Cover Sheet

2006 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

	0.5. Department of Commerce
Form EIA-	
846B	
OMB Approval	
No. 1905-0169	
Expires: 10/31/2009	
	Affix label from mail package above. If you don't have a label please provide username from
	letter, company name, and mailing address. <u>Please provide the 22-digit number on the top left</u>
	hand side of your letter found between the words ID and MECS.
TC 1 11.	
	ional time or have questions about what to report on this questionnaire, please call our processing office at Return the completed questionnaire in the enclosed envelope. Please staple all sections and pages of
	ent's questionnaire to this cover sheet. Please include one cover sheet for each establishment that
has a label. If th	e envelope has been misplaced, please mail to:
	Bureau Of The Census 1201 East 10 th Street
	Jeffersonville, IN 47132-0001
	irement: This survey is mandatory under the Federal Energy Administrative Act of 1974, Pub. Law No.
	er Title 3, Subtitle B, of the Omnibus Budget Reconciliation Act of 1986, Pub. Law No. 99-509, as
	e 1, Subtitle G, of the Energy Policy Act of 1992, Pub. Law No. 102-486.
	Talse, fictitious, or fraudulent statements as to any matter within its jurisdiction.
	Reduction Act of 1995, you are not required to respond to any Federally-sponsored collection of information unless
it displays a valid of at the top left of the	OMB Approval Number. The valid OMB Approval Number for this information collection (1905-0169) is displayed is page.
	Frequently Asked Questions can be found at <u>www.census.gov/econhelp/mecs</u> .

Contact & Refinery Information

Contact Information					
Date		Telephone) ,		
	Area Code	Number	Ext.		
		-			
Name of person to co	ontact regarding	this questionnair	e		
Title of	f contact person (a	above)			
Add	Iress (number and stree	et)			
City		State	Zip Code + 4		
E-mail address					
Refinery Information					
Indicate the correct description of this establishment.					

Definition of Refinery:

• For the purpose of this survey, a refinery is an installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons and alcohol. Processes used by a refinery include fractional distillation, cracking (both catalytic and hydro cracking), coking, reforming, alkylation, isomerization, polymerization, hydro treating, and sweetening. Products include, but are not limited to, unfinished oils, motor gasoline, aviation gasoline, special naphthas, kerosene, distillate fuel oil, residual fuel oil, lubricating oils, asphalt and road oil, waxes, petroleum coke, still gas, and petrochemical feedstocks.

Definition of Nonrefinery (Petrochemical):

• A nonrefinery is an installation that produces substances by the chemical treatment of raw materials derived from petroleum or natural gas. Among the final products are plastics (including synthetic rubbers), synthetic fibers, chemicals, drugs, and detergents. A nonrefinery is also called a petrochemical operation.

• Please check the reporting boundaries of the Census of Manufacturers (CM) to determine if your establishment is considered to include an adjacent nonrefinery (petrochemical operation).

18010	Check one box only
D 1	 Establishment consists of REFINERY operations ONLY. (There may be nonrefinery (petrochemical) operations co-located, but those operations are identified as a separate establishment for purposes of the Census of Manufacturers)
2	 Establishment consists of both REFINERY and NONREFINERY operations. For this survey questionnaire, report for the entire establishment, including both refinery and nonrefinery operations, unless those are identified as a separate establishment for purpose of the Census of Manufacturers. If nonrefinery identified as a separate establishment, then the REFINDERY operations ONLY button above should be checked
3	 Neither of the above Call the MECS specialist at 1-800-528-3049 if this establishment is NOT A REFINERY. Please call before continuing the questionnaire.

