



2002 Manufacturing Energy Consumption Survey

Sponsored by the Energy Information Administration
U.S. Department of Energy

Administered and Compiled by the Bureau of the Census
U.S. Department of Commerce

**Form
EIA-846A**

OMB Approval No.:
1905-0169
Expires: 03/31/2006

In correspondence pertaining to this report, please refer to the 10- digit Census File Number (CFN).

A

DUE DATE:

If you need additional time or have questions about what to report on this questionnaire, please call our processing office on 1-800-528-3049. Please return the completed questionnaire in the enclosed return envelope. If the envelope has been misplaced, please send to the Census Bureau address shown on the last page of the questionnaire.

Form EIA-846A should be completed by establishments whose first 3 digits of their **North American Industry Classification System (NAICS) code** are **311, 312, 313, 314, 315, 316, 323, 326, 327, 331 (except for 331111), 332, 333, 334, 335, 336, 337, or 339**. Government-owned establishments that are privately operated should all complete this questionnaire.

Note: the 6-digit NAICS code for this establishment is located on the mailing label above.

Reporting Requirement: This survey is **mandatory** under the Federal Energy Administration Act of 1974, Pub. Law No. 93-275, and under Title 3, Subtitle B, of the Omnibus Budget Reconciliation Act of 1986, Pub. Law No. 99-509, as amended by Title 1, Subtitle G, of the Energy Policy Act of 1992, Pub. Law No. 102-486.

Title 18 U.S.C. 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.

Per the Paperwork Reduction Act of 1995, you are not required to respond to any Federally-sponsored collection of information unless it displays a valid OMB Approval Number. The valid OMB Approval Number for this information collection (1905-0169) is displayed at the top left of this page.

See pages 1 through 4 for Frequently Asked Questions concerning the Manufacturing Energy Consumption Survey and instructions for completing this questionnaire.

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Frequently Asked Questions Concerning the 2002 MANUFACTURING ENERGY CONSUMPTION SURVEY (MECS)

Why have a MECS?

The Manufacturing Energy Consumption Survey (MECS) collects data on energy consumption and usage patterns for the manufacturing sector of the U.S. economy. The information will be used to publish aggregate statistics on the following: consumption of energy for fuel and nonfuel uses, energy characteristics of establishments in the manufacturing sector, energy consumption by end use, technologies currently in use by U.S. manufacturers, energy prices, electricity generation onsite, fuel switching capability, and participation in energy-management activities. This information will be used by the U.S. Department of Energy (DOE) to implement policy plans effectively. See MECS web site at: <http://www.eia.doe.gov/emeu/meecs/>.

What is a manufacturing establishment?

The reporting unit for the Manufacturing Energy Consumption Survey (MECS) is the manufacturing establishment. A manufacturing establishment is an economic unit at a single physical location, for the mechanical or chemical transformation of materials or substances into new products.

An establishment is not necessarily identical to a business concern or firm, either of which may consist of one or more establishments. A company may consist of one or more establishments that are engaged in separate or distinct activities. These establishments may be situated at one location and separated physically as well as economically.

Manufacturing operations are generally conducted in facilities described as plants, factories, or mills, characteristically using power-driven machines and materials-handling equipment. Manufacturing also includes such activities as the assembly of components of manufactured products and the blending of materials such as lubricating oil, plastics, resins, or liquors.

What should I report for?

If this establishment has previously completed the Census of Manufactures (CM), conducted by the U.S. Census Bureau, then the reporting boundaries for the MECS should correspond to those used for the CM. Each reporting unit should be treated as a separate establishment ONLY if that was the determination made for the CM. Do not consolidate CM establishments for reporting on the MECS. See Census of Manufactures web site: http://help.econ.census.gov/econhelp/resources/mc-33/SEC_MC-33.html.

What is NAICS?

Since 1997, federal agencies have used the North American Industry Classification System (NAICS). NAICS is unique in that its conceptual framework is based on production processes.

Therefore, economic units that have similar production processes are classified in the same industry.

What is the reporting period?

The period covered by this report for most establishments is calendar year 2002 (January 1 through December 31, 2002). The exception will be for those establishments whose ownership or operation changed during 2002. Indicate the reporting period covered in Section 1: Establishment Information.

Do I have to fill out this questionnaire?

Yes. This survey is **mandatory** under the Federal Energy Administration Act of 1974, Pub. Law No. 93-275, and under Title 3, Subtitle B, of the Omnibus Budget Reconciliation Act of 1986, Pub. Law No. 99-509, as amended by Title 1, Subtitle G, of the Energy Policy Act of 1992, Pub. Law No. 102-486. Response is required by law from establishments included in the MECS sample and receiving the MECS questionnaire. Failure to respond may result in criminal fines, civil penalties, and other sanctions as provided by law.

Are these data confidential?

Yes. Under Section 9 of Title 13, U.S. Code, your report to the Census Bureau is confidential. It may be seen only by sworn Census Bureau employees and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

What if I have questions?

If you have any questions about what to report on this questionnaire, please call the Census Bureau at 1-800-528-3049.

How long will this questionnaire take?

Public reporting burden for this collection of information is estimated to average nine hours per response, including the time of reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Energy Information Administration, Statistics and Methods Group, EI-70, Washington, DC 20585-0670; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

What if I need more time to complete the questionnaire?

The questionnaire should be returned no later than the due date specified on the front. If you need additional time, please call our processing office at 1-800-528-3049.

Instructions for Completing Form EIA-846A

General Instructions

1. Use the units specified on the questionnaire for reporting all quantities. See page 5 for a list of Btu conversion factors. If your establishment uses more precise conversion values for your operations, use them, and indicate in Section 21: Remarks, the conversion factor(s) used.
2. Do not consolidate establishments. The reporting boundaries for your establishment should correspond to those used in the Census of Manufactures (CM).

To resolve any consolidation problems, match the 10-digit Census File Number (CFN), which is located on the MECS questionnaire mailing label, with the first 10-digits of the CFN appearing on the CM mailing label.

Responses to MECS questions should include the same activities as those considered when responding to the matching CM.

3. Report dollar amounts rounded to the nearest dollar, e.g., report \$1,257.59 as \$1,258.
4. If you do not maintain book records for particular items, please use carefully prepared estimates.
5. Enter zeroes in the data columns if the value is zero or none.
6. Complete all applicable sections of the questionnaire.
7. The energy sources (Sections 2 - 13), end uses (Sections 14-15), and fuel switching capability (Sections 16-17) sections of this questionnaire are designed so that all questions associated with the particular energy source within a section should be completed before going on to the next energy source. Therefore, within these sections, the questionnaire should be answered from the top of one column to the bottom of the same column, before going on to the next energy source (column).
8. The energy sources which are preprinted on the survey questionnaire are considered the most frequently consumed, but they do not represent a complete list of applicable energy sources. If your establishment has energy sources that meet the criteria for reporting, but are not preprinted on the questionnaire, please specify those energy sources in Section 13 and enter the data there. (See Reporting Criteria, under Sections 2 through 13 of the Section-specific instructions).
9. The following definitions for units are used throughout the questionnaire:
 - Btu = British thermal unit(s)
 - One barrel = 42 gallons
 - One short ton = 2,000 pounds

Instructions for Completing Form EIA-846A, cont.

Section-Specific Instructions

Section 1: Establishment Information

In this section, indicate any changes in the establishment ownership during 2002 and indicate the period covered by this filing, whether the calendar year or other period.

and Byproduct Gases” (Section 6, column 3) includes all waste gas streams (for example, refinery gas, fuel gas, vent gas, plant gas, off gas, still gas, and other waste gases) produced onsite, except hydrogen.

Sections 2 through 13: Energy Sources (Fuels)

Reporting Criteria

An energy source should be reported on this questionnaire if:

1. the energy source was consumed as a fuel, (that is, for heat, power, or electricity generation)
or
2. the energy source was consumed as a nonfuel (feedstock, raw material input).

If your **only** means of supply of an energy source during 2002 was as a byproduct (or product) of an energy source used as a feedstock (or raw material input) to any of your manufacturing processes, that byproduct energy source should be reported **only if it was at least partially consumed onsite as a fuel**. If the byproduct (or product) energy source was not consumed as a fuel, it should be excluded.

Data are collected for the following energy sources (fuels):

- Section 2: Electricity**
- Section 3: Steam and Industrial Hot Water**
- Section 4: Natural Gas**
- Section 5: Liquefied Petroleum Gas (LPG) and Motor Gasoline**
- Section 6: Acetylene, Hydrogen, and Waste and Byproduct Gases**
- Section 7: Diesel Fuel, Distillate Fuel Oil, and Residual Fuel Oil**
- Section 8: Kerosene and Petroleum Coke**
- Section 9: Coal** (Anthracite, Bituminous and Subbituminous, and Lignite)
- Section 10: Breeze and Coal Coke**
- Section 11: Wood** (Directly from Trees, Wood Residues and Byproducts, and Wood/Paper-related Refuse)
- Section 12: Agricultural Waste and Waste Oils and Tars**
- Section 13: Other Energy Sources**

Report Coal Tar in Section 13.

In making additional entries in Section 13, please note that the preprinted entry “Waste

Energy-Source Reporting Examples

Example 1 - Your establishment depended entirely on electricity for heat and power, no combustible energy sources were consumed. In this instance, complete Section 2: Electricity. No data should be entered in Sections 3 through 13. Go to Section 14 and complete the remainder of the questionnaire.

Example 2 - Your establishment used electricity for lighting, natural gas for heating or as a feedstock, and propane for onsite transportation by forklifts. Complete the appropriate lines in Section 4 for natural gas and Section 5, column 1 for propane, in addition to Section 2.

Sections 14 and 15:

Estimated End-Use Percent Consumption

These sections of the survey are intended to provide information on the purposes for which various energy sources are used in the manufacturing sector.

Section 14 covers Electricity, Total Natural Gas and Total Coal.

Section 15 covers Liquefied Petroleum Gas (LPG), Total Diesel Fuel and Distillate Fuel Oil, and Residual Fuel Oil.

See specific instructions for completing these sections at the beginning of each section.

End-Use Reporting Examples

Example 3 - If coal is consumed in boilers to generate steam, some of which is passed through an extractor/condensing turbine generator, all coal consumption would be reported in question 150, column 3 (any boiler fuel used in a CHP and/or cogeneration process).

