKGHP8, SLFCNP8, HTPHP8, STHWP8, OTHTP8** |

** Probe for estimate if *DK*. **

The next questions are about the percent of floorspace heated by the equipment you just mentioned. Please keep in mind:

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.

What percent of the heated area in this building is served by the (*Column A*)?

Column A				
{If **D17**=Furnace} **furnace**	Answer	{If additional equipments used from *Column A*}	→	(Repeat) *Column A*
{If **D17**=Boilers} **boiler**				
{If **D17**=Packaged heating} **packaged heating**				
{If **D17**=Individual space heater} **space heater**				
{If **D17**=Heat pumps} **heat pumps**		{Otherwise}	→	**D18a** (Below)
{If **D17**=District steam or hot water} **district steam or hot water**				
{If **D17**=Other heating equipment} **other heating equipment**				

D18a		
{If there are equal maximum percentages for more than one equipment}		→ **D19**
{If there is an equipment with a maximum percent} Main Equipment=**MAINHT8**=the maximum percent equipment	{If **D17**=Heat pump}	→ **D20**
	{If main heating equipment is not district steam or hot water & **A15**<1990 or **A16** does not equal 2000-2003}	→ **D22**
	{Otherwise}	→ **D23**

D19   **MAINHT8**

** Only equipment types with equal percentages (from **D18**) are shown here. **

Which do you consider to be your main heating equipment – *(list of equipments with equal maximum percentages)*?

1. Furnace 2. Boiler 3. Packaged heating 4. Space heater 5. Heat pump 6. District steam or hot water 7. Other heating equipment	{If **D17**=Heat pump}	⟶ **D20**
	{If main heating equipment is not district steam or hot water & **A15**<1990 or **A16** does not equal 2000-2003}	⟶ **D22**
	{Otherwise}	⟶ **D23**

D20   **ENTER all that apply. **

Please look at the first list on this card and tell me which heat pump systems are used for heating in this building.

PKGHPS8	Packaged unit	
SPLHPS8	Residential-type split system	⟶ **D21**
RMHPS8	Individual room heat pump	

D21   **ENTER all that apply. **

Looking at the second list on this card, which types of heat pumps are these?

AIRHPT8	Air source heat pump	{If main heating equipment is not district steam or hot water & **A15**<1990 or **A16** does not equal 2000-2003}	⟶ **D22**
GRDHPT8	Ground source or ground water heat pump		
WTRHPT8	Water loop heat pump	{Otherwise}	⟶ **D23**

D22 **NWMNHT8**
** EXP: [If there is more than one of this equipment type and at least one has been replaced, answer "Yes."] **

(*Column A*) been replaced since 1990?

Column A		
{If **MAINHT8**=Furnace} **Has the furnace**		
{If **MAINHT8**=Boiler} **Has the boiler**		
{If **MAINHT8**=Packaged heating} **Has the packaged heating unit**	1. Yes 2. No	⟶ **D23**
{If **MAINHT8**=Individual space heater} **Have any of the individual space heaters**		
{If **MAINHT8**=Heat pump} **Has the heat pump**		
{If **MAINHT8**=Other} **Has the other type of heating equipment**		

D23 **RDHTNF8**

(*Column A*) **a change in the temperature setting for heating?**

Column A				
{If open 24 hours a day (**C12**=Yes or **C16**=168 or **C17**=168)} **In this building, are there any periods during a normal 24 hour day when there is**	1. Yes 2. No	{If Yes}		⟶ **D24**
{Otherwise} **When this building is not in full use, is there**		{If No}		⟶ **D23a** (Below)

D23a					
{If cooling (**D1**)}					⟶ **D25**
{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
	{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
		{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
			{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
				{If **D3**= No}	⟶ **D53**

D24

HWRDHT8

Looking at this card, which of these best describes how the temperature for heating is usually changed?

1. Time-clock thermostat 2. Thermostat is manually reset 3. Part of "Energy Management and Control System (EMCS)"	{If cooling (**D1**)}					⟶ **D25**
	{If no cooling (**D1**)}	{If water heating (**D1**)}				⟶ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
				{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
					{If **D3**= No}	⟶ **D53**

D25 ** Probe for any others. ENTER all that apply. Only sources already selected are shown here. **

Which energy sources were used for air conditioning? […*(list of energy sources used)*?]

ELCOOL8	Electricity		
NGCOOL8	Natural gas		
FKCOOL8	Fuel oil, Diesel, or Kerosene		
PRCOOL8	Bottled gas		
STCOOL8	District steam	Answer	⟶ **D27**
HWCOOL8	District hot water		
CWCOOL8	District chilled water		
OTCOOL8	Other fuel 1		
OTCOOL8	Other fuel 2		
OTCOOL8	Other fuel 3		
	Some other energy source		⟶ **D26**

D26

What was the other energy source used for air conditioning?

ELCOOL8	Electricity	
NGCOOL8	Natural gas	
FKCOOL8	Fuel oil/Diesel/Kerosene	
PRCOOL8	Bottled gas	
STCOOL8	District steam	⟶ **D27**
HWCOOL8	District hot water	
CWCOOL8	District chilled water	
OTCOOL8	Some other energy source	

D27 | **COOLP8**
** If cooled square footage is known, but not the percent, RECORD square footage in comments, then code *DK*. Probe for estimate if *DK*. **

What percentage of *(Column A)* in this building was cooled by air conditioning equipment in the past 12 months?

Column A				
{If **A1**=Answer} **the {Answer} square feet**	Answer	{If Answer=0}	{If heating (**D15**>0 or **D16**=Yes) & **D17** not just space heaters}	⟶ **D36**
			{Otherwise}	⟶ **D27a** (Below)
{If **A1**=*DK*} **the floorspace**		{Otherwise}		⟶ **D28**

D27a				
{If water heating (**D1**)}				⟶ **D39**
{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
	{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
		{If no manufacturing (**D1**)}	{If **D3**=Yes}	⟶ **D47**
			{If **D3**=No}	⟶ **D53**

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D28 ** RECORD in comments any extra information about the cooling system that is volunteered. Probe for any others. ENTER all that apply. **

Looking at this list of cooling equipment types, please tell me which types are used in this building.

PKGCL8	Packaged air conditioning units, other than heat pumps	{If more than one is selected}		→ **D29**
RCAC8	Residential-type central air conditioners, other than heat pumps, that cool air directly and circulate it without using chilled water	{If only one is selected}	{If Heat pump is selected}	→ **D31**
ACWNWL8	Individual room air conditioners, other than heat pumps		{If not District chilled water & not packaged cooling if the main heating was packaged heating & not heat pump if the main heating equipment was heat pump & **A15**<1990 or **A16** does not equal 2000-2003}	→ **D33**
HTPMPC8	Heat pumps for cooling			
CHWT8	District chilled water piped in from outside the building			
CHILLR8	Central chillers inside the building that chill water for air conditioning		{Otherwise}	→ **D34**
EVAPCL8	"Swamp" coolers or evaporative coolers			
OTCLEQ8	Other cooling equipment			

D29	**PKGCP8, RCACP8, ACWNWP8, HTPCP8, CHWTP8, CHILP8, EVAPP8, OTCLP8**

** Probe for estimate if *DK*. **

The next questions are about the percent of floorspace cooled by the equipment you just mentioned. Please keep in mind:

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.

What percent of the cooled area in this building is served by the *(Column A)*?

Column A			
{If **D28**=Packaged air conditioning} **packaged cooling**	Answer	{If additional equipments used from ***Column A***}	⟶ (Repeat) ***Column A***
{If **D28**=Central air conditioners} **central air conditioner**			
{If **D28**=Room air conditioners} **room air conditioner**			
{If **D28**=Heat pumps} **heat pumps**			
{If **D28**=District chilled water} **district chilled water**		{Otherwise}	⟶ **D29a** (Next page)
{If **D28**=Central chiller} **central chiller**			
{If **D28**=Swamp coolers} **swamp cooler**			
{If **D28**=other cooling equipment} **other cooling equipment**			

D29a		
{If there are equal maximum percentages for more than one equipment }		⟶ **D30**
{If there is an equipment with a maximum percent} Main Equipment=**MAINCL8**=the maximum percent equipment	{If **D28**=Heat pump}	⟶ **D31**
	{If main cooling equipment is (not district chilled water) & (not packaged cooling if the main heating was packaged heating) & (not heat pump if the main heating equipment was heat pump) & (**A15**<1990 or **A16** does not equal 2000-2003)}	⟶ **D33**
	{Otherwise}	⟶ **D34**

D30   **MAINCL8**
** Only equipment types with equal percentages (from **D29**) are shown here. **

Which do you consider to be your main cooling equipment – *(list of equipments with equal maximum percents)***?**

1. Packaged cooling 2. Central air conditioner 3. Room air conditioner 4. Heat pump 5. District chilled water 6. Central chiller 7. Swamp coolers 8. Other cooling equipment	{If **D28**=Heat pump}	⟶ **D31**
	{If main cooling equipment is (not district chilled water) & (not packaged cooling if the main heating was packaged heating) & (not heat pump if the main heating equipment was heat pump) & (**A15**<1990 or **A16** does not equal 2000-2003)}	⟶ **D33**
	{Otherwise}	⟶ **D34**

D31 ** ENTER all that apply. **

Please look at the first list on this card and tell me which heat pump systems are used for cooling in this building.

PKGCPS8	Packaged unit	
SPLCPS8	Residential-type split system	→ **D32**
RMCPS8	Individual room heat pump	

D32 ** ENTER all that apply. **

Looking at the second list on this card, which types of heat pumps are these?