Establishment Information

	Establishment Information					
1.	Did ownership of this establishment change during 2006?	"Census Use Only" 00011	 1. No 2. Yes: Establishment was sold during the year. Complete all sections of this questionnaire for activities that occurred in 2006 prior to the sale. 3. Yes: Establishment was bought during the year. Complete all sections of this questionnaire for activities that occurred in 2006 after the sale. 			
2.	What best describes this establishment at the end of 2006?	00010	 1. In operation: Skip to question 6 2. Ceased operation: Answer question 3 then skip to question 6. 3. Sold or leased to another operator: Skip to question 4. 			
3.	Enter the date in which your establishment ceased operation.	00013	Enter Date (mm-dd-yyyy)			
4.	Enter the date in which your establishment was either sold or leased to another operator.	00014	Enter Date (mm-dd-yyyy)			

Establishment Information

	Establishment Information				
5.	Enter the following information only if this establishmer during 2006.	nt was sold or leased to another operator			
	00015 Name of new owner of	r operator			
	00017 Address				
	00018 City				
	State Zip (Zip +4) 00019 00020	Employer Identification Number (9 Digit EIN) 00016			
6.	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, 2006 to December 31, 2006.	00022 From: (mm-dd-yyyy)			

Electricity

	Electricity: Total Pur	chased	
1.	Enter the total quantity of electricity purchased by and delivered to this establishment during 2006, regardless of when payment was made.	"Census Use Only" 10061	Kilowatthours
2.	Enter total expenditures; including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased electricity reported in question 1.	10062	\$ U.S. Dollars
	Electricity: Source of H	Purchas	8
3.	 During 2006, where did this establishment's purchased electricity come from? Local utility: 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. Non-utility: includes generators of electricity such as independent power producers, small power producers. It also includes brokers, marketers, marketing subsidiaries of utilities, or co-generators not owned by your company. 	10015	 1. All local utility: Answer question 4 then skip to question 7 2. All non-utility: Answer question 4 then skip to question 7 3. Both
4.	Please specify the utility/non-utility provider from w If this establishment purchases from more than one provider, please provide the largest provider.	vhom you	i purchased your electricity:
5.	Enter the quantity of your total purchased electricity that was purchased from a local utility during 2006.	10010	Kilowatthours
6.	Enter the total expenditures of your purchased electricity that was paid to a local utility.	10020	\$ U.S. Dollars
	Electricity: Transfe	rs In	
7.	 Enter the total quantity of electricity transferred in or otherwise received on-site without a direct open market purchase. Include quantities: For which payment, if any, does not represent an open-market transaction; For which payment was made in-kind (i.e., barter); Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (e.g., in a performance service contract). 	10050	Kilowatthours

Electricity

	Electricity: Generated On-site				
8.	Enter the quantity of electricity generated on-site fr	om each o	f the following:		
		"Census Use Only"	Kilowatthours		
	Combined Heat and Power (CHP)/Cogeneration Cogeneration is the production of electric energy and another form of useful energy (such as heat or steam) through the sequential use of energy.	10070			
	Solar Power	10081			
	Wind Power	10082			
	Hydropower	10083			
	Geothermal Power	10084			
	• Other (for example, electricity generated by diesel generators)	10090			
	Electricity: Sales and Tran	isfers Ofj	fsite		
9.	Enter the quantity of electricity sold or transferred out of this establishment to utilities during 2006.	10110			
	Include quantities exchanged for the same or any other energy source.		Kilowatthours		
	Exclude sales to independent power producers, small power producers, or co-generators not located at this establishment.				
10.	Enter the quantity of electricity sold or transferred out of this establishment to any non- utilities during 2006.	10120			
	Include:		Kilowatthours		
	• Sales to independent power producers, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generators not located at this establishment.				
	Quantities exchanged for the same or any other energy source.				

Electricity

enter as a	Electricity: Estimated End-Use Percent Consumpti ving questions refer to how this establishment consumed the electricity that was percentage of total consumption for each end use performed). A plant engineer of sy flows at this establishment should report this data.	s previous	
Total Consu Offsite]	mption = Question 1 [Purchases] + Question 7 [Transfers] + Question 8 [Generated] – (Question 1)	on 9 + 10)[3	Sales and Transfers
	Enter the percentage of total electricity that this establishment consum	ed for th	e following:
11.	Indirect Uses – Boilers: indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.	"Census Use Only"	Electricity
	Boiler fuel (includes fuels used for thermal outputs)	10710	%
	Direct Uses – Process: direct process use includes usage in motors, ovens, kilns, and strip heaters.		
	• Process heating (e.g., kilns, furnaces, ovens, strip heaters)	10720	%
	Process cooling and refrigeration	10730	%
	• Machine drive (e.g., motors, pumps, etc. associated with manufacturing process equipment)	10740	%
	Electro-chemical processes (e.g., reduction process)	10750	%
	Other direct process use: 10761 Please specify:	10760	%
	Direct Uses – Non-process: direct non-process use includes usage for facility lighting and space-conditioning equipment (HVAC).		
	• Facility heating, ventilation, and air conditioning	10770	%
	Facility lighting	10780	%
	• Facility support other than that reported above (e.g.: cooking, water heating, office equipment)	10790	%
	On-site transportation, excluding highway usage	10800	%
	Other direct non-process use: 10821 Please specify:	10820	%
			TOTAL 100%