Example 4 - If an establishment can distinguish energy used for emissions controls, it should be reported in either question 162 or 178 (Other direct nonprocess use), depending on the energy source used.

Continue to next page

Instructions for Completing Form EIA-846A, cont.

Section-Specific Instructions, cont.

Sections 16 and 17: Fuel-Switching Capability

This section is intended to measure the short-term capability of your establishment to use substitute energy sources in place of those actually consumed in 2002. These substitutions are limited to those that could actually have been introduced *within 30 days without extensive modifications*.

Section 16 covers Electricity, Total Natural Gas and Total Coal.

Section 17 covers Liquefied Petroleum Gas (LPG), Total Diesel Fuel and Distillate Fuel Oil, and Residual Fuel Oil.

See further definitions and instructions for completing this section at the beginning of the section.

Section 18: Energy-Management Activities

In this section, indicate whether your establishment participated in the energy-management activities during 2002 and the source (s) of the financial support to implement the energy-management activity.

Section 19: Technologies

Indicate any of the technologies present in this establishment. Listed technologies include general technologies which may be found in any manufacturing establishment and technologies related to cogeneration.

Section 20: Establishment Size

This section asks for the number of buildings and total square footage associated with this establishment. See the specific instructions in this section for the definition of what should be counted as a building.

Section 21: Remarks

Please provide any explanations that may be helpful to us in understanding your reported data. Indicate any Btu conversion factors used, if different from those provided on page 5. If additional space is needed, attach a separate sheet, including the 10-digit Census File Number (CFN) located on the mailing label on the front page of this questionnaire.

Section 22: Contact Information

Enter address and other contact information for the person most knowledgeable about completing this questionnaire and the person whom we should contact if we have any questions concerning this filing.

Btu Conversion Factors Table

Following are Btu conversion factors and other useful factors that should be used only if you do not know the actual Btu factor of the fuels consumed at your establishment site.

If your establishment uses more precise conversion values for your operations, use them in place of the approximations given below and identify in Section 21: Remarks (page 59), the conversion factor(s) used, if different from those listed below.

Energy Source	Conversion Factor(s)	Energy Source	Conversion Factor(s)
Acetylene	21,600 Btu/pound 1,500 Btu/cubic foot	Liquefied Petroleum Gas (LPG)	3.612 million Btu/barrel 0.08600 million Btu/gallon 4.5 pounds/gallon
Bagasse	4,081 Btu/pound	Natural Gas	1.029 million Btu/1,000 cubic feet 10.29 therms/1,000 cubic feet 1 therm = 100,000 Btu
Biomass	5,300 Btu/pound	Petroleum Coke	6.024 million Btu/barrel 30.12 million Btu/short ton 5 barrels/short ton
Breeze	19.8 million Btu/short ton	Propane	3.836 million Btu/barrel 0.09133 million Btu/gallon
Butane	4.326 million Btu/barrel 0.10300 million Btu/gallon	Pulping Liquor or Black Liquor	11 million Btu/short ton
Coal	22.489 million Btu/short ton	Residual Fuel Oil	6.287 million Btu/barrel
Coal (use for coke plants only)	27.426 million Btu/short ton	Roundwood	21.5 million Btu/cord 17.2 million Btu/short ton 0.014 million Btu/board foot
Coal Coke	24.8 million Btu/short ton	Sawdust (7% Moisture)	8,000 Btu/pound
Distillate Fuel Oil	5.825 million Btu/barrel	Steam	1,200 Btu/pound
Electricity	3,412 Btu/kilowatthour	Still Gas or Waste Gas or Refinery Gas	6 million Btu/barrel 1,029 Btu/cubic foot
Ethane	3.082 million Btu/barrel 0.07338 million Btu/gallon	Waste Materials (Wastepaper)	7,500 Btu/pound
Hydrogen	61,084 Btu/pound 325.11 Btu/cubic foot 35,600 Btu/gallon	Waste Oils and Tars	6 million Btu/barrel
Industrial Hot Water	140 Btu/pound 7.84 pounds/gallon	(Green) Wood Chips (50% Moisture)	10 million Btu/short ton
Isobutane	3.974 million Btu/barrel 0.09462 million Btu/gallon	Wood Waste (50% Moisture)	9 million Btu/short ton

Other Definitions:

- Btu = British thermal unit(s)
- One barrel = 42 gallons
- One short ton = 2,000 pounds

See examples of how to calculate different physical units on the next page.

Btu Conversion Factor Calculations

Examples of calculations to convert from physical quantities to Btu

1. Your establishment consumed 250 cubic feet of hydrogen in 2002.

The Btu equivalent calculated as:

$$\begin{aligned} 250 \text{ cubic feet} \times 325.11 \text{ Btu per cubic foot} & \text{ (from the Btu Conversion Factors Table)} \\ = 81,277.50 \text{ Btu} & \text{ or} \\ = 0.0813 \text{ million Btu} \end{aligned}$$

2. Your establishment consumed 300 pounds of hydrogen in 2002.

The Btu equivalent is calculated as:

$$\begin{aligned} 300 \text{ pounds} \times 61,084 \text{ Btu per pound} & \text{ (from the Btu Conversion Factors Table)} \\ = 18,325,200 \text{ Btu} & \text{ or} \\ = 18.325 \text{ million Btu} \end{aligned}$$

3. Your establishment consumed 150,000 cubic feet of natural gas in 2002.

The Btu equivalent is calculated as:

$$\begin{aligned} 150 \text{ thousand cubic feet} \times 1.029 \text{ million Btu per 1000 cubic feet} & \text{ (from the Btu Conversion} \\ & \text{Factors Table)} \\ = 154.35 \text{ million Btu} \end{aligned}$$

4. Your establishment consumed 85 therms of natural gas in 2002.

The Btu equivalent is calculated as:

$$\begin{aligned} 85 \times 100,000 \text{ Btu} & \text{ (1 therm = 100,000 Btu, from the Btu Conversion Factors Table)} \\ = 8,500,000 \text{ Btu} & \text{ or} \\ = 8.5 \text{ million Btu} \end{aligned}$$

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Section 1: Establishment Information

1. Did ownership of this establishment change during 2002?

Census
use
00011

- 1 No → Go to question 2.
- 2 Yes, Establishment was sold during the year → complete all sections of this questionnaire for activities that occurred in 2002 prior to the sale.
Go to question 2
- 3 Yes, Establishment was bought during the year → complete all sections of the questionnaire for activities that occurred in 2002 after the sale.
Go to question 2

2. Mark the answer which best describes this establishment at the end of 2002:

- 00010 1 a. In operation → Go to question 4
- 2 b. Ceased operation → enter date:
Month/Day/Year Go to question 4
- 3 c. Sold or leased TO another operator → enter date:
Month/Day/Year Go to question 3

If none of the above, go to question 4.

3. Enter the following information only if this establishment was sold or leased to another operator during 2002; otherwise, go to question 4.

<input type="text"/>	<input type="text"/>
Name of new owner or operator	Employer Identification (EI) Number (9 digits)
<input type="text"/>	
Number and Street	
<input type="text"/>	<input type="text"/>
City	State
	<input type="text"/>
	ZIP Code (9 digits)

4. Enter the reporting period for the information reported on this questionnaire.

Unless there are special circumstances like those reported above, this reporting period should be from January 1, 2002 to December 31, 2002.

From:
Month/Day/Year

To:
Month/Day/Year

Go to Question 5, Section 2, next page

Section 2: Electricity

Questions 5 and 6:

Total Purchased Electricity

Census use
only

- 5.** Enter the total quantity of electricity purchased from all sources by this establishment and delivered to this establishment site during 2002.

10061

Kilowatthours

- 6.** Enter total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased electricity reported in question 5.

10062

\$

U.S. Dollars

Include all expenditures regardless of when payment was actually made.

Questions 7 through 9:

Electricity Purchased from Local Utility

- 7.** During 2002, did this establishment purchase any electricity from your local utility?

10011

- 1 Yes → Go to question 8
2 No → Go to question 10

By local utility, we mean the company in your local area that produces and/or delivers electricity and is legally obligated to provide service to the general public within its franchise area.

Exclude electricity purchased from companies such as independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

- 8.** Enter the quantity of electricity purchased from your local utility by this establishment and delivered to this establishment site during 2002.

10010

Kilowatthours

Exclude quantities:

- 1) purchased centrally within your company, but outside of this establishment,
- 2) delivered from other establishments of your company,
- 3) for which payment was made in-kind, or
- 4) purchased from independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

Note: the sum of the quantities reported in questions 8 and 11 should equal the quantity reported in question 5.

- 9.** Enter the total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased electricity reported in question 8.

10020

\$

U.S. Dollars

Include all expenditures regardless of when payment was actually made.

Note: the sum of the expenditures reported in questions 9 and 12 should equal the total expenditures reported in question 6.

Continue to next page

Section 2: Electricity, cont.

Questions 10 through 12:

Electricity Purchased from Sources Other than Local

Census
use only

- 10.** During 2002, did this establishment purchase any electricity from sources other than the local utility?

10031

- 1 Yes → Go to question 11
2 No → Go to question 13

Sources other than local utilities include generators of electricity such as independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

- 11.** Enter the total quantity of electricity purchased from sources other than your local utility by this establishment and delivered to this establishment site during 2002.

10030

Kilowatthours

Include purchases from offsite nonutility power producers for any onsite use, e.g., production of heat and power, lighting or space conditioning, or electrolysis.

Note: the sum of the quantities reported in questions 8 and 11 should equal the quantity reported in question 5.

- 12.** Enter the total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased electricity reported in question 11.

10040

\$

U.S. Dollars

Include all expenditures regardless of when payment was actually made.

Note: the sum of the expenditures reported in questions 9 and 12 should equal the total expenditures reported in question 6.

Question 13:

Electricity Transfers

- 13.** Enter the quantity of electricity transferred from outside establishments and delivered to this establishment site during 2002.

10050

Kilowatthours

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude the purchases reported in questions 8 and 11.

Continue to next page

Section 2: Electricity, cont.

Question 14:

Total Electricity Received Onsite

Census
use only

14. Total Quantities of Electricity Received Onsite:

➤ Enter the sum of the quantities reported in questions 5 and 13.

⇒ Copy this quantity to Question 182, column 1, page 50.