AIRCPT8	Air source heat pump	{If main cooling equipment is (not district chilled water) & (not packaged cooling if the main heating was packaged heating) & (not heat pump if the main heating equipment was heat pump) & (**A15**<1990 or **A16** does not equal 2000-2003)}	→ **D33**
GRDCPT8	Ground source or ground water heat pump		
WTRCPT8	Water loop heat pump	{Otherwise}	→ **D34**

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D33

NWMNCL8
** EXP: [If there is more than one of this equipment type and at least one has been replaced, the answer is "Yes."] **

(*Column A*) been replaced since 1990?

Column A		
{If **MAINCL8**=Packaged cooling} **Has the packaged air conditioning unit**		
{If **MAINCL8**=Central air conditioner} **Has the central air conditioner**		
{If **MAINCL8**=Room air conditioner} **Have any of the room air conditioners**		
{If **MAINCL8**=Heat pump} **Has the heat pump**	1. Yes 2. No	⟶ **D34**
{If **MAINCL8**=Central chiller} **Has the central chiller**		
{If **MAINCL8**=Swamp cooler} **Has the swamp cooler**		
{If **MAINCL8**=Other cooling equipment} **Has the other type of cooling equipment**		

D34   **RDCLNF8**

(*Column A*) **a change in the temperature setting for cooling?**

Column A			
{If open 24 hours a day (**C12**=Yes or **C16**=168 or **C17**=168)} **In this building, are there any periods during a normal 24 hour day when there is**	1. Yes 2. No	{If Yes}	⟶ **D35**
{Otherwise} **When this building is not in full use, is there**		{If heating (D15>0 or D16=Yes) & **D17** not just space heaters}	⟶ **D36**
		{Otherwise}	⟶ **D34a** (Below)

D34a				
{If water heating (**D1**)}				⟶ **D39**
{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
	{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
		{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
			{If **D3**= No}	⟶ **D53**

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D35 **HWRDCL8**

Looking at this card, which of these best describes how the temperature for cooling is usually changed?

1. Time-clock thermostat 2. Thermostat is manually reset 3. Part of "Energy Management and Control System (EMCS)"	{If **D28** is not just room air conditioners or ((**D15**>0 or **D16**=Yes) &**D17** is not just individual space heaters)}				→ **D36**
	{Otherwise}	{If water heating (**D1**)}			→ **D39**
		{If no water heating (**D1**)}	{If cooking (**D1**)}		→ **D43**
			{If no cooking (**D1**)}	{If manufacturing (**D1**)}	→ **D45**
				{If no manufacturing (**D1**)} {If **D3**= Yes}	→ **D47**
				{If **D3**= No}	→ **D53**

D36 **VAV8**

Does this building have a variable air volume (VAV) system?

| 1. Yes 2. No | {If **D27**>0 & Cooling equipment other than just Room air conditioner} | → **D37** |
| | {Otherwise} | → **D38** |

D37   **ECN8**

Does this building have any equipment that uses outside air for cooling, often called an "economizer cycle"?

1. Yes 2. No	⟶ **D38**

D38   **MAINT8**

Is there any regularly scheduled maintenance and repair for the (*Column A)* system?

Column A		
{If heating only} **heating**	1. Yes 2. No	⟶ **D38a** (Below)
{If cooling only} **cooling**		
{If heating and cooling} **heating and cooling**		

D38a				
{If water heating (**D1**)}				⟶ **D39**
{If no water heating (**D1**)}	{If cooking (**D1**)}			⟶ **D43**
	{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
		{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
			{If **D3**= No}	⟶ **D53**

D39 ** Only sources already selected are shown here. Probe for any others.
ENTER all that apply. **

Which energy sources were used for water heating? […(*list of energy sources used*)?]

ELWATR8	Electricity		
NGWATR8	Natural gas		
FKWATR8	Fuel oil, Diesel, or Kerosene		
PRWATR8	Bottled gas		
STWATR8	District steam		
HWWATR8	District hot water	Answer	⟶ **D40**
WOWATR8	Wood		
COWATR8	Coal		
SOWATR8	Solar		
OTWATR8	Other fuel 1		
OTWATR8	Other fuel 2		
OTWATR8	Other fuel 3		
	Some other energy source		⟶ **D41**

D40

What was the other energy source used for water heating?

ELWATR8	Electricity	
NGWATR8	Natural gas	
FKWATR8	Fuel oil/Diesel/Kerosene	
PRWATR8	Bottled gas	
STWATR8	District steam	→ **D41**
HWWATR8	District hot water	
WOWATR8	Wood	
COWATR8	Coal	
SOWATR8	Solar	
OTWATR8	Some other energy source	

D41   **WTHTEQ8**

Does this building have one or more centralized water heaters, one or more "point-of-use" water heaters, or both of these types [of water heaters]?

1. One or more centralized water heaters 2. One or more "point-of-use" water heaters 3. Both types	{If *Activity=Lodging* (**B2**, **B4**)}				→ **D42**
	{Otherwise}	{If cooking (**D1**)}			→ **D43**
		{If no cooking (**D1**)}	{If manufacturing (**D1**)}		→ **D45**
			{If no manufacturing (**D1**)}	{If **D3**= Yes}	→ **D47**
				{If **D3**= No}	→ **D53**

D42 | **INSTWT8**

Is the water hot <u>as soon as</u> you turn on the faucet?

	{If cooking (**D1**)}			⟶ **D43**
1. Yes 2. No	{If no cooking (**D1**)}	{If manufacturing (**D1**)}		⟶ **D45**
		{If no manufacturing (**D1**)}	{If **D3**= Yes}	⟶ **D47**
			{If **D3**= No}	⟶ **D53**

D43 ** Only sources already selected are shown here. Probe for any others. ENTER all that apply. **

Which energy sources were used for cooking? […*(list of energy sources used)*?]

ELCOOK8	Electricity		{If manufacturing (**D1**)}	⟶ **D45**
NGCOOK8	Natural gas			
FKCOOK8	Fuel oil, Diesel, or Kerosene			
PRCOOK8	Bottled gas		{If no manufacturing (**D1**) & **D3**= Yes}	⟶ **D47**
STCOOK8	District steam	Answer		
HWCOOK8	District hot water			
WOCOOK8	Wood			
COCOOK8	Coal			
SOCOOK8	Solar		{Otherwise}	⟶ **D53**
OTCOOK8	Other fuel 1			
OTCOOK8	Other fuel 2			
OTCOOK8	Other fuel 3			
	Some other energy source			⟶ **D44**

D44

What was the other energy source used for cooking?

ELCOOK8	Electricity			{If manufacturing (**D1**)}	→ **D45**
NGCOOK8	Natural gas				
FKCOOK8	Fuel oil/Diesel/Kerosene				
PRCOOK8	Bottled gas				
STCOOK8	District steam	Answer		{If no manufacturing (**D1**) & D3= Yes}	→ **D47**
HWCOOK8	District hot water				
WOCOOK8	Wood				
COCOOK8	Coal				
SOCOOK8	Solar			{Otherwise}	→ **D53**
OTCOOK8	Some other energy source				

D45 ** Only sources already selected are shown here. Probe for any others.
ENTER all that apply. **

Which energy sources were used for manufacturing? […(list of
energy sources used**)?]**

ELMANU8	Electricity			
NGMANU8	Natural gas			
FKMANU8	Fuel oil, Diesel, or Kerosene		{If **D3**=Yes}	→ **D47**
PRMANU8	Bottled gas			
STMANU8	District steam			
HWMANU8	District hot water	Answer		
WOMANU8	Wood			
COMANU8	Coal			
SOMANU8	Solar		{If **D3**=No}	→ **D53**
OTMANU8	Other fuel 1			
OTMANU8	Other fuel 2			
OTMANU8	Other fuel 3			
	Some other energy source			→ **D46**

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D46

What was the other energy source used for manufacturing?

ELMANU8	Electricity	Answer	{If **D3**=Yes}	⟶ **D47**
NGMANU8	Natural gas			
FKMANU8	Fuel oil/Diesel/Kerosene			
PRMANU8	Bottled gas			
STMANU8	District steam			
HWMANU8	District hot water		{If **D3**=No}	⟶ **D53**
WOMANU8	Wood			
COMANU8	Coal			
SOMANU8	Solar			
OTMANU8	Some other energy source			

D47 **GENR8**

** EXP: [If energy is used to run regular tests of the emergency generators, answer "Yes."]

Was any energy actually <u>used</u> for generating electricity in this building during the past 12 months?

1. Yes	⟶ **D48**
2. No	⟶ **D53**

D48 ** Probe for any others. ENTER all that apply. **

Looking at this first list, please tell me which energy sources were used for electricity generation.

NGGENR8	Natural gas	
FKGENR8	Fuel oil/Diesel/Kerosene	
PRGENR8	Bottled gas/LPG/Propane	
WOGENR8	Wood	
COGENR8	Coal	⟶ **D49**
SOGENR8	Solar thermal panels	
OTGENR8	Other fuel 1	
OTGENR8	Other fuel 2	
OTGENR8	Other fuel 3	
	Some other energy source	

| **D49** | ** Probe for any others. ENTER all that apply. ** |

Looking again at this card, were any of the technologies on this second list used for generating electricity?

PHOTVL8	Photovoltaic cells	
FUELCL8	Fuel cells	
MCROTB8	Microturbines	⟶ **D50**
	** IF VOLUNTEERED ** None of these	

| **D50** | **GENUSE8** |

During the past 12 months, was the electricity generated in this building used: primarily for emergency backup, during periods of high electricity demand, or whenever electricity was used?