Petroleum-based Energy Sources

Petroleum-based Energy Sources				
	Energy Source	"Census Use Only"	Quantity Consumed as a Fuel	
	\checkmark		\downarrow	
on-sit steam	uestions 1 through 21, enter the quantity consumed e during 2006 as a fuel for the production of heat, , power, or the generation of electricity for all leum-based energy sources (fuel) listed below.			
	quantities of energy sources that were used as material inputs to your process or otherwise used as a non-fuel.			
	all process uses such as process heating, process cooling, and machine d all nonprocess uses such as facility heating, ventilation, and air ning.			
forklifts	fuel consumed by vehicles intended primarily for use on-site, e.g., , intra-plant shuttles, loaders and other materials-handling equipment d solely within boundaries of the establishment size.			
1.	Butane as Liquefied Petroleum Gas (LPG) or Natural Gas Liquids (NGL).			
		36060	Gallons	
2.	Ethane as Liquefied Petroleum Gas (LPG) or Natural Gas Liquids (NGL).	37060	Gallons	
3.	Propane as Liquefied Petroleum Gas (LPG) or Natural Gas Liquids (NGL).	38060	Gallons	
4.	Mixtures of ethane, butane, and propane.	34060		
		34060	Gallons	
5.	Other liquefied petroleum gases (LPG) and natural gas liquids (NGL) (e.g., butylenes, ethylene, propylene)	35060	Gallons	
6.	Total liquefied petroleum gases (LPG) and natural gas liquids (NGL).	24060	Gallons	
	Sum the quantities reported for questions 1 through 5.		Ganons	

Total LPG and NGL: Estimated End-Use Percent Consumption

The following questions refer to how this establishment consumed the energy source that was previously reported in question 6 (*please enter as a percentage of total consumption for each end use performed*). A plant engineer or someone who is familiar with energy flows at this establishment should report this data.

Enter the percentage of total Liquefied Petroleum Gas (LPG) and Natural Gas Liquids (NGL) (from question 6) that this establishment consumed as the following:			
Indirect Uses- Boilers: indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.	"Census Use Only"	Total LPG an NGL	
•Boiler fuel in a Combined Heat and Power (CHP) and/or cogeneration process	24705	q	
•Other boiler fuel (not included above) (includes fuels used for thermal outputs only)	24710		
Direct Uses- Process: direct process use includes usage in motors, ovens, kilns, and strip heaters.			
• Process heating (e.g., kilns, furnaces, ovens, strip heaters)	24720		
Process cooling and refrigeration	24730		
•Machine drive (e.g., motors, pumps, etc. associated with manufacturing process equipment)	24740		
• Other direct process use:	24760		
Direct Uses- Non-process: direct non-process use includes usage for facility lighting and space-conditioning equipment (HVAC).			
•Facility heating, ventilation, and air conditioning	24770		
•Facility support other than that reported above (e.g.: cooking, water heating, office equipment)	24790	(
•On-site transportation, excluding highway usage	24800		
•Conventional electricity generation	24810	(
Other direct non-process use: 24822 Please specify:	24820		
		TOTAL 100%	