10060

Kilowatthours
Sum of questions 5 and 13

Copy to Question 182,
column 1, page 50

Questions 15 through 18:

Sold or Leased CHP/Cogeneration Units

15. Since January 1, 1999 has your establishment sold or leased CHP/cogeneration units to any other establishment(s)?

Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).

10301

- 1 Yes → Go to Question 16
- 2 No → Go to Question 19
- 3 Don't Know → Go to Question 19

16. In 2002, did your establishment receive any electricity from the other establishment(s) referred to in Question 15?

10302

- 1 Yes → Go to Question 17
- 2 No → Go to Question 19

17. Approximately what percentage of the electricity reported in Question 11 was purchased from the establishment(s) referred to in Question 15?

10310

 %

18. Approximately what percentage of the electricity reported in Question 13 was transferred in from the establishment(s) referred to in Question 15?

10320

 %

Continue to next page

Section 2: Electricity, cont.

Questions 19 through 22:

Electricity Generated Onsite

Census
use only

- 19.** Enter the quantity of electricity generated onsite by CHP/cogeneration units at this establishment during 2002.

10070

Kilowatthours

Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).

Include all cogeneration facilities at this establishment site.

- 20.** Enter the quantity of electricity generated onsite during 2002 from each of the following:

a. Solar Power

10081 a.

Kilowatthours

b. Wind Power

10082 b.

Kilowatthours

c. Hydropower

10083 c.

Kilowatthours

d. Geothermal Power

10084 d.

Kilowatthours

Exclude any electricity produced as part of a cogeneration process, that is, electricity generated from geothermal steam before the steam itself is used. (This should be reported in question 19.)

- 21.** Enter the quantity of electricity generated onsite during 2002 by processes other than those reported in questions 19 and 20.

10090

Kilowatthours

For example, electricity generated by diesel generators should be reported here.

- 22.** Total Onsite Generation of Electricity:

10100

Kilowatthours

➤ Enter the sum of the quantities reported in questions 19, 20, and 21.

Sum of questions 19, 20 and 21

Continue to next page

Section 2: Electricity, cont.

Questions 23 through 25:

Electricity Sales and Transfers Offsite

Census
use only

- 23.** Enter the quantity of electricity sold or transferred to utilities during 2002.

10110

Kilowatthours

Include quantities exchanged for the same or any other energy source(s).

Exclude sales to independent power producers, small power producers, or co-generators not located at this establishment.

- 24.** Enter the quantity of electricity sold or transferred to any establishments other than utilities during 2002.

10120

Kilowatthours

Include 1) sales to independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not located at this establishment, and 2) quantities exchanged for the same or any other energy source(s).

- 25.** Total Electricity Sales and Transfers Offsite:

10130

Kilowatthours

➤ Enter the sum of the quantities reported in questions 23 and 24.

Sum of questions 23 and 24

Question 26:

Total Onsite Consumption of Electricity

- 26.** ➤ Enter the sum of the quantities reported in questions 14 and 22 minus the quantity reported in question 25.

10140

Kilowatthours

⇒ Copy this quantity to question 149, column 1, page 44.

Copy this quantity to question
149, column 1, page 44

- 27.** Is electricity the **ONLY** energy source used in this establishment for any purpose?

(This means that no natural gas, coal, fuel oil, steam or any other fuel is used in this establishment.)

10149

- 1 Yes, no other fuels →
Go to Section 14, page 44.
- 2 No → Go to Section 3,
next page.

Go to question 28, Section 3, next page

Section 3: Steam and Industrial Hot Water

28. Report quantities in millions of British thermal units (Btu).

If you keep your records for steam in pounds, use a factor of 1,200 Btu per pound of steam to convert your data into Btu. Industrial hot water should be reported at 140 Btu per pound and 7.84 pounds per gallon.

If you have more accurate Btu conversion factors for your establishment, use them instead of the more general factors given above and in the Btu Conversion Factors Table on page 5 and indicate the factor(s) used in Section 21: Remarks, page 59.

Answer all appropriate questions for steam, before answering the questions for industrial hot water.

	11		12
Census use only	Steam		Industrial Hot Water
	▼		▼

29. Was this energy source (column) either purchased or consumed in this establishment during 2002? 000

If neither source is used, go to question 49, Section 4, page 21.

1 Yes → Go to question 30

2 No → Go to next column

1 Yes → Go to question 30

2 No → Go to Section 4, page 21

Questions 30 and 31:

Total Purchased

30. Enter the total quantity of steam or hot water purchased from all sources by this establishment and delivered to this establishment site during 2002. 061

Million Btu

Million Btu

31. Enter total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the quantity reported in question 30. 062

\$

U.S. Dollars

\$

U.S. Dollars

Include all expenditures regardless of when payment was actually made.

Continue to next page

Section 3: Steam and Industrial Hot Water, cont.

Census
use only

11
Steam
▼

12
Industrial Hot Water
▼

Questions 32 through 34:

Purchased from Local Utility

32. During 2002, did this establishment purchase any steam or hot water from your local utility? 012

By local utility, we mean the company in your local area that produces and/or delivers electricity and is legally obligated to provide service to the general public within its franchise area.

Exclude energy purchased from companies such as independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

1 Yes → Go to question 33
2 No → Go to question 35

1 Yes → Go to question 33
2 No → Go to question 35

33. Enter the quantity of steam or hot water purchased from your local utility by this establishment and delivered to this establishment site during 2002. 010

Exclude quantities:

- 1) purchased centrally within your company, but outside of this establishment,
- 2) delivered from other establishments of your company,
- 3) for which payment was made in-kind, or
- 4) purchased from independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

Note: the sum of the quantities reported in questions 33 and 36 should equal the quantity reported in question 30.

Million Btu

Million Btu

34. Enter the total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased energy reported in question 33. 020

Include all expenditures regardless of when payment was actually made.

Note: the sum of the expenditures reported in questions 34 and 37 should equal the total expenditures reported in question 31.

U.S. Dollars

U.S. Dollars

Continue to next page

Section 3: Steam and Industrial Hot Water, cont.

Census
use only

11
Steam
▼

12
Industrial Hot Water
▼

Questions 35 through 37:

Purchased from Sources Other than Local Utility

- 35.** During 2002, did this establishment purchase any steam or hot water from sources other than the local utility? 032

Sources other than local utilities include generators of electricity such as independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company.

Include purchases from district heating facilities and any other entities (other than local utilities) providing steam or hot water.

1 Yes → Go to
Question 36
2 No → Go to
Question 38

1 Yes → Go to
Question 36
2 No → Go to
Question 38

- 36.** Enter the quantity purchased from sources other than your local utility by this establishment and delivered to this establishment site during 2002. 030

Include purchases from offsite nonutility power producers for any onsite use, e.g., production of heat and power, lighting or space conditioning.

Note: the sum of the quantities reported in questions 33 and 36 should equal the quantity reported in question 30.

Million Btu

Million Btu

- 37.** Enter the total expenditures, including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased energy reported in question 36. 040

Include all expenditures regardless of when payment was actually made.

Note: the sum of the expenditures reported in questions 34 and 37 should equal the quantity reported in question 31.

U.S. Dollars

U.S. Dollars

Question 38:

Transfers

- 38.** Enter the total quantity transferred from outside establishments and delivered to this establishment site during 2002. 050

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude the purchases reported in questions 33 and 36.

Million Btu

Million Btu

Continue to next page

Section 3: Steam and Industrial Hot Water, cont.

Census
use only

11
Steam
▼

12
Industrial Hot Water
▼

Questions 39 through 42:

Sold or Leased CHP/Cogeneration Units

- 39.** Since January 1, 1999 has your establishment sold or leased CHP/cogeneration units to any other establishment(s)? 301

Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).

- 1 Yes → Go to
Question 40
- 2 No → Go to
Question 43
- 3 Don't Know →
Go to Question 43

- 1 Yes → Go to
Question 40
- 2 No → Go to
Question 43
- 3 Don't Know →
Go to Question 43

- 40.** In 2002, did your establishment receive any steam or hot water from the other establishment(s) referred to in Question 39? 302

- 1 Yes → Go to
Question 41
- 2 No → Go to
Question 43

- 1 Yes → Go to
Question 41
- 2 No → Go to
Question 43

- 41.** Approximately what percentage of the steam or hot water reported in Question 36 was purchased from the establishment(s) referred to in Question 39? 310

[] %

[] %

- 42.** Approximately what percentage of the steam or hot water reported in Question 38 was transferred in from the establishment(s) referred to in Question 39? 320

[] %

[] %

Continue to next page

Section 3: Steam and Industrial Hot Water, cont.

Census
use only

11
Steam
▼

12
Industrial Hot Water
▼

Questions 43 through 45:

Onsite Production

- 43.** Enter the quantity produced onsite by CHP/cogeneration units at this establishment during 2002.

070

Million Btu

Million Btu

Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).

Include all cogeneration facilities at this establishment site.

- 44.** Enter the quantity produced onsite during 2002, from each of the following:

a. Solar Power

081

a.

Million Btu

Million Btu

b. Wind Power

082

b.

Million Btu

Million Btu

c. Hydropower

083

c.

Million Btu

Million Btu

d. Geothermal Power

084

d.

Million Btu

Million Btu

- 45.** Enter the quantity produced onsite during 2002 by processes other than those reported in questions 43 and 44.

090

Million Btu

Million Btu

Steam and hot water produced in boilers that are not associated with CHP/cogeneration should be reported here.

Continue to next page

Section 3: Steam and Industrial Hot Water, cont.

Census
use only

11
Steam



12
Industrial Hot Water



Questions 46 and 47:

Sales and Transfers

- 46.** Enter the quantity sold or transferred to utilities during 2002. 110

Million Btu

Million Btu

Include quantities exchanged for the same or any other energy source(s).

Exclude sales to independent power producers, small power producers, or co-generators not located at this establishment.

- 47.** Enter the quantity sold or transferred to any establishments other than utilities during 2002. 121

Million Btu

Million Btu

Include:

- 1) sales to independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not located at this establishment, and
- 2) quantities exchanged for the same or any other energy source(s).

**Go to Question 29, next
column**

**Go to Question 49, next
page**

- 48.** ➤ Answer Questions 29 through 47 for both energy sources (columns).