1. Primarily for emergency backup	⟶ **D53**
2. During periods of high electricity demand 3. Whenever electricity was used	⟶ **D51**

| **D51** | **COGEN8** |

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?

1. Yes	⟶ **D52**
2. No	⟶ **D53**

| **D52** | **GRID8** |

Is the cogeneration or generation system interconnected with an electric utility so that it is able to deliver or sell electricity <u>to the grid</u>?

1. Yes 2. No	⟶ **D53**

D53

As a final check, were there any energy sources used in this building other than (*list of energy sources used*)?

Electricity		{If Yes}		⟶ **D54**
Natural gas		{If No and if every source given in **D4** (other than Electricity or District chilled water) was assigned an end use}	{If Electricity was used}	⟶ **D57**
Fuel oil, Diesel, or Kerosene				
Bottled gas			{If Bottled gas was used}	⟶ **D58**
District steam				
District hot water	1. Yes 2. No			
Wood			{If Wood was used}	⟶ **D62**
Coal			{Otherwise}	⟶ **E1**
Solar				
Other fuel 1		{Otherwise}		
Other fuel 2				
Other fuel 3				⟶ **D56**

D54 ** Probe for any others. ENTER all that apply. **

What other sources were used?

ELUSED8	11. Electricity	
NGUSED8	12. Natural gas	
FKUSED8	13. Fuel/Diesel/Kerosene	
PRUSED8	14. Bottled gas	
STUSED8	15. District steam	
HWUSED8	16. District hot water	→ **D55**
CWUSED8	17. District chilled water	
WOUSED8	18. Wood	
COUSED8	19. Coal	
SOUSED8	20. Solar	
OTUSED8	21. Other	

D55

What was the (*Column A*) used for?

Column A				
{If **D54**=Electricity} **electricity**		{If additional sources used in **Column A**}		⟶ (Repeat) ***Column A***
{If **D54**=Natural gas} **natural gas**				
{If **D54**=Fuel oil/ Diesel/Kerosene} **fuel oil/diesel/ kerosene**	1. Heating 2. Cooling 3. Water heating 4. Cooking 5. Manufacturing 6. Electricity generation 7. Some other use 8. Incorrectly recorded -- source not used	{If no additional sources used in **Column A** and every energy source given in **D4** (other than Electricity or District chilled water) was assigned an end use}	{If Electricity was used}	⟶ **D57**
{If **D54**=Bottled gas} **bottled gas**			{If Natural gas was used}	⟶ **D59**
{If **D54**=District steam} **district steam**				
{If **D54**=District hot water} **district hot water**			{If Bottled gas was used}	⟶ **D60**
{If **D54**=Wood} **wood**			{If Wood was used}	⟶ **D62**
{If **D54**=Coal} **coal**				
{If **D54**=Solar} **solar**			{Otherwise}	⟶ **E1**
{If **D54**=Other} **other**		{Otherwise}		⟶ **D56**

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D56

I have recorded that (*Column A*) was used in this building but not how it was used. What was the (*Column A*) used for?

Column A			
12. {If **D4**=Natural gas and no end use given} **natural gas**	1. Heating 2. Cooling 3. Water heating 4. Cooking 5. Manufacturing 6. Electricity generation 7. Some other use 8. Incorrectly recorded -- source not used	{If additional sources used in *Column A* and no end use was given}	⟶ (Repeat) *Column A*
13. {If **D5**=Fuel oil and no end use given} **fuel oil**		{If Electricity was used}	⟶ **D57**
13. {If **D5**=Diesel and no end use given} **diesel**			
13. {If **D5**=Kerosene and no end use given} **kerosene**		{If Natural gas was used}	⟶ **D59**
14. {If **D4**=Bottled gas and no end use given} **bottled gas**			
15. {If **D4**=District steam and no end use given} **district steam**		{If Bottled gas was used}	⟶ **D60**
16. {If **D4**=District hot water and no end use given} **district hot water**			
18. {If **D6**=Wood and no end use given} **wood**		{If wood was used}	⟶ **D62**
19. {If **D6**=Coal and no end use given} **coal**			
20. {If **D6**=Solar and no end use given} **solar**		{Otherwise}	⟶ **E1**
21. {If **D4**=Other and no end use given} **another energy source**			

D57 ** EXP: [If electricity is brought from the city, that is considered to be the local utility.] Probe for any others. ENTER all that apply. **

In some areas of the country, consumers may purchase their electricity from more than one supplier. Looking at the list, please tell me all the ways that electricity is purchased for this building?

ELLOCUT8	Bought from the local utility	{If more than one answer was selected, including bought from the local utility}		→ **D58**
ELNONLU8	Contracted or bought from an independent power producer or non-local utility	{Otherwise}	{If Natural gas used}	→ **D59**
			{If Bottled gas used}	→ **D60**
			{If Wood used}	→ **D62**
ELOTSRC8	Bought from someone else, such as a broker		{Otherwise}	→ **E1**

D58 **ELLUPCT8**

About what percent of the electricity would you estimate was obtained from the local utility?

Answer	{If Natural gas was used}	→ **D59**
	{If Bottled gas was used}	→ **D60**
	{If Wood was used}	→ **D62**
	{Otherwise}	→ **E1**

D59

In some areas of the country, consumers may purchase their natural gas from more than one supplier. Was the natural gas in this building bought from the local utility, bought from someone else, such as a non-utility or a broker, or bought both of these ways?

NGLOCUT8	Bought from the local utility	{If Bottled gas was used}	➞ **D60**
NGOTSRC8	Bought from someone else, such as a non-utility or broker	{If Wood was used}	➞ **D62**
	Bought both ways	{Otherwise}	➞ **E1**

D60

PRAMTC8

You mentioned that bottled gas is used in this building. Looking at this list, which range best describes the amount of bottled gas used in the past 12 months?

1. Less than 100 2. 100 to 499 3. 500 to 999 4. 1,000 or more	➞ **D61**

D61

PRUNIT8
** VERIFY if volunteered in the previous question. **

Is that in gallons or pounds?

1. Gallons 2. Pounds	{If Wood used}	➞ **D62**
	{Otherwise}	➞ **E1**

D62 | **WOAMT8**

Looking at this card, which range best describes how much wood has been burned in this building in the past 12 months?

| 1. Less than 1 cord
2. 1 to 9 cords
3. 10 to 20 cords
4. More than 20 cords | ⟶ **D63** |

D63 | **WOSRC8**

Did you purchase all the wood, obtain it all free of charge, or was some purchased and some free?

1. Purchased all the wood	⟶ **D64**
2. Obtained it all free of charge	⟶ **E1**
3. Some purchased and some free	⟶ **D64**

D64 | **WOEXP8**
** Do not enter cents. VERIFY number digit by digit. **

Please give me an estimate of the total amount spent for the wood used in the past 12 months.

| Answer | ⟶ **E1** |
| *Don't Know/Refusal* | ⟶ **D65** |

D65 | **WOEXPC8**

Looking at this list, which range best describes the total amount spent for the wood used in the past 12 months?

| 1. $1 to $100
2. $101 to $500
3. $501 to $1000
4. $1,001 to $2,000
5. Over $2,000 | ⟶ **E1** |

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SECTION E: MISCELLANEOUS EQUIPMENT

E1

{If Cooking (**D43**)}			⟶ **E2**
{If Water heating (**D39**)}			⟶ **E5**
{Otherwise}	{If Activity (**B2**)=Lodging, Inpatient Health Care or Nursing}		⟶ **E6**
	{If Activity (**B5**)=Doctor's/ Dentist office or Activity (**B16**)=Doctor's/Dentist office, Clinic or other Outpatient health care, Outpatient rehab center}		⟶ **E7**
	{If Activity (**B2**)=Education, Laboratory, Office, Outpatient health care, Public assembly, Retail, or Service		⟶ **E8**
	{If Activity (**B9**)=Nonrefrigerated or Refrigerated warehouse}		⟶ **E9**
	{Otherwise}	{If Electricity not used}	⟶ **E14**
		{Otherwise}	⟶ **E15**

E2 **FDRM8**

Now I have some questions about uses of space and equipment in this building.

Is any space used for institutional or commercial food preparation and serving, such as kitchens, restaurants, snack bars, cafeterias, steam tables, or warming areas?

Do not include lounge areas with only a microwave or other small food preparation equipment or vending machines.

1. Yes				⟶ **E3**
2. No	{If Water heating (**D39**)}			⟶ **E5**
	{Otherwise}	{If Activity (**B2**)=Lodging, Inpatient health care or Nursing}		⟶ **E6**
		{If Activity (**B5**)=Doctor's/Dentist office or Activity (**B16**)=Doctor's/Dentist office, Clinic or other Outpatient health care, Outpatient rehab center}		⟶ **E7**
		{If Activity (**B2**)=Education, Laboratory, Office, Outpatient health care, Public assembly, Retail, or Service}		⟶ **E8**
		{If Activity (**B9**)=Nonrefrigerated or Refrigerated warehouse}		⟶ **E9**
		{Otherwise}	{If Electricity not used}	⟶ **E14**
			{Otherwise}	⟶ **E15**

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| **E3** | ** Probe for any others. ENTER all that apply. ** |

Which of these types best describes the food preparation or serving areas in this building?