	Petroleum-based Energy Sources Cont.				
8.	Diesel fuel, excluding offsite highway usage.		[
		28060	Ba	rrels	
9.	Distillate fuel oil (numbers 1, 2 and 4 fuel oil).				
		29060			
10.	Total diesel fuel and distillate fuel oil.	29000	Ba	rrels	
10.	Sum the quantities in questions 8 and 9.	22060			
	Sum the quantities in questions 6 and 7.	22000	Ba	rrels	
	Diesel or Distillate Fuel Oil: Estimated End	l-Use Perce	ent Consun	nption	
previo <i>perfor</i>	blowing questions refer to how this establishment con ously reported in question 10 (<i>please enter as a percent</i> <i>med</i>). A plant engineer or someone who is familiar wi d report this data.	age of total c	consumption	for each end use	
11.	Enter the percentage of the total Diesel and Distillate establishment consumed as the following:	e Fuel Oil (fi	rom question	10) that this	
	Indirect Uses – Boilers: indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.			Diesel and Distillate	
	•Boiler fuel in a Combined Heat and Power (CHP) and/or cogeneration process			%	
	•Other boiler fuel (not included above) (includes fuels use outputs only)	ed for thermal	22710	%	
	Direct Uses –Process: direct process use includes usa ovens, kilns, and strip heaters.	ge in motors	s,		
	• Process heating (e.g., kilns, furnaces, ovens, strip heaters)		22720	%	
	•Process cooling and refrigeration		22730	%	
	•Machine drive (e.g., motors, pumps, etc. associated with manufac equipment)	turing process	22740	%	
	•Other direct process use:			%	
	Direct Uses – Non-process: direct non-process use incl facility lighting and space-conditioning equipment (HV	•••	or		
	•Facility heating, ventilation, and air conditioning		22770	%	
	•Facility support other than that reported above (e.g. heating, office equipment)	: cooking, water	22790	%	

Petroleum-based Energy Sources

	•On-site transportation, excluding highway usage			22800	%
	•Conventional electricity generation			22810	%
	•Other direct non-process use:			22820	0/
	Please specify:				%
					TOTAL 100%
	Petroleum-based Energy So	ources C	Cont.		
12.	Motor gasoline, excluding offsite highway usage.				
		23060			
10		23060		Gal	lons
13.	Residual fuel oil (numbers 5, 6, Navy Special, and				
	Bunker C).	21060		Bar	rels
	Residual Fuel Oil: Estimated End-Use	e Percen	t Cons		
The fo	ollowing questions refer to how this establishment cor			-	
	ously reported in question 13 (please enter as a percen				
perfor	med). A plant engineer or someone who is familiar w	ith energ	y flows a	at this est	tablishment
	l report this data.				
14.	Enter the percentage of total Residual Fuel (from que consumed as the following:	uestion 1.	3) that t	his estab	lishment
	Indirect Uses – Boilers: indirect use is the transformate another usable energy source, as in a boiler, gas turbir turbine.	v	0.	"Census use Only"	Residual Fuel
	•Boiler fuel in a Combined Heat and Power (CHP) a cogeneration process	and/or		21705	%
	•Other boiler fuel (not included above) (includes fuels us	sed for therm	al outputs)	21710	%
	Direct Uses – Process: direct process use includes usa ovens, kilns, and strip heaters.	ge in mot	ors,		
	•Process heating (e.g., kilns, furnaces, ovens, strip heaters) •Process cooling and refrigeration				%
					%
	•Machine drive (e.g., motors, pumps, etc. associated with manuface equipment)	eturing proce	SS	21740	%
	•Other direct process use:			21760	
				21700	
	Please specify:				%

Petroleum-based Energy Sources

	Direct Uses – Non-process: direct non-process use inc facility lighting and space-conditioning equipment (HV	"Census use Only"	Residual Fuel		
	•Facility heating, ventilation, and air conditioning		21770	%	
	•Facility support other than that reported above (e.g heating, office equipment)	:: cooking, v	vater	21790	%
	•Conventional electricity generation			21810	%
	•Other direct non-process use: 21822 Please specify:			21820	%
					TOTAL 100%
	Petroleum-based Energy So	ources C	Cont.		
15.	Waste and byproduct gases (e.g., refinery gas, off gas, vent gas, plant gas, still gas).	62060		Million	BTU
16.	Fluid catalytic cracking unit coke.	77060		Barr	
17.	Marketable petroleum coke—unrefined or green.	78060		Barro	
18.	Marketable petroleum coke—calcined.	79060		Barr	
19.	Waste oils and tars, excluding coal tar.	71060		Barr	
20.	Other petroleum-based combustible energy source not specified above:	95060		Million	BTU
	Please specify:	95990		Specify	Units
21.	Other petroleum-based combustible energy source not specified above:	96060		Million	
	Please specify:	96990		Specify	