Go to question 49, Section 4, next page

Section 4: Natural Gas

Census use only

30000

49. Was natural gas either purchased or consumed in this establishment during 2002?

Natural gas refers to natural gas delivered to your establishment through a pipeline.

Excluded as natural gas are any bottled gases such as liquefied petroleum gas (LPG) or propane, which are reported in Section 5 of this questionnaire.

1 Yes → Go to question 50

2 No → Go to Section 5, page 24

Questions 50 through 55:

Total Natural Gas

50. Enter the total quantity of natural gas consumed as a fuel for the production of heat, steam, power, or generation of electricity onsite at this establishment in 2002.

30060

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include natural gas consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

⇒ Copy this quantity to question 149, column 2, page 44.

⇒ Copy this quantity to question 182, column 2, page 50.

1,000 cubic feet (mcf)

Copy to question 149, column 2, page 44

Copy to question 182, column 2, page 50

51. Enter the total quantity of natural gas consumed for any purpose other than fuel use in this establishment in 2002.

30070

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

1,000 cubic feet (mcf)

52. Enter the total quantity of natural gas purchased from all sources by this establishment for any use in 2002.

30010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

1,000 cubic feet (mcf)

53. Enter total expenditures, including all applicable taxes, delivery, transportation, management, storage and demand charges, for the purchased natural gas reported in question 52.

30020

Include all expenditures regardless of when payment was made.

\$

U.S. Dollars

Continue to next page

Section 4: Natural Gas, cont.

54. Enter total quantity of transfers in and central purchases received of natural gas in this establishment in 2002 not included in quantity reported in question 52.

Census use
only
30030

1,000 cubic feet (mcf)

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

55. Enter the quantity of natural gas that was both produced onsite in 2002 as output from a captive (onsite) well, and was at least partially consumed onsite (as a fuel or nonfuel).

30040

1,000 cubic feet (mcf)

Questions 56 through 58:

Natural Gas Purchased from Local Utility

56. During 2002, did this establishment purchase natural gas from your local utility?

31011

1 Yes → Go to question 57

2 No → Go to question 59,
next page

Local natural gas utilities produce and/or deliver natural gas and are legally obligated to provide service to the general public within their franchise area.

Exclude gas purchased from companies such as independent gas producers, gas brokers, marketers, and any marketing subsidiaries of utilities.

Answer "yes" if this establishment purchases natural gas from the local utility.

Answer "no" if this establishment does not purchase any natural gas from the local utility or if only fees to transport natural gas bought from others are paid to the local utility.

57. Enter the total quantity of natural gas purchased from your local utility during 2002.

31010

1,000 cubic feet (mcf)

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

Note: The sum of the quantities reported in questions 57 and 60 should equal the total reported in question 52.

58. Enter total expenditures, including all applicable taxes, delivery, transportation, management, storage and demand charges, for the purchased natural gas reported in question 57.

31020

\$

U.S. Dollars

Include all expenditures regardless of when payment was made.

Note: The sum of the expenditures reported in questions 58 and 61 should equal the total expenditures reported in question 53.

Continue to next page

Section 4: Natural Gas, cont.

Questions 59 through 61:

Natural Gas Purchased from Sources Other Than Local Utility

Census use
only

51011

59. During 2002, did this establishment purchase natural gas from sources other than your local utility?

Sources other than your local utility include producers, brokers, marketers, and any marketing subsidiaries of utilities.

1 Yes → Go to question 60

2 No → Go to Section 5,
next page

60. Enter the total quantity of natural gas purchased from sources other than your local utility during 2002.

Note: The sum of the quantities reported in questions 57 and 60 should equal the total reported in question 52.

51010

1,000 cubic feet (mcf)

61. Enter total expenditures, including all applicable taxes, delivery, transportation, management, storage and demand charges, for the purchased natural gas reported in question 60.

Some of these charges listed above may be found on the bill from your local utility.

Include all expenditures regardless of when payment was made.

Note: The sum of the expenditures reported in questions 58 and 61 should equal the total expenditures reported in question 53.

51020

\$

U.S. Dollars

Go to question 62, Section 5, next page

Section 5: Liquefied Petroleum Gas and Motor Gasoline

Census
use only

24
column 1

23
column 2

Liquefied Petroleum Gas (LPG)

e.g., butane, butylene, ethane,
propane, ethylene, propylene,
isobutane, mixtures

Motor Gasoline excluding offsite highway usage

62. Was this energy source (column) either purchased or consumed in this establishment during 2002?

000

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

▼

**Yes →Go to
question 63**

**No →Go to
column 2**

▼

**Yes →Go to
question 63**

**No →Go to
Section 6,
page 26**

63. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made.

010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

Gallons

Gallons

64. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 63.

020

Include all expenditures regardless of when payment was made.

\$

U.S. Dollars

\$

U.S. Dollars

65. Enter total quantity of transfers in and central purchases received in this establishment in 2002.

030

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude quantities reported in question 63.

Gallons

Gallons

Continue to next page

Section 5: LPG and Motor Gasoline, cont.

Census
use only

24
column 1

23
column 2

**Liquefied Petroleum
Gas (LPG)**

Motor Gasoline
excl. offsite highway usage



66. Enter the quantity that was produced onsite in 2002.

040

Gallons

Gallons

67. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Gallons

Gallons

**Copy to question 167,
column 1,
page 47**

**Copy to question 197,
column 1,
page 53**

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

68. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Gallons

Gallons

**Go to question 62, next
column**

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

69. Enter the shell or design storage capacity of all the storage tanks located onsite as of 12/31/02 for motor gasoline.

090

Gallons

Go to Section 6, next page

Include the onsite capacity of:

1) all storage facilities regardless of the intended disposition of the energy source--include both product storage tanks and tanks dedicated for onsite use, and

2) dedicated or leased for storage of energy sources owned by other establishments.

70. ▶ Answer questions 62 through 69 for both energy sources (columns).

Go to question 71, Section 6, next page

Section 6: Acetylene, Hydrogen, and Waste & Byproduct Gases

	64 Acetylene <small>(use reasonable estimates if exact measurements are not available)</small>	63 Hydrogen	62 Waste and Byproduct Gases <small>(e.g., refinery gas, vent gas, plant gas, fuel gas, off gas still gas)</small>
71. Was this energy source (column) either purchased or consumed in this establishment during 2002? <small>See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.</small>	000 <input type="checkbox"/> Yes → Go to question 72 <input type="checkbox"/> No → Go to next column	000 <input type="checkbox"/> Yes → Go to question 72 <input type="checkbox"/> No → Go to next column	000 <input type="checkbox"/> Yes → Go to question 72 <input type="checkbox"/> No → Go to Section 7, page 28

72. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made. <small>Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock). Exclude quantities: 1) purchased centrally within your company, 2) delivered from other establishments of your company, or 3) for which payment was made in-kind.</small>	010 <input style="width: 100%;" type="text"/> Cubic Feet	010 <input style="width: 100%;" type="text"/> Million Btu	010 <input style="width: 100%;" type="text"/> Million Btu
---	--	---	---

73. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 72. <small>Include all expenditures regardless of when payment was made.</small>	020 <input style="width: 100%;" type="text"/> U.S. Dollars	020 <input style="width: 100%;" type="text"/> U.S. Dollars	020 <input style="width: 100%;" type="text"/> U.S. Dollars
--	--	--	--

74. Enter total quantity of transfers in and central purchases received in this establishment in 2002. <small>Include quantities: 1) delivered from any other establishment(s) in your company, 2) transferred from other establishments of your company for which payment was not made, 3) purchased centrally within your company, separate from this establishment, or 4) for which payment was made in-kind. Exclude quantities reported in question 72.</small>	030 <input style="width: 100%;" type="text"/> Cubic Feet	030 <input style="width: 100%;" type="text"/> Million Btu	030 <input style="width: 100%;" type="text"/> Million Btu
--	--	---	---

Continue to next page

Section 6: Acetylene, Hydrogen, and Waste & Byproduct Gases, cont.

Cen- sus use only	64 Acetylene ▼	63 Hydrogen ▼	62 Waste & Byproduct Gases ▼
----------------------------	-----------------------------	----------------------------	---

75. Enter the quantity that was produced onsite in 2002.

040

Cubic Feet

Million Btu

Million Btu

76. Does the quantity reported in question 75 represent the product or byproduct of another energy source consumed onsite?

050

1 Yes, product or byproduct

2 No

1 Yes, product or byproduct

2 No

77. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Cubic Feet

Million Btu

Million Btu

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

78. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Cubic Feet

Million Btu

Million Btu

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

**Go to question 71,
next column**

**Go to question 71,
next column**

**Go to Section 7, next
page**

79. > Answer questions 71 through 78 for all energy sources (columns).

Go to question 80, Section 7, next page

Section 7: Diesel Fuel, Distillate Fuel Oil, and Residual Fuel Oil

	28 <i>column 1</i>	29 <i>column 2</i>	21 <i>column 3</i>
Cen- sus use only	Diesel Fuel excluding offsite highway usage ▼	Distillate Fuel Oil (#'s 1, 2, & 4) excluding diesel fuel ▼	Residual Fuel Oil (#'s 5, 6, Navy Special & Bunker C) ▼

80. Was this energy source (column) either purchased or consumed in this establishment during 2002? 000

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

<p>1 <input type="checkbox"/> Yes → Go to question 81</p> <p>2 <input type="checkbox"/> No → Go to column 2</p>	<p>1 <input type="checkbox"/> Yes → Go to question 81</p> <p>2 <input type="checkbox"/> No → Go to column 3</p>	<p>1 <input type="checkbox"/> Yes → Go to question 81</p> <p>2 <input type="checkbox"/> No → Go to Question 89, page 30</p>
---	---	---

81. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made. 010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

Barrels	Barrels	Barrels

82. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 81. 020

Include all expenditures regardless of when payment was made.

\$	\$	\$
U.S. Dollars	U.S. Dollars	U.S. Dollars

83. Enter total quantity of transfers in and central purchases received in this establishment in 2002. 030

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude quantities reported in question 81.

Barrels	Barrels	Barrels

Continue to next page

Section 7: Diesel Fuel, Distillate Fuel Oil, and Residual Fuel Oil, cont.