SNACK8	Snack bar	
FASTFD8	Fast food/Small restaurant	
CAF8	Cafeteria/Large restaurant	⟶ **E3a** (Below)
FDPREP8	Food preparation area	
KITCHN8	Small kitchen area	
OTFDRM8	Other type of food preparation area	⟶ **E4**

E3a		
{If Water heating (**D39**)}		⟶ **E5**
{Otherwise}	{If Activity (**B2**)=Lodging, Inpatient health care or Nursing}	⟶ **E6**
	{If Activity (**B5**)=Doctor's/Dentist office or Activity (**B16**)=Doctor's/Dentist office, Clinic or other Outpatient health care, Outpatient rehab center}	⟶ **E7**
	{If Activity (**B2**)=Education, Laboratory, Office, Outpatient health care, Public assembly, Retail, or Service}	⟶ **E8**
	{If Activity (**B9**)=Nonrefrigerated or Refrigerated warehouse}	⟶ **E9**
	{Otherwise} {If Electricity not used}	⟶ **E14**
	{Otherwise} {Otherwise}	⟶ **E15**

E4 ** RECORD in open box. **

Please describe this other type of food preparation or serving area.

Answer	{If Water heating (**D39**)}			→ **E5**
	{Otherwise}	{If Activity (**B2**)=Lodging, Inpatient health care or Nursing}		→ **E6**
		{If Activity (**B5**)=Doctor's/Dentist office or Activity (**B16**)=Doctor's/Dentist office, Clinic or other Outpatient health care, Outpatient rehab center}		→ **E7**
		{If Activity (**B2**)=Education, Laboratory, Office, Outpatient health care, Public assembly, Retail, or Service}		→ **E8**
		{If Activity (**B9**)=Nonrefrigerated or Refrigerated warehouse}		→ **E9**
		{Otherwise}	{If Electricity not used}	→ **E14**
			{Otherwise}	→ **E15**

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E5	HWTRM8

Is any space in this building used for any activities requiring large amounts of hot water, such as a commercial dishwasher, laundry room, heated pool, steam room, whirlpool, or showers?

1. Yes 2. No	{If Activity (**B2**)=Lodging, Inpatient health care or Nursing}		⟶ **E6**
	{If Activity (**B5**)=Doctor's/Dentist office or Activity (**B16**)=Doctor's/Dentist office, Clinic or other Outpatient health care, Outpatient rehab center}		⟶ **E7**
	{If Activity (**B2**)=Education, Laboratory, Office, Outpatient health care, Public assembly, Retail, or Service}		⟶ **E8**
	{If Activity (**B9**)=Nonrefrigerated or Refrigerated warehouse}		⟶ **E9**
	{Otherwise}	{If Electricity not used}	⟶ **E14**
		{Otherwise}	⟶ **E15**

E6	LAUNDR8

Are the linens primarily laundered in this building, in another building on-site, or by an off-site laundry service?

1. In this building 2. In another building on-site 3. By an off-site laundry service	{If Activity (**B16**)=Inpatient rehabilitation center}		⟶ **E7**
	{If Activity (**B16**)=Inpatient health care}		⟶ **E8**
	{If Activity (**B2**)=Lodging}		⟶ **E10**
	{Otherwise}	{If Electricity not used}	⟶ **E14**
		{Otherwise}	⟶ **E15**

E7

MEDEQP8

Does this building have any equipment for medical diagnosis or treatment, such as X-ray, CAT scan, MRI, dialysis, or ultrasound machines?

1. Yes 2. No	{If Activity (**B16**)=Outpatient health care}		→ **E8**
	{If Activity (**B16**)=Inpatient rehabilitation center}		→ **E10**
	{Otherwise}	{If Electricity not used}	→ **E14**
		{Otherwise}	→ **E15**

E8

LABEQP8
** EXP: [Some examples are fume hoods, gas chromatographs, centrifuges, spectrometers, and analysis equipment.] **

Does this building have any specialized laboratory equipment that requires extra energy consumption?

1. Yes 2. No	{If Activity (**B2**)=Education, Laboratory, or Service}		→ **E9**
	{If Activity (**B2**)=Public assembly or (**B16**)=Outpatient rehabilitation center or Inpatient rehabilitation center}		→ **E10**
	{Otherwise}	{If Electricity not used}	→ **E14**
		{Otherwise}	→ **E15**

E9

MCHEQP8

Does this building have any machine or shop equipment such as woodworking tools, metalworking tools, arc welders, or any other types of power tools?

1. Yes 2. No	{If Activity (B2)=Education}		→ **E10**
	{Otherwise}	{If Electricity not used}	→ **E14**
		{Otherwise}	→ **E15**

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E10 **POOL8**

Is there an indoor swimming pool in this building?

1. Yes		⟶ **E11**
2. No	{If Activity (**B2**)=Education, Lodging, or Public Assembly}	⟶ **E13**
	{If Electricity is not used}	⟶ **E14**
	{Otherwise}	⟶ **E15**

E11 **HTPOOL8**

Is it a heated pool?

1. Yes		⟶ **E12**
2. No	{If Activity (**B2**)=Education, Lodging, or Public Assembly}	⟶ **E13**
	{If Electricity is not used}	⟶ **E14**
	{Otherwise}	⟶ **E15**

E12 **PLSRC8**
** Read choices if necessary. **

What energy source is used to heat the pool?

1. Electricity 2. Natural gas 3. Fuel oil/Diesel/Kerosene 4. Bottled gas/LPG/Propane 5. Solar 6. Some other energy source	{If Activity (**B2**)=Education, Lodging, or Public Assembly}	⟶ **E13**
	{If Electricity is not used}	⟶ **E14**
	{Otherwise}	⟶ **E15**

E13 **RINK8**

Does this building contain an indoor skating rink?

| 1. Yes | {If Electricity not used} | ⟶ **E14** |
| 2. No | {Otherwise} | ⟶ **E15** |

E14

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?

| True, electricity is not used | ⟶ **E51** |
| False, electricity is used | ⟶ **E15** |

E15 **RFGEQP8**

Is there any refrigeration or freezer equipment used in this building, including vending machines?

| 1. Yes | ⟶ **E16** |
| 2. No | ⟶ **E22** |

E16 ** Probe for any others. ENTER all that apply. **

Looking at this card, please tell me which types of refrigeration or freezer equipment are found in this building.

RFGWI8	Walk-in refrigeration/freezer units	⟶ **E17**
RFGOP8	Open refrigerated/freezer cases or cabinets	⟶ **E18**
RFGCL8	Residential-type refrigerators/freezers	⟶ **E19**
RFGRES8	Closed refrigerated/freezer cases or cabinets	⟶ **E20**
RFGVEN8	Refrigerated vending machines	⟶ **E21**

E17 **RFGWIN8**
** Probe for estimate if *DK*. **

How many walk-in refrigeration or freezer units are there?

	{If Open refrigerated/freezer cases or cabinets (**E16**)}	⟶ **E18**
	{If Residential-type refrigerators/freezers (**E16**)}	⟶ **E19**
Answer	{If Closed refrigerated/freezer cases or cabinets (**E16**)}	⟶ **E20**
	{If Refrigerated vending machines (**E16**)}	⟶ **E21**
	{Otherwise}	⟶ **E22**

E18   **RFGOPN8**
** Probe for estimate if *DK*. **

How many open refrigerated or freezer cases or cabinets are there?

Answer	{If Residential-type refrigerators/freezers (**E16**)}	⟶ **E19**
	{If Closed refrigerated/freezer cases or cabinets (**E16**)}	⟶ **E20**
	{If Refrigerated vending machines (**E16**)}	⟶ **E21**
	{Otherwise}	⟶ **E22**

E19   **RFGRSN8**
** Probe for estimate if *DK*. **

How many residential-type refrigerators or freezers are there?

Answer	{If Closed refrigerated/freezer cases or cabinets (**E16**)}	⟶ **E20**
	{If Refrigerated vending machines (**E16**)}	⟶ **E21**
	{Otherwise}	⟶ **E22**

E20   **RFGCLN8**
** Probe for estimate if *DK*. **

How many closed refrigerated or freezer cases or cabinets are there?

Answer	{If Refrigerated vending machines (**E16**)}	⟶ **E21**
	{Otherwise}	⟶ **E22**

E21   **RFGVNN8**
** Probe for estimate if *DK*. **

How many refrigerated vending machines are there inside the building?

Answer	⟶ **E22**

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E22   **PCTERM8**
** EXP: [Do not include inventory, such as in retail stores.] **

Are there any computers used in this building?

1. Yes		⟶ **E23**
2. No	{If Activity (**B2**)=Retail, Food sales, or Food Service}	⟶ **E36**
	{Otherwise}	⟶ **E37**

E23   **SERVER8**
** DEF: [A server is usually just the CPU, or "case," portion of a computer that manages network resources such as computer files, printers, databases, or network traffic; servers do not require much human operation, so most do not have keyboards or monitors.] DEF: [Dedicated means that the server performs no other tasks besides server tasks.] **

Are there any dedicated computer servers used in this building?

1. Yes 2. No	⟶ **E24**

E24
** Probe for any others. ENTER all that apply. **

Please look at this card and tell me if any of these types of separate computer areas are found in this building.

MNFRM8	Mainframe computer room		
SRVFRM8	"Server farm"		
TRNGRM8	Computer based training room		⟶ **E26**
STDNRM8	Student or public computer center		
OTPCRM8	Other type of specialized computer area		⟶ **E25**
	** IF VOLUNTEERED ** None of these types of areas	{If **E23**=Yes}	⟶ **E27**
		{Otherwise}	⟶ **E29**

E25 ** RECORD in open box. **

Please describe this other type of computer area.

Answer	⟶ **E26**

E26 **PCRMP8**

Approximately what percent of the floorspace in this building does all of the computer area you just mentioned comprise?