	Natural Gas: Units		
1.	Please indicate the units for the quantity that you will be reported below. ** Please use this unit for reporting the remainder of the Natural Gas quantity questions.	"Census Use Only" 31111	 1. Therms 2. Decatherms (Dth) 3. 1,000 Cubic Feet (Mcf) 4. 100 Cubic Feet (Ccf) 5. Million British Thermal Units (MMBtu)
	Natural Gas: Total Purch	nased	
2.	Enter the total quantity of natural gas purchased by and delivered to this establishment during 2006, regardless of when payment was made.	30010	Units
3.	Enter total expenditures; including all applicable taxes and any delivery, management, transportation, and demand charges, for the purchased natural gas reported in question 2.	30020	\$ U.S. Dollars
	Natural Gas: Source of Pu	rchase	
4.	 During 2006, where did this establishment's purchased natural gas come from? Local utility: the company in your local area that produces and/or delivers natural gas and is legally obligated to provide service to the general public within its franchise area. Non-utility: include independent producers, brokers, marketers, and any marketing subsidiaries of utilities. 	30015	 1. All local utility: Answer question 5 then skip to question 8 2. All non-utility: Answer question 5 then skip to question 8 3. Both
5.	Please specify the utility/non-utility provider from whom	you purc	hased your natural gas:
	If this establishment purchases from more than one provider, please provide the largest provider. 30016		
6.	Enter the quantity of your total purchased natural gas that was purchased from a local utility during 2006.	31010	Units
7.	Enter the total expenditures of your purchased natural gas that was paid to a local utility.	31020	\$ U.S. Dollars

Natural Gas

	Natural Gas: Transferred In and Pr	oduced	On-site
8.	Enter the total quantity of natural gas transferred in or otherwise received on-site without a direct open market purchase.	"Census Use Only"	
	 Include quantities: For which payment, if any, does not represent an open-market transaction; For which payment was made in-kind (i.e., barter); Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (e.g., in a performance service contract). 	30030	Units
9.	Enter the quantity of natural gas that was both produced on-site during 2006 as output from a captive (on-site) well, and was at least partially consumed on- site (as a fuel or nonfuel).	30040	Units
	Natural Gas: Consumpt	tion	
10.	Enter the total quantity of natural gas consumed as a fuel at this establishment during 2006. Include all uses that were used for the heat, power, and electricity generation. Also, include fuel consumed by vehicles intended primarily for use on-site.	30060	Units

Natural Gas

following:	lishment	consumed
Indirect Uses – Boilers: indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.	"Census Use Only"	Natura Gas
Boiler fuel in a Combined Heat and Power (CHP) and/or cogeneration process	30705	
Other boiler fuel (not included above) (includes fuels used for thermal outputs only)	30710	
Direct Uses- Process: direct process use includes usage in motors, ovens, kilns, and strip heaters.		
Process heating (e.g., kilns, furnaces, ovens, strip heaters)	30720	
Process cooling and refrigeration	30730	
Machine drive (e.g., motors, pumps, etc. associated with manufacturing process equipment)	30740	
Other direct process use: ³⁰⁷⁶¹ Please specify:	30760	
Direct Uses – Non-process: direct non-process use includes usage for facility lighting and space-conditioning equipment (HVAC).		
Facility heating, ventilation, and air conditioning	30770	
• Facility support other than that reported above (e.g.: cooking, water heating, office equipment)	30790	
On-site transportation, excluding highway usage	30800	
Conventional electricity generation	30810	
Other direct non-process use:	30820	
Please specify:		