Cen-
sus
use
only

28
column 1

29
column 2

21
column 3

Diesel Fuel
excl. offsite highway usage

Distillate Fuel Oil

Residual Fuel Oil



84. Enter the quantity that was produced onsite in 2002.

040

Barrels

Barrels

Barrels

85. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Barrels

Barrels

Barrels

**Copy to question
167, column 3,
page 47**

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

**Copy to question
197, column 3,
page 53**

86. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Barrels

Barrels

Barrels

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

87. Enter the shell or design storage capacity of all the storage tanks located onsite as of 12/31/02 for this energy source.

090

Barrels

Barrels

Barrels

Include the onsite capacity of:

- 1) all storage facilities regardless of the intended disposition of the energy source--include both product storage tanks and tanks dedicated for onsite use, and
- 2) dedicated or leased for storage of energy sources owned by other establishments.

**Go to question 80,
column 2**

**Go to question 80,
column 3**

**Go to question 89,
next page**

88. ➤ Answer questions 80 through 87 for all energy sources (columns).

Go to question 89, next page

Section 7: Diesel Fuel, Distillate Fuel Oil, and Residual Fuel Oil, cont.

89. Sum the quantities reported in columns 1 and 2 in question 85 to provide the total amount of diesel fuel and distillate fuel oil consumed as a fuel in this establishment in 2002.
(If none, enter zero.)

22060

**Total
Diesel Fuel and Distillate Fuel Oil**

Barrels

Copy to question 167,
column 2, page 47

Copy to question 197,
column 2, page 53

⇒ Copy this quantity to question 167,
column 2, page 47.

⇒ Copy this quantity to question 197,
column 2, page 53.

Go to question 90, Section 8, next page

Section 8: Kerosene and Petroleum Coke

Census
use only

27
Kerosene
▼

70
Petroleum Coke
▼

Note: Report quantities of Petroleum Coke in barrels.
5 barrels = 1 short ton.

See Conversion Factors Table on page 5 for other conversion factors, if needed.

90. Was this energy source (column) either purchased or consumed in this establishment during 2002? 000

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

1 Yes →Go to question 91

2 No →Go to next column

1 Yes →Go to question 91

2 No →Go to Section 9, page 33

91. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made. 010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

Barrels

Barrels

92. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 91. 020

Include all expenditures regardless of when payment was made.

U.S. Dollars

U.S. Dollars

93. Enter total quantity of transfers in and central purchases received in this establishment in 2002. 030

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude quantities reported in question 91.

Barrels

Barrels

Continue to next page

Section 8: Kerosene and Petroleum Coke, cont.

Census
use only

27

Kerosene

70

Petroleum Coke

94. Enter the quantity that was produced onsite in 2002.

040

Barrels

Barrels

95. Does the quantity reported in question 94 represent the product or byproduct of another energy source consumed onsite?

050

1 Yes, product or byproduct
2 No

1 Yes, product or byproduct
2 No

96. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Barrels

Barrels

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

97. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Barrels

Barrels

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

Go to question 90, next column

Go to Section 9, next page

98. ➤ Answer questions 90 through 97 for both energy sources (columns).

Go to question 99, Section 9, next page

Section 9: Coal

	40 <i>column 1</i>	41 <i>column 2</i>	42 <i>column 3</i>
Cen- sus use only	Anthracite	Bituminous and Subbituminous Coal	Lignite
	▼	▼	▼
<p>99. Was this energy source (column) either purchased or consumed in this establishment during 2002?</p> <p>See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.</p>	000	000	000
	<input type="checkbox"/> Yes → Go to question 100 <input type="checkbox"/> No → Go to column 2	<input type="checkbox"/> Yes → Go to question 100 <input type="checkbox"/> No → Go to column 3	<input type="checkbox"/> Yes → Go to question 100 <input type="checkbox"/> No → Go to Question 107, page 34
<p>100. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made.</p> <p>Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).</p> <p>Exclude quantities:</p> <ol style="list-style-type: none"> 1) purchased centrally within your company, 2) delivered from other establishments of your company, or 3) for which payment was made in-kind. 	010	010	010
	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons
<p>101. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 100.</p> <p>Include all expenditures regardless of when payment was made.</p>	020	020	020
	<input style="width: 100%;" type="text"/> \$ U.S. Dollars	<input style="width: 100%;" type="text"/> \$ U.S. Dollars	<input style="width: 100%;" type="text"/> \$ U.S. Dollars
<p>102. Enter total quantity of transfers in and central purchases received in this establishment in 2002.</p> <p>Include quantities:</p> <ol style="list-style-type: none"> 1) delivered from any other establishment(s) in your company, 2) transferred from other establishments of your company for which payment was not made, 3) purchased centrally within your company, separate from this establishment, or 4) for which payment was made in-kind. <p>Exclude quantities reported in question 100.</p>	030	030	030
	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons
<p>103. Enter the quantity that was produced onsite in 2002 from a captive (onsite) mine.</p>	040	040	040
	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons	<input style="width: 100%;" type="text"/> Short Tons

Continue to next page

Section 9: Coal, cont.

Cen-
sus
use
only

40
column 1

41
column 2

42
column 3

Anthracite

**Bituminous and
Subbituminous**

Lignite



- 104.** Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Short Tons

Short Tons

Short Tons

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

- 105.** Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Short Tons

Short Tons

Short Tons

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

**Go to question 99,
column 2**

**Go to question 99,
column 3**

Go to question 107

- 106.** ➤ Answer questions 99 through 105 for all energy sources (columns).

➤ Then go to question 107.

- 107.** Sum the quantities reported for all three types of coal in question 104 to provide the total amount of coal consumed as a fuel in this establishment in 2002. (If none, enter zero.)

46060

Total Coal

Short Tons

**Copy to question 149,
column 3, page 44**

**Copy to question 182,
column 3, page 50**

⇒ Copy this quantity to question 149, column 3, page 44.

⇒ Copy this quantity to question 182, column 3, page 50.

Go to question 108, Section 10, next page

Section 10: Breeze and Coal Coke

Census
use only

44
Breeze
▼

43
Coal Coke
▼

108. Report quantities in this section in short tons.
One short ton = 2,000 pounds.

See Conversion Factors Table on page 5 for other conversion factors, if needed.

109. Was this energy source (column) either purchased or consumed in this establishment during 2002? 000

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

1 Yes → Go to question 110
2 No → Go to next column

1 Yes → Go to question 110
2 No → Go to Section 11, page 37

110. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made. 010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

[]
Short Tons

[]
Short Tons

111. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 110. 020

Include all expenditures regardless of when payment was made.

\$ []
U.S. Dollars

\$ []
U.S. Dollars

112. Enter total quantity of transfers in and central purchases received in this establishment in 2002. 030

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude quantities reported in question 110.

[]
Short Tons

[]
Short Tons

Continue to next page

Section 10: Breeze and Coal Coke, cont.

Census
use only

44
Breeze
▼

43
Coal Coke
▼

113. Enter the quantity that was produced onsite in 2002.

040

Short Tons

Short Tons

114. Does the quantity reported in question 113 represent the product or byproduct of another energy source consumed onsite?

050

1 Yes, product or byproduct
2 No

1 Yes, product or byproduct
2 No

115. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Short Tons

Short Tons

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

116. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Short Tons

Short Tons

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

Go to question 109, next column

Go to Section 11, next page

117. ▶ Answer questions 109 through 116 for both energy sources (columns).

Go to question 118, Section 11, next page

Section 11: Wood

	83	84	72
Cen- sus use only	Wood Harvested Directly from Trees (e.g., roundwood, wood chips, tree bark)	Wood Residues and Byproducts from Mill Processing (e.g., sawdust, shavings, slabs)	Wood/Paper- related Refuse (e.g., scrap, wastepaper, wood pallets, packing materials)
	▼	▼	▼

118. Report quantities in this section in millions of British thermal units (Btu).

See the Conversion Factors Table on page 5, if needed.

119. Was this energy source (column) either purchased or consumed in this establishment during 2002?

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

000

1 Yes → Go to question 120
2 No → Go to next column

1 Yes → Go to question 120
2 No → Go to next column

1 Yes → Go to question 120
2 No → Go to Section 12, page 39

120. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made.

010

Million Btu

Million Btu

Million Btu

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

121. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 120.

020

U.S. Dollars

U.S. Dollars

U.S. Dollars

Include all expenditures regardless of when payment was made.

Continue to next page

Section 11: Wood, cont.

Cen- sus use only	83 Wood Directly from Trees ▼	84 Wood Residues and Byproducts ▼	72 Wood/Paper- related Refuse ▼
----------------------------	--	--	--

122. Enter total quantity of transfers in and central purchases received in this establishment in 2002.

030			
	Million Btu	Million Btu	Million Btu

Include quantities:
 1) delivered from any other establishment(s) in your company,
 2) transferred from other establishments of your company for which payment was not made,
 3) purchased centrally within your company, separate from this establishment, or
 4) for which payment was made in-kind.

Exclude quantities reported in question 120.

123. Enter the quantity that was produced onsite in 2002.

040			
	Million Btu	Million Btu	Million Btu

124. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060			
	Million Btu	Million Btu	Million Btu

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

125. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070			
	Million Btu	Million Btu	Million Btu

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude wood used for papermaking and construction purposes.

Exclude all offsite dispositions such as sales and transfers to other establishments.

**Go to question 119,
next column**

**Go to question 119,
next column**

**Go to Section 12,
next page**

126. ➤ Answer questions 119 through 125 for all energy sources (columns).

Go to question 127, Section 12, next page

Section 12: Agricultural Waste and Waste Oils & Tars

	90	71
Census use only	Agricultural Waste (e.g., bagasse, rice hulls, nut shells, orchard prunings)	Waste Oils and Tars (excluding Coal Tar)
	▼	▼

127. Report quantities in this section in millions of British thermal units (Btu).

See the Conversion Factors Table on page 5, if needed.

128. Was this energy source (column) either purchased or consumed in this establishment during 2002? 000

See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.

Note: Coal Tar should be reported in Section 13, Other Energy Sources.

1 Yes →Go to question 129

2 No →Go to next column

1 Yes →Go to question 129

2 No →Go to Section 13, page 41

129. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made. 010

Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).

Exclude quantities:

- 1) purchased centrally within your company,
- 2) delivered from other establishments of your company, or
- 3) for which payment was made in-kind.

Million Btu

Million Btu

130. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 129. 020

Include all expenditures regardless of when payment was made.