Answer	{If **E23**=Yes}	⟶ **E27**
	{Otherwise}	⟶ **E29**

E27 **SRVNUM8**

About how many dedicated servers are used in this building?

Answer	⟶ **E29**
Don't Know	⟶ **E28**

E28 **SRVRC8**

Looking at this card, which category best describes the number of servers used in this building?

01. 1 to 4	
02. 5 to 9	
03. 10 to 19	
04. 20 to 49	
05. 50 to 99	⟶ **E29**
06. 100 to 249	
07. 250 to 499	
08. 500 to 999	
09. 1,000 to 2,499	
10. 2,500 to 4,999	
11. 5,000 or more	

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E29 **PCNUM8**
** EXP: [Do not include inventory, such as in retail stores.] **

About how many computers are used in this building?

Answer	⟶ **E31**
Don't Know	⟶ **E30**

E30 **PCTRMC8**

Looking at this card, which category best describes the number of computers used in this building?

01. 1 to 4 02. 5 to 9 03. 10 to 19 04. 20 to 49 05. 50 to 99 06. 100 to 249 07. 250 to 499 08. 500 to 999 09. 1,000 to 2,499 10. 2,500 to 4,999 11. 5,000 or more	⟶ **E31**

E31 **FLAT8**
** DEF: [A flat screen monitor, also known as a liquid crystal display or LCD, is lightweight and very thin, in contrast to most standard monitors which have bulky backs and take up a lot of desk space.] **

Please look at this picture of a flat screen monitor. Do any of the computers in this building have these types of monitors?

Yes	⟶ **E32**
No	⟶ **E33**

E32 **FLATC8**

Would you say that all of the computers have flat screen monitors, most of them, some of them, or just a few?

| 1. All
2. Most
3. Some
4. A few | ⟶ **E33** |

E33 **PCEQPR8**

Does each computer have a printer attached to it?

1. Yes		⟶ **E35**
2. No		⟶ **E34**
3. ** IF VOLUNTEERED ** No printers	{If Activity (**B2**)=Retail, Food sales, or Food service}	⟶ **E36**
	{Otherwise}	⟶ **E37**

E34 **PRNTRN8**
** Probe for estimate if *DK*. **

About how many printers are there in this building?

| Answer | {If Answer>0} | ⟶ **E35** |
| | {If Answer=0} | ⟶ **E36** |

E35 **PRNTYP8**

Are these mainly inkjet or laser printers?

| 1. Inkjet
2. Laser
3. ** IF VOLUNTEERED **
    Some other type
4. ** IF VOLUNTEERED **
    Half inkjet, half laser | {If Activity (**B2**)=Retail, Food sales, or Food service} | ⟶ **E36** |
| | {Otherwise} | ⟶ **E37** |

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E36 **RGSTRN8**
** Probe for estimate if *DK*. **

About how many cash registers are used in this building?

Answer	⟶ **E37**

E37 **COPIER8**

Are there any photocopiers, other than small desktop copiers, used in this building?

1. Yes	⟶ **E38**
2. No	⟶ **E39**

E38 **COPRN8**
** Probe for estimate if *DK*. **

About how many photocopiers are there?

Answer	⟶ **E39**

E39 **FAX8**

Are there any FAX machines used in this building?

	{If **E22**=Yes & If building is not open 24 hours a day (**C12**, **C16**, **C17**)}	⟶ **E40**
1. Yes 2. No	{If **E22**=Yes & If building is open 24 hours a day (**C12**, **C16**, **C17**) or If **E22**=No & If building operating hours>0 (**C15**, **C16**)}	⟶ **E41**
	{If **E22**=No & If building operating hours=0 (**C15**, **C16**)}	⟶ **E43**

E40 RDOFEQ8

How often is the majority of *(Column A)* turned off when the building is not normally open? Would you say that they are always turned off, sometimes turned off, or never turned off when the building is not normally open?

Column A			
{If printers, registers or copiers (**E33**, **E34**, **E36**, **E37**, **E39**)} **the computers and the office equipment just mentioned**	1. Always turned off 2. Sometimes turned off 3. Never turned off 4. **IF VOLUNTEERED** Computers are "powered down"	{If building operating hours>0 (**C12**, **C15**, **C16**, **C17**)}	⟶ **E41**
{Otherwise} **the computers**		{If building operating hours=0 (**C15**, **C16**)}	⟶ **E43**

E41 LTOHRP8
** DEF: ["Normally open" means the hours when the usual activities occur.] If lit square footage is known but not the percent, RECORD square footage in comments, then code *DK*. **

What percentage of the square footage in this building is lit when the building is normally open?

Answer	{If building is not open 24 hours a day (**C12**, **C16**, **C17**)}		⟶ **E43**
	{Otherwise}	{If Answer>0}	⟶ **E45**
		{If Answer=0}	⟶ **E51**
Don't Know			⟶ **E42**

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E42

LOHRPC8

Looking at this list, what is your best estimate of the percent of the square feet in this building that is lit?

1. 1 to 25 percent 2. 26 to 50 percent 3. 51 to 75 percent 4. 76 to 100 percent	{If building is not open 24 hours a day (**C12**, **C16**, **C17**)}	⟶ **E43**
	{Otherwise}	⟶ **E45**
5. Not lit at all when it is normally open	{If building is not open 24 hours a day (**C12**, **C16**, **C17**)}	⟶ **E43**
	{Otherwise}	⟶ **E51**

E43

LTNHRP8
** DEF: ["Normally open" means the hours when the usual activities occur.] If lit square footage is known but not the percent, RECORD square footage in comments, then code *DK*. **

What percentage of the square footage is lit during off hours, that is, hours when the building is not normally open? Exclude the space lit by emergency lighting.

Answer	{If Answer=0 and building is not lit when open (**E41**, **E42**)}	⟶ **E51**
	{Otherwise}	⟶ **E45**
Don't Know		⟶ **E44**

E44

LNHRPC8

Looking at this list, 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		⟶ **E45**
5. Not lit at all during off hours	{If % lit when open>0 (**E41**, **E42**)}	
	{Otherwise}	⟶ **E51**

E45

** Probe for any others. ENTER all that apply. **

Looking at this card, what types of lighting were used to light any of the space in this building?

FLUOR8	Fluorescent lighting other than compact fluorescent bulbs	{If more than one type selected}		⟶ **E47**
CFLR8	Compact fluorescent bulbs	{If only one type selected}	{If Fluorescent selected}	⟶ **E48**
BULB8	Incandescent light bulbs, other than halogen bulbs		{If HID selected}	⟶ **E49**
HALO8	Halogen bulbs		{If **D24**=EMCS or **D35**=EMCS}	⟶ **E50**
HID8	High intensity discharge (HID) lights such as high pressure sodium, metal halide or mercury vapor		{Otherwise}	⟶ **E51**
OTLT8	6. Other type of lighting			⟶ **E46**

E46

** RECORD in space below. **

What type of bulb is the other type of lighting?

Answer	{If more than one type selected}		⟶ **E47**
	{If only one type selected}	{If Fluorescent selected}	⟶ **E48**
		{If HID selected}	⟶ **E49**
		{If **D24**=EMCS or **D35**=EMCS}	⟶ **E50**
		{Otherwise}	⟶ **E51**

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| E47 | **FLUORP8, CFLRP8, BULBP8, HALOP8, HIDP8, OTLTP8** |

The next questions are about the percent of floorspace lit by the types of lighting you just mentioned. Please keep in mind:

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.

What percent of the lighted area in this building is lit by the (*Column A*)?

Column A				
{If **E45**=Fluorescent} **fluorescent lighting**	Answer	{If an additional type of lighting is used from *Column A*}		⟶ (Repeat) *Column A*
{If **E45**=Compact fluorescent bulbs} **compact fluorescent bulbs**				
{If **E45**=Incandescent light bulbs} **incandescent bulbs**				
{If **E45**=Halogen bulbs} **halogen lighting**		{Otherwise}	{If Fluorescent selected}	⟶ **E48**
{If **E45**=High intensity discharge lights} **high intensity discharge lights**			{If HID selected}	⟶ **E49**
			{If **D24**=EMCS or **D35**=EMCS}	⟶ **E50**
{If **E45**=Other type of lighting} **other lighting type**			{Otherwise}	⟶ **E51**

E48

SREF8
** DEF: [A specular reflector consists of a reflective surface or panel attached to a fluorescent lamp to direct a greater fraction of the lamp's light to the room. **

Does your building's interior lighting system have any specular reflectors, which are designed to increase the amount of light from a fluorescent fixture?

| 1. Yes
2. No | ⟶ **E49** |

E49

HEB8
** DEF: [A ballast is the transformer for fluorescent and HID lamps which provides the necessary current, voltage, and wave-form conditions to operate the lamp. Electronic ballasts operate lamps using electronic switching power supply circuits, are lightweight, and start instantly without flickering.] EXP: [Do not include magnetic ballasts.] **

Do any of the building's lights have electronic ballasts?

| 1. Yes
2. No | {If **D24**=EMCS or **D35**=EMCS} | ⟶ **E50** |
| | {Otherwise} | ⟶ **E51** |

E50

EMCSLT8

Does the "Energy Management and Control System (EMCS)" that you mentioned earlier also control the interior lighting system?

| 1. Yes
2. No | ⟶ **E51** |

E51 WINTYP8

Looking at the picture on this card, which shows a multi-layer window, do the exterior windows in this building contain single layer glass, multi-layer glass, or a combination of both of these types?

1. Single layer glass 2. Multi-layer glass 3. Combination of both	⟶ **E52**
4. ** IF VOLUNTEERED: ** No windows	⟶ **F1**

E52 ** Probe for any others. ENTER all that apply. **

Looking at this list at the bottom of this same card, please tell me which of these daylighting or conservation features are present in this building.