Steam or Industrial Hot Water

	Steam or Industrial Hot Water: Total Purchased					
		"Census Use Only"	(11)	(12)		
			Steam	Industrial Hot Water		
			\downarrow	\downarrow		
1.	Enter the total quantity of the energy source (column) purchased by and delivered to this establishment during 2006, regardless of when payment was made.	061	Million Btu	Million Btu		
2.	Enter total expenditures; including all applicable taxes and any delivery, management, transportation, and demand charges, for the quantity reported in question 1.	062	\$ U.S. Dollars	\$ U.S. Dollars		
Ste	am, Industrial Hot Water: Purcha	sed from	n Local Utility and N	on-Utility Sources		
3.	 During 2006, where did this establishment's purchased steam come from? Local utility means the company in your local area that produces and/or delivers steam and is legally obligated to provide service to the general public within its franchise area. The term "non-utility" includes generator of steam such as independent power producer, small power producers, brokers, marketers, marketing subsidiaries of utilities, or co-generator not owned by your company. 	015	 1. All local utility: Answer question 4 then skip to question 7 2. All non- utility: Answer question 4 then skip to question 7 3. Both: 			
4.	Please specify the utility/non-utility provider from whom you purchased your steam: If this establishment purchases from more than one provider, please provide the largest provider.	016				
5.	Enter the quantity of your total purchased steam that was purchased from a local utility during 2006.	010	Million Btu			

Steam or Industrial Hot Water

		"Census Use Only"	(11)	(12)
			Steam ↓	Industrial Hot Water ↓
6.	Enter the total expenditures of your purchased steam that came from a local utility.	020	\$	
		• • • •	U.S. Dollars	
	Steam or Indust	rial Hot	Water: Transfers	
7.	Enter the total quantity of the energy source transferred in or otherwise received on-site without a direct open market purchase.			
	Include quantities:	050		
	•For which payment, if any, does not represent an open –market transaction;	050		
	•For which payment was made in-kind (i.e., barter);		Million Btu	Million Btu
	•Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (e.g., in a performance service contract)			
	Steam or Industrial	Hot Wat	ter: Generated On-si	te
8.	Enter the quantity of steam or hot wa	ter gener	rated on-site from each	of the following:
	•Solar Power	081		
			Million Btu	Million Btu
	•Wind Power	082		
			Million Btu	Million Btu
	Hudronowar	083		
	•Hydropower		Million Btu	Million Btu
		084		
	•Geothermal Power	004	Million Btu	Million Btu

Steam or Industrial Hot Water

	Steam or Industrial Hot	Water: S	ales and Transfers (Off-site
		"Census Use Only"	(11)	(12)
			Steam	Industrial Hot Water
			\downarrow	\downarrow
9.	Enter the quantity of the energy source transferred out of this establishment during 2006.			
	Include quantities exchanged for the same or any other energy source. Exclude sales to independent power producers, small power producers, or co-generators not located	110	Million Btu	Million Btu
	at this establishment.			

	Coal					
	Coal: Purchas	ed, Tran	sferred, and Pi	roduced		
		"Census Use Only"	(40)	(41)	(42)	
			Anthracite ↓	Bituminous and Subbituminous	Lignite	
1.	Enter the total quantity of the energy source (column) purchased by and delivered to this establishment during 2006, regardless of when payment was made.	010	◆ Short tons	Short tons	Short tons	
2.	Enter the total expenditures; including all applicable taxes and delivery, management, transportation, and demand charges, for the quantity reported in question 1.	020	\$ U.S. Dollars	\$ U.S. Dollars	\$ U.S. Dollars	
3.	Enter the total quantity of the energy source transferred in or otherwise received on-site without a direct open market purchase.	030	Short tons	Short tons	Short tons	
	 Include quantities: For which payment, if any, does not represent an open-market transaction; For which payment was made in-kind (i.e., barter); Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (e.g., in a performance service contract.) 					
4.	Enter the quantity of the energy source produced on-site during 2006.	040	Short tons	Short tons	Short tons	

_	Coal					
	Coal: Consumption					
		"Census Use Only"	(40)	(41)	(42)	
			Anthracite	Bituminous and Subbituminous	Lignite	
			\downarrow	\downarrow	\downarrow	
5.	Enter the total quantity of the energy source consumed as a fuel in this establishment during 2006.	060				
	Include all uses that were used for the heat, power, and electricity generation. Also, include fuel consumed by vehicles intended primarily for use on-site.		Short tons	Short tons	Short tons	