\$

U.S. Dollars

\$

U.S. Dollars

131. Enter total quantity of transfers in and central purchases received in this establishment in 2002. 030

Include quantities:

- 1) delivered from any other establishment(s) in your company,
- 2) transferred from other establishments of your company for which payment was not made,
- 3) purchased centrally within your company, separate from this establishment, or
- 4) for which payment was made in-kind.

Exclude quantities reported in question 129.

Million Btu

Million Btu

Continue to next page

Section 12: Agricultural Waste and Waste Oils & Tars, cont.

	90 Agricultural Waste ▼	71 Waste Oils and Tars (excluding Coal Tar) ▼
Census use only		
040	<input style="width: 100%; height: 20px;" type="text"/> Million Btu	<input style="width: 100%; height: 20px;" type="text"/> Million Btu

132. Enter the quantity that was produced onsite in 2002.

050

133. Does the quantity reported in question 132 represent the product or byproduct of another energy source consumed onsite?

1 Yes, product or byproduct

2 No

134. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060

Million Btu

Million Btu

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

135. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

070

Million Btu

Million Btu

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

Go to question 128, next column

Go to Section 13, next page

136. ➤ Answer questions 128 through 135 for both energy sources (columns).

Go to question 137, Section 13, next page

Section 13: Other Energy Sources (not specified elsewhere)

	91	93	95
	Other Energy Source # 1	Other Energy Source # 2	Other Energy Source # 3
<p>137. Are there any other additional energy sources (fuels) purchased or consumed in this establishment in 2002 that have not been listed in previous sections?</p> <p>See Reporting Criteria near the top of column 1 on page 3 of the instructions for more information on what should be included.</p>	Cen- sus use only 000	000	000
	▼	▼	▼
	1 <input type="checkbox"/> Yes → Go to question 138 2 <input type="checkbox"/> No → Go to Section 14, page 44	1 <input type="checkbox"/> Yes → Go to question 138 2 <input type="checkbox"/> No → Go to Section 14, page 44	1 <input type="checkbox"/> Yes → Go to question 138 2 <input type="checkbox"/> No → Go to Section 14, page 44
<p>138. Specify the name of any energy source purchased or consumed in this establishment that has not been previously listed.</p> <p>In addition, specify the units (e.g., gallons, million Btu, cubic feet, etc.) you are using to report this energy source.</p>	980	980	980
	_____	_____	_____
	Energy Source	Energy Source	Energy Source
	981	981	981
	_____	_____	_____
	Units	Units	Units
<p>139. Enter quantity purchased by, and delivered to, this establishment in 2002, regardless of when payment was made.</p> <p>Include quantities that were purchased for any onsite use, e.g., process heating or cooling, building heating or cooling, machine drive, or as raw material input to any manufacturing operation (feedstock).</p> <p>Exclude quantities:</p> <ol style="list-style-type: none"> 1) purchased centrally within your company, 2) delivered from other establishments of your company, or 3) for which payment was made in-kind. 	010	010	010
	_____	_____	_____
	Units	Units	Units
<p>140. Enter total expenditures, including taxes and delivery charges, for the quantity reported in question 139.</p> <p>Include all expenditures regardless of when payment was made.</p>	020	020	020
	\$ _____	\$ _____	\$ _____
	U.S. Dollars	U.S. Dollars	U.S. Dollars

Continue to next page

Section 13: Other Energy Sources, cont.

Cen- sus use only	91 Other Energy Source # 1 ▼	93 Other Energy Source # 2 ▼	95 Other Energy Source # 3 ▼
----------------------------	---	---	---

141. Enter total quantity of transfers in and central purchases received in this establishment in 2002.

030			
	Units	Units	Units

Include quantities:
 1) delivered from any other establishment(s) in your company,
 2) transferred from other establishments of your company for which payment was not made,
 3) purchased centrally within your company, separate from this establishment, or
 4) for which payment was made in-kind.

Exclude quantities reported in question 139.

142. Enter the quantity that was produced onsite in 2002.

040			
	Units	Units	Units

143. Does the quantity reported in question 142 represent the product or byproduct of another energy source consumed onsite?

050	1 <input type="checkbox"/> Yes, product or byproduct 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes, product or byproduct 2 <input type="checkbox"/> No	1 <input type="checkbox"/> Yes, product or byproduct 2 <input type="checkbox"/> No
-----	---	---	---

144. Enter quantity consumed as a fuel for the production of heat, steam, power, or the generation of electricity onsite at this establishment in 2002.

060			
	Units	Units	Units

Include all process uses such as process heating, process cooling, and machine drive and all nonprocess uses such as facility heating, ventilation and air conditioning.

Include fuel consumed by vehicles intended primarily for use onsite, e.g., forklifts, intra-plant shuttles, loaders and other materials-handling equipment operated solely within the boundaries of the establishment site.

Continue to next page

Section 13: Other Energy Sources, cont.

Cen-
sus
use
only

91

**Other Energy
Source # 1**



070

Units

**Go to question 137,
next column**

93

**Other Energy
Source # 2**



Units

**Go to question 137,
next column**

95

**Other Energy
Source # 3**



Units

**Go to Section 14,
next page**

145. Enter quantity consumed for any purpose other than fuel use at this establishment in 2002.

Include all quantities consumed as lubricants, solvents, or as feedstocks, raw materials, additives, or ingredients for products manufactured by this establishment.

Exclude all offsite dispositions such as sales and transfers to other establishments.

146. ➤ Answer questions 137 through 145 for any additional energy sources (columns).

Go to question 147, Section 14, next page

Section 14: Estimated End-Use Percent Consumption for Electricity, Natural Gas, and Coal

147. Directions for completing Estimated End-Use Percent Consumption Section:

1. Enter the percent of total consumption for each end use performed in this establishment.
2. Please answer questions 148 through 164 below for each energy source (column).
3. Complete one energy source (column) for all end uses, before starting the next energy source (column).
4. Enter a zero if the end use is not performed for the specific energy source.
5. Reasonable approximations are acceptable. These approximations should be based on the judgment of a person knowledgeable about the energy consumption and operation of your establishment. They are not expected to be the result of modeling activity or formal engineering studies unless these results are routinely available.
6. The sum of all the estimated end-use percentages should total 100 percent for each energy source (column).

	10 <i>column 1</i>	30 <i>column 2</i>	46 <i>column 3</i>
Cen- sus use only	Electricity	Natural Gas	Coal excluding Coal Coke and Breeze
001	▼	▼	▼
148. Was this energy source consumed as a fuel in this establishment during 2002?	<p>1 <input type="checkbox"/> Yes → Go to question 149</p> <p>2 <input type="checkbox"/> No → Go to column 2</p>	<p>1 <input type="checkbox"/> Yes → Go to question 149</p> <p>2 <input type="checkbox"/> No → Go to column 3</p>	<p>1 <input type="checkbox"/> Yes → Go to question 149</p> <p>2 <input type="checkbox"/> No → Go to Section 15, page 47</p>

149. Copy total energy source consumption for fuel uses from appropriate sections of the questionnaire, as indicated in each column.

➤ For questions 150 through 162, provide the approximate percentage of this total amount that is used for each of the end uses.

	Copied quantity from question 26, page 14	Copied quantity from question 50, page 21	Copied quantity from question 107, page 34
700			
	Kilowatthours	1,000 cubic ft.	Short tons

Continue to next page

Section 14: Estimated End-Use Percent Consumption for Electricity, Natural Gas, and Coal, cont.

		10 <i>column 1</i> Electricity ▼	30 <i>column 2</i> Natural Gas ▼	46 <i>column 3</i> Coal ▼
<u>Questions 150 and 151:</u> Indirect Uses - Boilers: Indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.	Cen- sus use only			
150. Boiler fuel in a CHP and/or cogeneration process.	705	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
<p>Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).</p>				
151. Any boiler fuel use not included in Question 150.	710	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
<p>Includes fuels used for thermal outputs only.</p> <p>Note: Include all boiler fuel here if you cannot make a reasonable distinction between CHP and non-CHP boiler use.</p>				
<p><u>Questions 152 through 156:</u> Direct Uses - Process: Direct process use includes usage in motors, ovens, kilns, and strip heaters.</p>				
152. Process heating (e.g., kilns, furnaces, ovens, strip heaters)	720	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
153. Process cooling and refrigeration	730	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
154. Machine drive (e.g., motors, pumps, etc. associated with manufacturing process equipment)	740	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
155. Electro-chemical processes (e.g., reduction process)	750	<input style="width: 100px; height: 20px;" type="text" value=" %"/>		
156. Other direct process use Please specify:	760	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>	<input style="width: 100px; height: 20px;" type="text" value=" %"/>
10761 <input style="width: 300px; height: 20px;" type="text"/>				

Continue to next page

Section 14: Estimated End-Use Percent Consumption for Electricity, Natural Gas, and Coal, cont.

	Cen- sus use only	10 <i>column 1</i> Electricity ▼	30 <i>column 2</i> Natural Gas ▼	46 <i>column 3</i> Coal ▼
<hr/> Questions 157 through 162: Direct Uses - Nonprocess: Direct nonprocess use includes usage for facility lighting and space-conditioning equipment.				
157. Facility heating, ventilation, and air conditioning	770	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>
158. Facility lighting	780	<input style="width: 100%;" type="text" value=" %"/>		
159. Facility support other than that reported in questions 157 and 158. (e.g., cooking, water heating, office equipment)	790	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>
160. Onsite transportation, excluding highway usage	800	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>	
161. Conventional electricity generation	810		<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>
162. Other direct nonprocess use Please specify: 10821 <input style="width: 300px; height: 20px;" type="text"/>	820	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>	<input style="width: 100%;" type="text" value=" %"/>
<hr/> 163. Total for all purposes The sum of the end-use percents reported in Questions 150 through 162 should equal 100 percent.		Total <input style="width: 100%;" type="text" value=" 100 %"/> Go to question 148, column 2	Total <input style="width: 100%;" type="text" value=" 100 %"/> Go to question 148, column 3	Total <input style="width: 100%;" type="text" value=" 100 %"/> Go to question 165, next page
164. ➤ Answer questions 148 through 163 for all energy sources (columns).				