TINT8	Tinted window glass	
REFL8	Reflective window glass	
AWN8	External overhangs or awnings	
SKYLT8	Skylights or atriums designed to provide light	⟶ **E53**
AUTOLT8	Automatic controls or sensors that increase or reduce lighting in response to the level of natural light	
	** IF VOLUNTEERED: ** None of these	

E53 DAYLTP8
** If none, ENTER "0." Probe for estimate if *DK*. **

What percent of the building receives enough outside light so that the interior lights do not need to be turned on?

Answer	⟶ **F1**

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SECTION F: ELECTRICITY

F1

{If Electricity used}	⟶ **F2**
{Otherwise}	⟶ **G1**

F2

Do you have Worksheet 2 with you and filled out for electricity?

Yes	⟶ **F4**
No	⟶ **F3**

F3

The next questions are about electricity usage in this building during the past 12 months. Would you be able to give me an approximate figure of how much electricity was used or how much was spent on it?

Yes	⟶ **F4**
No	⟶ **F18**

F4 **ELCNS8**
** EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus of complex here.] VERIFY number <u>digit by digit</u>. **

Please give me the total number of kilowatthours of electricity used in the past 12 months.

Answer	⟶ **F5**

F5   **ELEXP8**
** Do <u>not</u> enter cents. VERIFY number <u>digit by digit</u>. **

Answer		
Don't Know	{If Answer given in **F4**}	⟶ **F6**
	{If **F4**=*DK/RF*}	⟶ **F18**

F6   ** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the starting date for these electricity usage figures?

Answer	⟶ **F7**

F7   ** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the ending date for these electricity usage figures?

Answer	⟶ **F8**

F8

Is any consumption from other buildings included in these figures?

Yes	⟶ **F9**
No	⟶ **F10**

F9   ** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings that are included in these figures?

Answer	⟶ **F10**

F10

Do these figures include charges for any other major electricity usage outside the building, such as parking lot lights, exterior lights, signs or billboards, large pumps, or swimming pools?

Yes No	{If independent power producer/non local utility or bought from someone else (**D57**)}	⟶ **F11**
	{If **F2**=Yes}	⟶ **F13**
	{If **F2**=No}	⟶ **F14**

F11

Do these figures include all the electricity from the independent power producer, non-local utility, or broker?

Yes	{If **F2**=Yes}	⟶ **F13**
	{If **F2**=No}	⟶ **F14**
No		⟶ **F12**

F12

** RECORD the additional charges in the open box. **

What was not included?

| Answer | {If **F2**=Yes} | ⟶ **F13** |
| | {If **F2**=No} | ⟶ **F14** |

F13

Did you include your monthly electricity usage on Worksheet 2?

| Yes | ⟶ **F15** |
| No | ⟶ **F14** |

F14

** If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Do you have a record of the monthly electricity use that I could have to help us better understand the seasonal patterns of electricity use?

| Yes, monthly electricity available | → **F15** |
| No, will not be able to provide monthly electricity | |

F15

** EXP: [Examples of these items include miscellaneous charges, past months' data, and units of measure.] If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Would it be possible for me to have a copy of one electricity bill? There is information on some utility bills that may help energy researchers put these figures together.

	{If (**A1**=*DK* & **A2**=*DK*) or **D1**=*DK*}		→ **F19**
▪ Yes, copy of bill available ▪ No, will not be able to provide copy of bill	{Otherwise, predictions of consumption and expenditures estimates are calculated based on various building characteristics}	{If **F10**>(Predicted consumption*8) or **F10**<(Predicted consumption/13) or **F11**>(Predicted expenditures*8) or **F11**<(Predicted expenditures/13)}	→ **F16**
		{Otherwise}	→ **G1**

F16

These usage figures seem (*Column A*) for what you have told me about this building. Is there anything unusual that might explain this (*Column A*) usage?

Column A		
{If **F10**>(Predicted consumption*8) or **F11**>(Predicted expenditures*8)} **high**	Yes	→ **F17**
{If **F10**<(Predicted consumption/13) or **F11**<(Predicted expenditures/13)} **low**	No	→ **F18**

F17 ** RECORD in open box. **

Please tell me what is out of the ordinary about this building.

Answer	⟶ **G1**

F18

We may need to go to your supplier for some information, so I need to ask you some questions about your electricity supplier or suppliers.

In some parts of the country, customers can purchase energy from more than one supplier. How many different companies supplied electricity to this building during the past 12 months?

Answer	⟶ **F19**
Don't Know	⟶ **G1**

F19 ** Start typing the name of the supplier or use BACKSPACE to bring up the look-up table. Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match. If you find a match, make sure the correct line is highlighted (blue) and press ENTER. 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. **

What is the name of the supplier that provided electricity in the past 12 months?

{If NOT ON LIST}	Answer {Enter the name}		⟶ **F20**
{If Supplier found in look-up table}	Answer {Select from look-up table}		⟶ **F25**
{If *Don't Know*}		{If only one supplier or last supplier}	⟶ **G1**
		{If more suppliers left to answer for}	⟶ (Repeat) **F19**

F20

What is the address for *(Supplier)*, beginning with the street?

Answer	→ **F21**

F21

** If not, press ENTER. **

Is there a post office box or suite number?

Answer	→ **F22**

F22

What is the city?

Answer	→ **F23**

F23

What is the state?

Answer	→ **F24**

F24

And what is the zip code?

Answer	→ **F25**

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F25

How many different electricity accounts does this building have with *(Supplier)***?**

Answer	{If 1 to 10 accounts}		⟶ **F26**
	{If more than 10 accounts or *Don't Know/Refusal*}	{If **F15** not asked}	⟶ **F31**
		{If only one supplier or last supplier}	⟶ **G1**
		{If more suppliers left}	(Back to) ⟶ **F19**

F26 ** VERIFY number digit by digit. **

Please give me the (*Column A*) electricity account number for *(Supplier)*.

Column A				
{If only one account} BLANK	Answer	{If more accounts left}		⟶ (Return) *Column A*
{If first account given} **first**		{Otherwise}	{If Independent power producer/non-local utility or Bought from someone else (**D57**)}	⟶ **F27**
{Otherwise} **next**			{Otherwise}	⟶ **F28**

F27

You mentioned earlier that you purchase electricity from an independent power producer, non-local utility, or broker. Is *(Supplier)* **one of those companies?**

Yes No	⟶ **F28**

F28

Do*(es)* the bill*(s)* or statement*(s)* from *(Supplier)* cover just this building or are other buildings covered as well?

Just this building	⟶ **F30**
Other building(s)	⟶ **F29**

F29

** Probe for estimate if *DK*. **

What is the approximate square footage of the other buildings included on the bill*(s)* or statement*(s)*?

Answer	⟶ **F30**

F30

Do*(es)* the bill*(s)* or statement*(s)* include charges for any other major electricity usage outside the building, such as parking lot lights, exterior lights, signs or billboards, large pumps or swimming pools?

Yes	{If **F15** not already asked}	⟶ **F31**
No	{Otherwise}	⟶ **G1**

F31

** EXP: [Examples of these items include other miscellaneous charges, past months' data, and units of measure.] If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Would it be possible for me to have a copy of one electricity bill from *(Supplier)*? There is information on some utility bills that may help energy researchers put these figures together.

Yes, copy of bill available	
No, will not be able to provide copy of bill	⟶ **G1**

SECTION G: NATURAL GAS

G1

{If Natural gas used}	⟶ **G2**
{Otherwise}	⟶ **H1**

G2

Do you have Worksheet 2 with you and filled out for natural gas?

Yes	⟶ **G4**
No	⟶ **G3**

G3

The next questions are about natural gas usage in the building during the past 12 months. Would you be able to give me an approximate figure of how much natural gas was used or how much was spent on it?

Yes	⟶ **G4**
No	⟶ **G15**

G4

Please look at this card and tell me the units in which your natural gas is measured.

Hundred cubic feet (Ccf) Therms Thousand cubic feet (Mcf) Dekatherms Cubic feet (cf)	⟶ **G6**
** IF VOLUNTEERED ** Some other unit	⟶ **G5**

G5

What are the other units?

Answer	⟶ **G6**

G6

NGCNS8
** EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.] VERIFY number <u>digit by digit</u>. **

Please give me the total amount of natural gas used in the past 12 months.

Answer	⟶ **G7**

G7

NGEXP8
** Do <u>not</u> enter cents. VERIFY number digit by digit. **

Please give me the total dollars spent on natural gas in the past 12 months. This should include state and local taxes and the following charges: fuel adjustment, system, demand, and distribution.

Answer		
Don't Know	{If Answer given in **G6**}	⟶ **G8**
	{If **G6**=*DK/RF*}	⟶ **G14**

G8

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the starting date for these natural gas usage figures?

Answer	⟶ **G9**

G9   ** ENTER date as MMDDYYYY. If the day is not known, ENTER "15" **

What is the ending date for these natural gas usage figures?

Answer	→ **G10**

G10

Is any consumption from other buildings included in these figures?

Yes	→ **G11**
No	→ **G12**

G11   ** Probe for estimate if *DK*. **

What is the approximate square footage of the other buildings that are included in these figures?

Answer	→ **G12**

G12

Do these figures include charges for any other 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?

Yes No	{If **D59**=Bought from someone else or Bought both ways}		→ **G13**
	{Otherwise}	{If **G2**=Yes}	→ **G15**
		{If **G2**=No}	→ **G16**

G13

Do these figures include all the natural gas from the non-utility or broker?