	Coal: Estimated End-Use Percent Consumpti	on			
previo <i>perfor</i>	The following questions refer to how this establishment consumed the energy source that was previously reported question 5 (<i>please enter as a percentage of total consumption for each end use performed</i>). A plant engineer or someone who is familiar with energy flows at this establishment should report this data.				
6.	Enter the percentage of the total energy source (question 5 column 1 - question 5 column 3) that this establishment consumed as the following	_	n 5 column 2 +		
	Indirect Uses – Boilers: indirect use is the transformation of energy to another usable energy source, as in a boiler, gas turbine, or combustion turbine.	"Census Use Only"	TOTAL COAL (exclude coal coke and breeze)		
	Boiler fuel in a Combined Heat and Power (CHP) and/or cogeneration process	46705	%		
	Other boiler fuel (not included above) (includes fuels used for thermal outputs only)	46710	%		
	Direct Uses – Process: direct process use includes usage in motors, ovens, kilns, and strip heaters.				
	• Process heating (e.g., kilns, furnaces, ovens, strip heaters)	46720	%		
	•Process cooling and refrigeration	46730	%		
	•Machine drive (e.g., motors, pumps, etc. associated with manufacturing process equipment)	46740	%		
	•Other direct process use: 46761 Please specify:	46760	%		
	Direct Uses – Non-process: direct non process use includes usage for facility lighting and space-conditioning equipment (HVAC).				
	•Facility heating, ventilation, and air conditioning	46770	%		
	• Facility support other than that reported above (e.g.: cooking, water heating, office equipment)	46790	%		
	•Conventional electricity generation	46810	%		
	•Other direct non-process use: 46821 Please specify:	46820	%		
			TOTAL 100%		

Breeze or Coal Coke

		"Census	(44)	(43)
		Use Only"	Breeze	Coal Coke
			breeze ↓	Coal Coke ↓
1.	Enter the total quantity of the energy source (column) purchased by and delivered to this establishment during 2006, regardless of when payment was made.	010	Short tons	Short tons
2.	Enter the total expenditures; including all applicable taxes and delivery, management, transportation, and demand charges, for the quantity reported in question 1.	020	\$ U.S. Dollars	\$ U.S. Dollars
3.	Enter the total quantity of the energy source transferred in or otherwise received on-site without a direct open market purchase.	030		
	 Include quantities: For which payment, if any, does not represent an open-market transaction; For which payment was made in-kind (i.e., barter); Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (e.g., in a performance service contract.) 		Short tons	Short tons
4.	Enter the quantity of the energy source produced on-site during 2006.	040		
			Short tons	Short tons

Breeze or Coal Coke

	Breeze or Coal Coke: Consumption					
		"Census Use Only"	(44)	(43)		
			Breeze	Coal Coke		
			\downarrow	\downarrow		
5.	Enter the total quantity of the energy source consumed as a fuel in this establishment during 2006.	060				
	Include all uses that were used for the heat, power, and electricity generation. Also, include fuel consumed by vehicles intended primarily for use on-site.		Short tons	Short tons		

Hydrogen or Wood Fuel Wood/Paper Refuse

	Hydrogen or Wood Fuel Wood/Pap Cor	er Refus nsumpti		fer, Produce, and
		"Census Use Only"	(63)	(72)
			Hydrogen ↓	Wood Fuel Wood/Paper Refuse ↓
1.	Enter the total quantity of the energy source (column) purchased by and delivered to this establishment during 2006, regardless of when payment was made.	010	Cubic Feet	Million Btu
2.	Enter the total expenditures; including all applicable taxes and any delivery, management, transportation, and demand charges, for the quantity reported in question 1.	020	\$ U.S. Dollars	\$ U.S. Dollars
3.	 Enter the total quantity of the energy source transferred in or otherwise received on-site without a direct open market purchase. Include quantities: For which payment, if any, does not represent an open-market transaction; For which payment was made in-kind (i.e., barter); Received from an entity in which your establishment or company has a share of ownership or special sharing of revenue (i.e., in a performance service contract.) 	030	Cubic Feet	Million Btu
4.	Enter the quantity of the energy source produced on-site during 2006.	040	Cubic Feet	Million Btu
5.	Enter the total quantity of the energy source consumed as a fuel at this establishment during 2006. Include all uses that were used for the heat, power, and electricity generation. Also, include fuel consumed by vehicles intended primarily for use on-site.	060	Cubic Feet	Million Btu