Go to Question 165, Section 15, next page

Section 15: Estimated End-Use Percent Consumption for LPG, Diesel Fuel & Distillate Fuel Oil, and Residual Fuel Oil

165. Directions for completing Estimated End-Use Percent Consumption Section:

1. Enter the percent of total consumption for each end use performed in this establishment.
2. Please answer questions 166 through 180 below for each energy source (column).
3. Complete one energy source (column) for all end uses, before starting the next energy source (column).
4. Enter a zero if the end use is not performed for the specific energy source.
5. Reasonable approximations are acceptable. These approximations should be based on the judgment of a person knowledgeable about the energy consumption and operation of your establishment. They are not expected to be the result of modeling activity or formal engineering studies unless these results are routinely available.
6. The sum of all the estimated end-use percentages should total 100 percent for each energy source (column).

166. Was this energy source consumed as a fuel in this establishment during 2002?

	24 <i>column 1</i>	22 <i>column 2</i>	21 <i>column 3</i>
Cen- sus use only	Liquefied Petroleum Gas (LPG)	Total Diesel Fuel and Distillate Fuel Oil	Residual Fuel Oil
	▼	▼	▼
001	1 <input type="checkbox"/> Yes → Go to question 167 2 <input type="checkbox"/> No → Go to column 2	1 <input type="checkbox"/> Yes → Go to question 167 2 <input type="checkbox"/> No → Go to column 3	1 <input type="checkbox"/> Yes → Go to question 167 2 <input type="checkbox"/> No → Go to Section 16, page 50

167. Copy total energy source consumption for fuel uses from appropriate sections of the questionnaire, as indicated in each column.

	24 <i>column 1</i>	22 <i>column 2</i>	21 <i>column 3</i>
700	Copied quantity from question 67, column 1, page 25 <input style="width: 100px; height: 20px;" type="text"/> Gallons	Copied quantity from question 89, page 30 <input style="width: 100px; height: 20px;" type="text"/> Barrels	Copied quantity from question 85, column 3, page 29 <input style="width: 100px; height: 20px;" type="text"/> Barrels

➤ For questions 168 through 178, provide the approximate percentage of this total amount that is used for each of the end uses.

Continue to next page

Section 15: Estimated End-Use Percent Consumption for LPG, Diesel Fuel & Distillate Fuel Oil, and Residual Fuel Oil, cont.

24
column 1

22
column 2

21
column 3

Cen-
sus
use
only

LPG

**Diesel Fuel and
Distillate Fuel Oil**

Residual Fuel Oil



Questions 168 and 169:

Indirect Uses - Boilers:

Indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.

168. Boiler fuel in a CHP and/or cogeneration process.

705

 %

 %

 %

Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy. This may also be called CHP (combined heat and power).

169. Any boiler fuel use not included in question 168.

710

 %

 %

 %

Includes fuels used for thermal outputs only.

Note: Include all boiler fuel here if you cannot make a reasonable distinction between CHP and non-CHP boiler use.

Questions 170 through 173:

Direct Uses - Process:

Direct process use includes usage in motors, ovens, kilns, and strip heaters.

170. Process heating
(e.g., kilns, furnaces, ovens, strip heaters)

720

 %

 %

 %

171. Process cooling and refrigeration

730

 %

 %

 %

172. Machine drive
(e.g., motors, pumps, etc. associated with manufacturing process equipment)

740

 %

 %

 %

173. Other direct process use
Please specify:

760

 %

 %

 %

10762

Continue to next page

**Section 15: Estimated End-Use Percent Consumption for
LPG, Diesel Fuel & Distillate Fuel Oil, and Residual Fuel Oil, cont.**

24
column 1

22
column 2

21
column 3

Cen-
sus
use
only

LPG
▼

**Diesel Fuel and
Distillate Fuel Oil**
▼

Residual Fuel Oil
▼

Questions 174 through 178:

Direct Uses - Nonprocess:

Direct nonprocess use includes usage for facility lighting and space-conditioning equipment.

174.	Facility heating, ventilation, and air conditioning	770	<input type="text" value=" %"/>	<input type="text" value=" %"/>	<input type="text" value=" %"/>
175.	Facility support other than that reported in question 174. (e.g., cooking, water heating, office equipment)	790	<input type="text" value=" %"/>	<input type="text" value=" %"/>	<input type="text" value=" %"/>
176.	Onsite transportation, excluding highway usage	800	<input type="text" value=" %"/>	<input type="text" value=" %"/>	<input type="text" value=" %"/>
177.	Conventional electricity generation	810	<input type="text" value=" %"/>	<input type="text" value=" %"/>	<input type="text" value=" %"/>
178.	Other direct nonprocess use Please specify:	820	<input type="text" value=" %"/>	<input type="text" value=" %"/>	<input type="text" value=" %"/>
10822	<input type="text"/>				
179.	Total for all purposes The sum of the end-use percents reported in questions 168 through 178 should equal 100 percent.	Total	<input type="text" value=" 100 %"/>	<input type="text" value=" 100 %"/>	<input type="text" value=" 100 %"/>
			Go to question 166, column 2	Go to question 166, column 3	Go to question 181, next page
180.	➤ Answer questions 166 through 179 for all energy sources (columns).				

Go to question 181, Section 16, next page

Section 16: Fuel Switching Capability—Electricity, Natural Gas and Total Coal

181. Directions for Completing the Fuel Switching Capability Section:

1. Capability to use substitute energy sources means that this establishment's combustor's (for example, boilers, furnaces, ovens, blast furnaces) had the equipment, either in place or available for installation in 2002, so that substitutions could actually have been introduced within 30 days without extensive modifications.
2. Include switching capability that could have resulted from the use of redundant and/or standby combustors, and from combustors that were already equipped to fire alternative fuels.
3. In addition to the capability of your equipment, when formulating your estimates:
 - a. Make sure to consider practical constraints such as environmental regulations or actual availability of supply during 2002
 - b. Do not limit your estimated capability by differences in relative prices of energy sources.
4. This section is intended to measure your *capability* to switch, not whether you would switch if you could.
5. When estimating your capability to substitute other fuels for electricity receipts, please consider the fuels that could be used to generate electricity onsite, as well as those that could be directly substituted in combustors.
6. If records of fuel-switching capability are not regularly maintained, reasonable approximations are acceptable.
7. Enter a zero if the fuel could not be switched for the specific energy source.

182. Enter the total quantity of energy source (column) consumed.

Copy this amount from earlier in the questionnaire (see columns for locations).

	10 <i>column 1</i>	30 <i>column 2</i>	46 <i>column 3</i>
Cen- sus use only	Total Electricity Received ▼	Total Natural Gas ▼	Total Coal excluding Coal Coke & Breeze ▼
	copy from Question 14, page 12	copy from Question 50, page 21	copy from Question 107, page 34
500			
	Kilowatthours	1,000 Cubic Feet	Short Tons

183. Is the total quantity reported in Question 182 greater than zero?

501	1 <input type="checkbox"/> Yes → Go to question 184 2 <input type="checkbox"/> No → Go to question 182, column 2	1 <input type="checkbox"/> Yes → Go to question 184 2 <input type="checkbox"/> No → Go to question 182, column 3	1 <input type="checkbox"/> Yes → Go to question 184 2 <input type="checkbox"/> No → Go to Section 17, page 53
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Continue to next page

Section 16: Fuel Switching Capability—Electricity, Natural Gas & Total Coal, cont.

10
column 1

30
column 2

46
column 3

Cen-
sus
Use
Only

**Total Electricity
Received**

**Total Natural
Gas**

**Total Coal,
excluding Coal
Coke & Breeze**



184. Enter the amount of the total quantity reported in question 182 that could NOT have been replaced within 30 days by another energy source in 2002.

510

Kilowatthours

1,000 Cubic Feet

Short Tons

Do not consider differences in energy prices when estimating the amount.

185. Enter the result of subtracting the quantity reported in question 184 from the quantity reported in question 182.

520

Kilowatthours

1,000 Cubic Feet

Short Tons

This represents the total quantity of energy consumption that could have been replaced within 30 days by one or more alternative energy source in 2002.

Note: the sum of the quantities reported in Questions 187 through 194 should equal or exceed this quantity.

186. Is the total quantity reported in Question 185 greater than zero?

521

1 Yes → Go to question 187
2 No → Go to question 182, column 2

1 Yes → Go to question 187
2 No → Go to question 182, column 3

1 Yes → Go to question 187
2 No → Go to Section 17, page 53

187. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by electricity?

530

1,000 Cubic Feet

Short Tons

188. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by coal, excluding coal coke and breeze?

670

Kilowatthours

1,000 Cubic Feet

189. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by total coal coke and breeze, excluding coal included in question 188?

690

Kilowatthours

1,000 Cubic Feet

Continue to next page

Section 16: Fuel Switching Capability—Electricity, Natural Gas & Total Coal, cont.

10
column 1

30
column 2

46
column 3

Cen-
sus
use
only

**Total Electricity
Received**

**Total Natural
Gas**

**Total Coal,
excluding Coal Coke
& Breeze**



190. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by natural gas from any supplier(s)?

570

Kilowatthours

Short Tons

191. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by total diesel fuel and distillate fuel oil?

590

Kilowatthours

1,000 Cubic Feet

Short Tons

192. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by liquefied petroleum gas (LPG)?

610

Kilowatthours

1,000 Cubic Feet

Short Tons

193. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by residual fuel oil?

630

Kilowatthours

1,000 Cubic Feet

Short Tons

194. Of the quantity switchable reported in Question 185, what is the maximum amount that could have been replaced by any other energy source (not already asked about)?

650

Kilowatthours

1,000 Cubic Feet

Short Tons

Specify the energy source (fuel):

10990

Go to Question 182,
column 2

Go to Question 182,
column 3

Go to Question 196,
next page

195. ➤ Answer Questions 182 through 194 for all energy sources (columns).