Yes	{If **G2**=Yes}	→ **G15**
	{If **G2**=No}	→ **G16**
No		→ **G14**

G14

** RECORD the additional charges in the open box. **

What was not included?

| Answer | {If **G2**=Yes} | → **G15** |
| | {If **G2**=No} | → **G16** |

G15

Did you include your monthly natural gas usage on Worksheet 2?

| Yes | → **G17** |
| No | → **G16** |

G16

** If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Do you have a record of the monthly natural gas use that I could have to help us better understand the seasonal patterns of natural gas use?

| Yes, monthly natural gas available | → **G23** |
| No, will not be able to provide monthly natural gas | |

G17 ** EXP: [Examples of these items include miscellaneous charges, past months' data, and units of measure.] If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Would it be possible for me to have a copy of one natural gas bill? There is information on some utility bills that may help energy researchers put these figures together.

	{If (**A1**=*DK* & **A2**=*DK*) or **D1**=*DK* or **D39**=DK}	→ **G20**
▪ Yes, copy of bill available ▪ No, will not be able to provide copy of bill	{Otherwise, predictions of consumption and expenditures estimates are calculated based on various building characteristics}	{If **G6**>(Predicted consumption*8) or **G6**<(Predicted consumption/13) or **G7**>(Predicted expenditures*8) or **G7**<(Predicted expenditures/13)} → **G18**
		{Otherwise} → **H1**

G18

These usage figures seem (*Column A*) for what you have told me about this building. Is there anything unusual that might explain this (*Column A*) usage?

Column A		
{If **G6**>(Predicted consumption*8) or **G7**>(Predicted expenditures*8)} **high**	Yes	→ **G19**
{If **G6**<(Predicted consumption/13) or **G7**<(Predicted expenditures/13)} **low**	No	→ **G20**

G19 ** RECORD in open box. **

Please tell me what is out of the ordinary about this building.

Answer	→ **H1**

G20

We may need to go to your supplier for some information, so I need to ask you some questions about your natural gas supplier or suppliers.

In some parts of the country, customers can purchase energy from more than one supplier. How many different companies supplied natural gas to this building during the past 12 months?

Answer	⟶ G21
Don't Know	⟶ H1

G21

** Start typing the name of the supplier or use BACKSPACE to bring up the look-up table. Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match. If you find a match, make sure the correct line is highlighted (blue) and press ENTER. 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. **
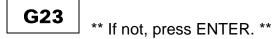
What is the name of the supplier that provided natural gas in the past 12 months?

{If NOT ON LIST}	Answer {Enter the name}		⟶ G22
{If Supplier found in look-up table}	Answer {Select from look-up table}		⟶ G27
{If *Don't Know*}	{If only one supplier or last supplier}	⟶ H1
	{If more suppliers left to answer for}	(Repeat) G21

G22

What is the address for *(Supplier)*, beginning with the street?

Answer	⟶ G23

G23

** If not, press ENTER. **

Is there a post office box or suite number?

Answer	→ **G24**

G24

What is the city?

Answer	→ **G25**

G25

What is the state?

Answer	→ **G26**

G26

And what is the zip code?

Answer	→ **G27**

G27

How many different natural gas accounts does this building have with *(Supplier)*?

Answer	{If 1 to 10 accounts}		→ **G28**
	{If more than 10 accounts or *Don't Know/Refusal*}	{If **G17** not asked}	→ **G33**
		{If only one supplier or last supplier}	→ **H1**
		{If more suppliers left}	(Back to) → **G21**

G28

** VERIFY number digit by digit. **

Please give me the (*Column A*) natural gas account number for (*Supplier*).

Column A				
{If only one account} BLANK		{If more accounts left}		⟶ (Repeat) *Column A*
{If first account given} **first**	Answer	{Otherwise}	{If Independent power producer/non-local utility or Bought from someone else (**D59**)}	⟶ **G29**
{Otherwise} **next**			{Otherwise}	⟶ **G30**

G29

You mentioned earlier that you purchase natural gas from a non-local utility, or broker. Is (*Supplier*) one of those companies?

Yes No	⟶ **G30**

G30

Do(es) the bill(s) or statement(s) from (*Supplier*) cover just this building or are other buildings covered as well?

Just this building	⟶ **G32**
Other building(s)	⟶ **G31**

G31

** Probe for estimate if *DK*. **

What is the approximate square footage of the other buildings included on the bill*(s)* or statement*(s)*?

Answer	⟶ **G32**

G32

Do*(es)* the bill*(s)* or statement*(s)* include charges for any other 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?

Yes	{If **G16** not already asked}	⟶ **G33**
No	{Otherwise}	⟶ **H1**

G33

** EXP: [Examples of these items include other miscellaneous charges, past months' data, and units of measure.] If available, you will be prompted again to collect this at the end of the interview, so it is not necessary to stop the interview to collect it here. **

Would it be possible for me to have a copy of one natural gas bill from *(Supplier)*? There is information on some utility bills that may help energy researchers put these figures together.

Yes, copy of bill available	
No, will not be able to provide copy of bill	⟶ **H1**

SECTION H: FUEL OIL/DIESEL/KEROSENE

H1

{If Fuel oil used}	⟶ **H2**
{Otherwise}	⟶ **I1**

H2

Do you have Worksheet 2 with you and filled out for *(fuel oil, diesel and/or kerosene)*?

Yes	⟶ **H4**
No	⟶ **H3**

H3

The next questions are about *(fuel oil, diesel and/or kerosene)* usage in this building during the past 12 months. Would you be able to give me an approximate figure of how much *(fuel oil, diesel and/or kerosene)* was used or how much was spent on it?

Yes	⟶ **H4**
No	⟶ **H14**

H4

FKCNS8
** EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.] VERIFY number <u>digit by digit</u>. **

Please give me the total number of gallons of *(fuel oil, diesel and/or kerosene)* used in the past 12 months.

Answer	⟶ **H5**

H5

FKEXP8
** Do <u>not</u> enter cents. VERIFY number digit by digit. **

Please give me the total dollars spent on *(fuel oil, diesel and/or kerosene)* in the past 12 months, including state and local taxes.

Answer	{If Answer=0 & **H4**=0}	⟶ **H6**
	{If Answer=*DK/RF* & **H4**=*DK/RF*}	⟶ **H14**
	{Otherwise}	⟶ **H7**

H6

Was any *(fuel oil, diesel and/or kerosene)* purchased or delivered earlier than the past 12 months?

Yes No	⟶ **I1**

H7

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the first delivery date for these *(fuel oil, diesel and/or kerosene)* purchases?

Answer	⟶ **H8**

H8

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the last delivery date for these *(fuel oil, diesel and/or kerosene)* purchases?

Answer	⟶ **H9**

H9

Is any consumption from other buildings included in these figures?

Yes	⟶ **H10**
No	⟶ **H11**

H10

** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings that are included in these figures?

Answer	⟶ **H11**

H11

Do these figures include charges for any other major *(fuel oil, diesel and/or kerosene)* usage outside the building, such as for kilns, welding, pumps, or motors?

Yes No	{If (**A1**=*DK* & **A2**=*DK*) or **D1**=*DK*}		⟶ **H14**
	{Otherwise, predictions of consumption and expenditures estimates are calculated based on various building characteristics}	{If **H4**>(Predicted consumption*10) or **H4**<(Predicted consumption/20) or **H5**>(Predicted expenditures*10) or **H5**<(Predicted expenditures/20)}	⟶ **H12**
		{Otherwise}	⟶ **I1**

H12

These usage figures seem (*Column A*) for what you have told me about this building. Is there anything unusual that might explain this (*Column A*) usage?

Column A		
{If **H4**>(Predicted consumption*10) or **H5**>(Predicted expenditures*10)} **high**	Yes	⟶ **H13**
{If **H4**<(Predicted consumption/20) or **H5**<(Predicted expenditures/20)} **low**	No	⟶ **H14**

H13   ** RECORD in open box. **

Please tell me what is out of the ordinary about this building.

Answer	⟶ **I1**

H14

We may need to go to your supplier for some information, so I need to ask you some questions about your supplier or suppliers.

How many different companies supplied *(fuel oil, diesel and/or kerosene)* to this building during the past 12 months?

Answer	⟶ **H15**
Don't Know	⟶ **I1**

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H15   ** Start typing the name of the supplier or use BACKSPACE to bring up the look-up table. Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match. If you find a match, make sure the correct line is highlighted (blue) and press ENTER. 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. **

What is the name of the supplier that provided *(fuel oil, diesel and/or kerosene)* in the past 12 months?

{If NOT ON LIST}	Answer {Enter the name}		⟶ **H16**
{If Supplier found in look-up table}	Answer {Select from look-up table}		⟶ **H21**
{If *Don't Know*}		{If only one supplier or last supplier}	⟶ **I1**
		{If more suppliers left to answer for}	⟶ (Repeat) **H15**

H16

What is the address for *(Supplier)*, beginning with the street?

Answer	⟶ **H17**

H17   ** If not, press ENTER. **

Is there a post office box or suite number?

Answer	⟶ **H18**

H18

What is the city?

| Answer | ⟶ **H19** |

H19

What is the state?

| Answer | ⟶ **H20** |

H20

And what is the zip code?

| Answer | ⟶ **H21** |

H21

How many different *(fuel oil, diesel and/or kerosene)* accounts does this building have with *(Supplier)*?