Go to Question 196, Section 17, next page

Section 17: Fuel Switching Capability—LPG, Diesel Fuel, Distillate and Residual Fuel Oils

196. Directions for Completing the Fuel Switching Capability Section.

1. Capability to use substitute energy sources means that this establishment's combustor's (for example, boilers, furnaces, ovens, blast furnaces) had the equipment, either in place or available for installation in 2002, so that substitutions could actually have been introduced within 30 days without extensive modifications.
2. Include switching capability that could have resulted from the use of redundant and/or standby combustors, and from combustors that were already equipped to fire alternative fuels.
3. In addition to the capability of your equipment, when formulating your estimates:
 - a. Make sure to consider practical constraints such as environmental regulations or actual availability of supply during 2002
 - b. Do not limit your estimated capability by differences in relative prices of energy sources.
4. This section is intended to measure your *capability* to switch, not whether you would switch if you could.
5. When estimating your capability to substitute other fuels for electricity receipts, please consider the fuels that could be used to generate electricity onsite, as well as those that could be directly substituted in combustors.
6. If records of fuel-switching capability are not regularly maintained, reasonable approximations are acceptable.
7. Enter a zero if the fuel could not be switched for the specific energy source.

197. Enter the total quantity of energy source (column) consumed.

Copy this amount from earlier in the questionnaire (see columns for locations).

	24 column 1	22 column 2	21 column 3
Cen- sus use only	Liquefied Petroleum Gas (LPG)	Total Diesel Fuel & Distillate Fuel Oil	Residual Fuel Oil
	▼	▼	▼
	Copy from Question 67, column 1, page 25	Copy from Question 89, page 30	Copy from Question 85, column 3, page 29
500	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
	Gallons	Barrels	Barrels

198. Is the total quantity reported in Question 197 greater than zero?

501	1 <input type="checkbox"/> Yes → Go to question 199 2 <input type="checkbox"/> No → Go to question 197, column 2	1 <input type="checkbox"/> Yes → Go to question 199 2 <input type="checkbox"/> No → Go to question 197, column 3	1 <input type="checkbox"/> Yes → Go to question 199 2 <input type="checkbox"/> No → Go to Section 18, page 56
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Continue to next page

Section 17: Fuel Switching Capability—LPG, Diesel, Distillate and Residual Fuel Oils, cont.

24
column 1

22
column 2

21
column 3

Cen-
sus
use
only

LPG
▼

**Total
Diesel Fuel &
Distillate Fuel
Oil**
▼

Residual Fuel Oil
▼

199. Enter the amount of the total quantity reported in question 197 that could NOT have been replaced within 30 days by another energy source in 2002.

510

Gallons

Barrels

Barrels

Do not consider differences in energy prices when estimating the amount.

200. Enter the result of subtracting the quantity reported in Question 199 from the quantity reported in Question 197.

520

Gallons

Barrels

Barrels

This represents the total quantity of energy consumption that could have been replaced within 30 days by one or more alternative energy sources in 2002.

Note: the sum of the quantities reported in Questions 202 through 209 should equal or exceed this quantity.

201. Is the total quantity reported in Question 200 greater than zero?

521

1 Yes → Go to question 202
2 No → Go to question 197, column 2

1 Yes → Go to question 202
2 No → Go to question 197, column 3

1 Yes → Go to question 202
2 No → Go to Section 18, page 56

202. Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by electricity?

530

Gallons

Barrels

Barrels

203. Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by coal, excluding coal coke and breeze?

670

Gallons

Barrels

Barrels

204. Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by total coal coke and breeze, excluding coal included in question 203?

690

Gallons

Barrels

Barrels

Continue to next page

Section 17: Fuel Switching Capability—LPG, Diesel, Distillate and Residual Fuel Oils, cont.

Cen- sus use only	24 column 1	22 column 2	21 column 3		
	LPG ▼	Total Diesel Fuel & Distillate Fuel Oil ▼	Residual Fuel Oil ▼		
205.	Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by <u>natural gas</u> from any supplier(s)?	570	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Gallons	Barrels	Barrels	
206.	Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by <u>total diesel fuel and distillate fuel oil</u> ?	590	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Gallons		Barrels	
207.	Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by <u>liquefied petroleum gas (LPG)</u> ?	610	<input type="text"/>	<input type="text"/>	<input type="text"/>
			Barrels	Barrels	
208.	Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by <u>residual fuel oil</u> ?	630	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Gallons	Barrels		
209.	Of the quantity switchable reported in Question 200, what is the maximum amount that could have been replaced by <u>any other energy source</u> (not already asked about)?	650	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Gallons	Barrels	Barrels	

Specify the energy source (fuel):

10990

Go to Question 197, column 2

Go to Question 197, column 3

Go to Question 211, next page

210. ➤ Answer Questions 197 through 209 for all energy sources (columns).

Go to Question 211, Section 18, next page

Section 18: Energy-Management Activities

211. For each of the following energy-management activities, indicate with a “yes” or a “no” under the “Participate?” column whether your establishment participated in or undertook the specified energy management-related activity between January 1, 2002 and December 31, 2002.

For any activity for which you marked “yes” and if it has an arrow, please mark the source (s) of financial support for the energy-management activity.

“In-house” means your establishment or company paid for the activity.

“Energy Supplier” refers to either your electricity or natural gas energy supplier/provider.

“Other” includes any third party entity such as an energy service company (ESCO).

	Energy-Management Activities	Cen- sus use only	Participate? 13	Source of Financial Support for Activity (check all that apply)			
				In- house	Energy Supplier	Other	Don't Know
212.	Energy audits	060	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
213.	Electricity load control	080	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
214.	Power factor correction or improvement	380	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
215.	Equipment installation or retrofit for the <u>primary purpose of using a different energy source</u> (e.g., electrification) <small>Exclude modifications made principally for energy efficiency; those should be included in questions 217 through 223</small>	240	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
216.	Standby generation program	260	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
For questions 217 through 223: Equipment installation or retrofit for the <u>primary purpose of improving energy efficiency</u> affecting:							
217.	Steam production/system (e.g., boilers, burners, insulation, piping)	120	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
218.	Compressed air systems (e.g., compressors, sizing, leak reduction)	450	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
219.	Direct/indirect process heating	140	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
220.	Direct process cooling, refrigeration	160	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
221.	Direct machine drive (e.g., adjustable-speed drives, motors, pumps)	180	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

Continue to next page

Section 18: Energy-Management Activities, cont.

	Energy-Management Activities	Cen- sus use only	Participate? 13	Source of Financial Support for Activity (check all that apply)			
				In- house	Energy Supplier	Other	Don't Know
222.	Facility heating, ventilation, and air conditioning, excluding Energy Star Program	200	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
223.	Facility lighting, excluding Green Lights Program	220	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
For questions 224 through 229: Indicate whether the establishment participated in the energy-management activity during 2002.							
224.	Special rate schedule (e.g., interruptible or time-of-use)	100	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No	<div style="border: 1px solid black; width: 100%; height: 100%;"></div> Federal Program Name 13980			
225.	Interval metering needed to manage energy use for programs such as real-time pricing	250	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No				
226.	Equipment rebates	280	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No				
227.	U.S. Environmental Protection Agency's Energy Star Program	420	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No				
228.	U.S. Environmental Protection Agency's Green Lights Program	430	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No				
229.	Other Federally Sponsored Energy or Environmental Management Program (Specify name in right column)	440	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No				
For question 230: Indicate any other energy-management activity not specified above that this establishment participated in during 2002.							
230.	<div style="border: 1px solid black; width: 100%; height: 20px; margin-bottom: 5px;"></div> Other Energy-Management Program 13960	300	1 <input type="checkbox"/> Yes →	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
231.	Does this establishment have a full-time Energy Manager? (i.e., a person whose major function is to direct or plan energy strategies relating to energy use and energy-efficient technology within the establishment)			460	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No		

Go to question 232, Section 22, next page

Section 19: Technologies

232. Were any of the following technologies in use at your establishment anytime during 2002?

Census
use only

a. Computer control of building-wide environment
(e.g., space-heating equipment, cooling equipment, lights)

	Yes	No	Don't Know
14010 a.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK

b. Computer control of processes or major energy-using equipment
(e.g., boilers, furnaces, conveyors used in the manufacturing process)

14020 b.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

c. Waste heat recovery

14030 c.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

d. Adjustable-speed motors

14040 d.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

e. Oxy-fuel firing

14950 e.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

233. Were any of the following technologies associated with cogeneration in use at your establishment anytime during 2002?

a. Steam turbines supplied by either conventional or fluidized bed boilers

	Yes	No	Don't Know
14042 a.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK

b. Conventional combustion turbines with heat recovery

14043 b.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

c. Combined-cycle combustion turbines

14044 c.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

d. Internal combustion engines with heat recovery

14045 d.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

e. Steam turbines supplied by heat recovered from high-temperature processes

14046 e.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> DK
----------	------------------------------	-----------------------------	-----------------------------

Continue to Section 20, next page

Section 20: Establishment Size

234. How many buildings were on this establishment site as of December 31, 2002?

Census
use only
17010

Number of Buildings

Buildings include:

- 1) structures enclosed by walls extending from the foundation to the roof,
- 2) parking garages, even if not totally enclosed by walls and a roof, or
- 3) structures erected on pillars to elevate the first fully enclosed level.

17020

Don't Know

Excluded as buildings are:

- 1) structures (other than the exceptions noted above) that are not totally enclosed by walls and a roof,
- 2) mobile homes and trailers, even if they house manufacturing activity,
- 3) structures not ordinarily intended to be entered by humans, such as storage tanks, or
- 4) nonbuildings that consume energy (such as pumps and construction sites).

235. What was the approximate total enclosed square footage of the buildings located on this establishment site as of December 31, 2002?

13010

Total Square Feet

Include in this estimate all the area enclosed by the exterior walls of a building, such as indoor parking facilities, basements, hallways, lobbies, stairways, and elevator shafts.

13011

Don't Know

Section 21: Remarks

236. Please use this space for any explanations that may be essential in understanding your reported data. If additional space is needed, attach a separate sheet, including the 10-digit Census File Number (CFN) located on the mailing label on the front of this questionnaire.

15990

15991

15992

15993

15994

15995

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15997

15998

15999

16000

Continue to next page

Section 22: Contact Information

237. Name of person to contact regarding this questionnaire *(Please print or type)* Date

238. Title of contact person above *(Please print or type)*

239. Telephone: **Area Code** **Number** **Extension**
 -

240. Address--Number and Street

241. City **State** **ZIP Code (9 digits)**

242. Internet or E-mail address, if available *(Please print or type)*

19010

Thank you for completing this questionnaire!

Please photocopy this questionnaire for your records.

**Return this questionnaire in the return envelope provided.
If the envelope has been misplaced, return the completed questionnaire to:**

**Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132-0001**