	{If 1 to 10 accounts}		⟶ **H22**
Answer	{If more than 10 accounts or *Don't Know/Refusal*}	{If only one supplier or last supplier}	⟶ **I1**
		{If more suppliers left}	⟶ (Back to) **H15**

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H22

** VERIFY number digit by digit. **

Please give me the (*Column A*) *(fuel oil, diesel and/or kerosene)* account number for *(Supplier)*.

Column A			
{If only one account} BLANK	Answer	{If more accounts left}	→ (Repeat) *Column A*
{If first account given} **first**		{Otherwise}	→ **H23**
{Otherwise} **next**			

H23

Do(es) the bill(s) or statement(s) from (*Supplier*) cover just this building or are other buildings covered as well?

Just this building	→ **H25**
Other building(s)	→ **H24**

H24

** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings included on the bill(s) or statement(s)?

Answer	→ **H25**

H25

Do(es) the bill(s) or statement(s) include charges for any <u>other</u> major fuel oil usage outside the building, such as for kilns, welding, pumps or motors?

Yes No	→ **I1**

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SECTION I: DISTRICT STEAM

I1

{If District steam used}	⟶ **I2**
{Otherwise}	⟶ **J1**

I2

Do you have Worksheet 2 with you and filled out for district steam?

Yes	⟶ **I4**
No	⟶ **I3**

I3

The next questions are about district steam usage in this building during the past 12 months. Would you be able to give me an approximate figure of how much district steam was used or how much was spent on it?

Yes	⟶ **I4**
No	⟶ **I13**

I4

Please look at this card and tell me the units in which your district steam is measured.

Thousand pounds Pounds Million Btu	⟶ **I6**
** IF VOLUNTEERED ** Some other unit	⟶ **I5**

I5

What are the other units?

Answer	→ **I6**

I6 **STCNS8**
** EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.] VERIFY number digit by digit. **

Please give me the total amount of district steam used in the past 12 months.

Answer	→ **I7**

I7 **STEXP8**
** Do not enter cents. VERIFY number digit by digit. **

Please give me the total dollars spent on district steam in the past 12 months, including state and local taxes.

Answer	{If Answer=*DK/RF* & **I6**=*DK/RF*}	→ **I13**
	{Otherwise}	→ **I8**

I8

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the starting date for these district steam usage figures?

Answer	→ **I9**

I9

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the ending date for these district steam usage figures?

Answer	→ **I10**

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I10

Is any consumption from other buildings included in these figures?

Yes	⟶ **I11**
No	⟶ **I12**

I11

** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings that are included in these figures?

Answer	⟶ **J1**

I12

** If the building purchases district steam from the local utility and is not on a district loop, ENTER "99." Probe for estimate if *DK*. **

What is the total square footage of all the buildings on the <u>district loop</u> that serves this building?

Answer	⟶ **J1**

I13

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.

How many different companies supplied district steam to this building during the past 12 months?

Answer	⟶ **I14**
Don't Know	⟶ **J1**

I14   ** Start typing the name of the supplier or use BACKSPACE to bring up the look-up table. Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match. If you find a match, make sure the correct line is highlighted (blue) and press ENTER. 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. **

What is the name of the supplier that provided district steam in the past 12 months?

{If NOT ON LIST}	Answer {Enter the name}		⟶ **I15**
{If Supplier found in look-up table}	Answer {Select from look-up table}		⟶ **I21**
{If *Don't Know*}		{If only one supplier or last supplier}	⟶ **J1**
		{If more suppliers left to answer for}	⟶ (Repeat) **I14**

I15

What is the address for *(Supplier)*, beginning with the street?

Answer	⟶ **I16**

I16   ** If not, press ENTER. **

Is there a post office box or suite number?

Answer	⟶ **I17**

I17

What is the city?

Answer	⟶ **I18**

I18

What is the state?

Answer	⟶ **I19**

I19

And what is the zip code?

Answer	⟶ **I20**

I20

How many different district steam accounts does this building have with *(Supplier)*?

Answer	{If 1 to 10 accounts}		⟶ **I21**
	{If more than 10 accounts or *Don't Know/Refusal*}	{If only one supplier or last supplier}	⟶ **J1**
		{If more suppliers left}	(Back to) ⟶ **I14**

I21

** VERIFY number digit by digit. **

Please give me the (*Column A*) district steam account number for (*Supplier*).

Column A			
{If only one account} BLANK	Answer	{If more accounts left}	⟶ (Repeat) ***Column A***
{If first account given} **first**		{Otherwise}	⟶ **I22**
{Otherwise} **next**			

I22

Do*(es)* the bill*(s)* or statement*(s)* from (*Supplier*) cover just this building or are other buildings covered as well?

Just this building	{If more suppliers left to answer for}	⟶ (Return to) **I14**
	{Otherwise}	⟶ **I24**
Other building(s)		⟶ **I23**

I23

** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings included on the bill*(s)* or statement*(s)*?

Answer	{If more suppliers left to answer for}	⟶ (Back to) **I14**
	{Otherwise}	⟶ **J1**

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I24   ** If the building purchases district steam from the local utility and is not on a district loop, ENTER "99." Probe for estimate if *DK*. **

What is the total square footage of all the buildings on the district loop that serves this building?

Answer	⟶ **J1**

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SECTION J: DISTRICT HOT WATER

J1

{If District hot water used}	⟶ **J2**
{Otherwise}	⟶ **J23**

J2

Do you have Worksheet 2 with you and filled out for district hot water?

1. Yes	⟶ **J4**
2. No	⟶ **J3**

J3

The next questions are about district hot water usage in this building during the past 12 months. Would you be able to give me an approximate figure of how much district steam was used or how much was spent on it?

1. Yes	⟶ **J4**
2. No	⟶ **J11**

J4

HWCNS8
** EXP: [If part of a multibuilding campus or complex, and the respondent only knows the consumption for the whole campus or complex, ENTER the total consumption for the campus or complex here.] VERIFY number <u>digit by digit</u>. **

Please give me the total amount, in Million Btu, of district hot water used in the past 12 months.

Answer	⟶ **J5**

J5

HWEXP8
** Do not enter cents. VERIFY number digit by digit. **

Please give me the total dollars spent on district hot water in the past 12 months, including state and local taxes.

Answer	{If Answer=*DK/RF* & **J4**=*DK/RF*}	⟶ **J11**
	{Otherwise}	⟶ **J6**

J6

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the starting date for these district hot water usage figures?

Answer	⟶ **J7**

J7

** ENTER date as MMDDYYYY. If the day is not known, ENTER "15." **

What is the ending date for these district hot water usage figures?

Answer	⟶ **J8**

J8

Is any consumption from other buildings included in these figures?

Yes	⟶ **J9**
No	⟶ **J10**

J9

** Probe for estimate if *DK*. **

What is the approximate square footage of the other buildings that are included in these figures?

Answer	⟶ **J23**

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J10 ** If the building purchases district hot water from the local utility and is not on a district loop, ENTER "99." Probe for estimate if *DK*. **

> **What is the total square footage of all the buildings on the <u>district loop</u> that serves this building?**

Answer	⟶ **J11**

J11

> **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.**
>
> **How many different companies supplied district hot water to this building during the past 12 months?**

Answer	⟶ **J12**
Don't Know	⟶ **J23**

J12 ** Start typing the name of the supplier or use BACKSPACE to bring up the look-up table. Type in the first few letters of the supplier name, and the look-up table will scroll to the closest match. If you find a match, make sure the correct line is highlighted (blue) and press ENTER. 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. **

What is the name of the supplier that provided district hot water in the past 12 months?

{If NOT ON LIST}	Answer {Enter the name}	⟶ **J13**
{If Supplier found in look-up table}	Answer {Select from look-up table}	⟶ **J18**
{If *Don't Know*}	{If only one supplier or last supplier}	⟶ **J23**
	{If more suppliers left to answer for}	⟶ (Repeat) **J12**

J13

What is the address for *(Supplier)*, beginning with the street?

Answer	⟶ **J14**

J14 ** If not, press ENTER. **

Is there a post office box or suite number?

Answer	⟶ **J15**

J15

What is the city?

| Answer | ⟶ **J16** |

J16

What is the state?

| Answer | ⟶ **J17** |

J17

And what is the zip code?

| Answer | ⟶ **J18** |

J18

How many different district hot water accounts does this building have with *(Supplier)*?

	{If 1 to 10 accounts}		⟶ **J19**
Answer	{If more than 10 accounts or *Don't Know/Refusal*}	{If only one supplier or last supplier}	⟶ **J23**
		{If more suppliers left}	⟶ (Back to) **J12**

J19

** VERIFY number digit by digit. **

Please give me the (*Column A*) district hot water account number for (*Supplier*).

Column A			
{If only one account} BLANK	Answer	{If more accounts left}	⟶ (Repeat) **Column A**
{If first account given} **first**		{Otherwise}	⟶ **J20**
{Otherwise} **next**			

J20

Do*(es)* the bill*(s)* or statement*(s)* from *(Supplier)* cover just this building or are other buildings covered as well?

Just this building	{If more suppliers left to answer for}	⟶ (Back to) **J12**
	{Otherwise}	⟶ **J22**
Other building(s)		⟶ **J21**

J21

** Probe for estimate if *DK*. **

What is the approximate square footage of the <u>other</u> buildings included on the bill*(s)* or statement*(s)*?

Answer	{If more suppliers left to answer for}	⟶ (Back to) **J12**
	{Otherwise}	⟶ **J23**

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J22

HWLOOP28
** If the building purchases district hot water from the local utility and is not on a district loop, ENTER "99." Probe for estimate if *DK*. **

What is the total square footage of all the buildings on the <u>district loop</u> that serves this building?

Answer   ⟶ **J23**

J23   **END OF INTERVIEW**