Other Energy Sources

	Other Energy Sources: To	otal Pur	chased, Transfe	erred and Produ	uced
		"Census Use Only"	(97)	(98)	(99)
			Other ↓	Other ↓	Other ↓
1.	Specify the name and units (e.g., gallons, million Btu, cubic feet, etc.) of any energy source purchased or consumed in this	980	Energy source	Energy source	Energy source
	establishment that has not been previously asked. *Do not include: oxygen, carbon	981	Units	Units	Units
2.	dioxide, nitrogen, argon, or helium.Enter the total quantity of the other energy source (column) purchased by and delivered to this establishment during 2006, regardless of when payment was made.	010	Units	Units	Units
3.	Enter total expenditures; including all applicable taxes and any delivery, management, transportation, and demand charges, for the quantity reported in question 2.	020	\$ U.S. Dollars	\$ U.S. Dollars	\$ U.S. Dollars
4.	Enter the total quantity of the other energy source transferred in or otherwise received on-site without a direct open market purchase. Include quantities:	030			
	 •For which payment, if any, does not represent an open-market transaction; •For which payment was made in-kind (i.e., barter); •Received from an entity in which your establishment or company has a share or ownership or special sharing of revenue (e.g., in a performance service contract.) 		Units	Units	Units
5.	Enter the quantity of the other energy source produced on-site during 2006.	040	Units	Units	Units

Other Energy Sources

	Other Energy Source: Consumption							
		"Census Use Only"	(97)	(98)	(99)			
			Other ↓	Other ↓	Other ↓			
6.	Does the quantity reported in produced on-site represent the product or byproduct of another energy source consumed on-site?	050	□ 1. Yes, product or byproduct □ 2. No	□ 1. Yes, product or byproduct □ 2. No	1. Yes, product or byproduct 2. No			
7.	Enter the total quantity of the other energy source consumed as a fuel at this establishment during 2006.	060	Units	Units	Units			
	Include all uses that were used for the heat, power, and electricity generation. Also, include fuel consumed by vehicles intended primarily for use on-site.							

Fuel Switching Capability: Electricity, Natural Gas and Total Coal

- Capability to use substitute energy sources means that this establishment's combustors (for example, boilers, furnaces, ovens, blast furnaces) had the equipment, either in place or available for installation in 2006, so that substitutions could actually have been introduced within 30 days without extensive modifications.
- 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.
- In addition to the capability of your equipment, when formulating your estimates:
 - Make sure to consider both the equipment limitations of your boilers, heaters, and combustors and any other practical reasons when determining the availability of supply during 2006.

Equipment limitations include:

- The boilers, heaters, or other fuel-consuming equipment are not capable of using anything other than specify fuel for at least part of the operations.
- Although the boilers, heaters, or combustors would allow using another fuel, doing so would adversely affect a product. Ex. altering the pigment in a paint-drying application.

Practical reasons include:

- There is no ready supply of an alternative energy source.
- Environmental restrictions related to air quality limit the amount of the physically usable alternative fuel that could be used instead.
- A long-term contract in-place that requires the purchase of certain amounts of the energy source in any case.
- Storage of alternative fuels is not available due to potential environmental impact of storage tanks.
- Do not limit your estimated capability by differences in relative prices of energy sources.
- This section is intended to measure your capability to switch, not whether you would switch if you could.
- 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.
- If records of fuel-switching capability are not regularly maintained, reasonable approximations are acceptable.
- Enter a zero if the fuel could not be switched for the specific energy source.
- Please proceed through this section column-by-column.

	Fuel Switching Capability	: Electi	ricity, Natural (Gas and Total (Coal	
	ext four questions are designed as a w hat you have already filled out to reco				e sections of the	
1.	Referring back to the Electricity section enter the quantity of reported purchased					
2.	Referring back to the Electricity section enter the quantity of reported transferre					
3.	Add lines from question 1 and 2 (ques total in the box.	10503				
4.	Referring back to the Natural Gas section Please enter the quantity of reported nation the figure in the box.	30503				
5.	the quantity of reported anthracite, bitu	ing back to the Coal section, question 5 page 2. Please add antity of reported anthracite, bituminous and subbituminous mite consumed. Enter the total in the box.				
		"Census Use Only"	(10)	(30)	(46)	
			Total Electricity Received Transfers + purchase ↓	Total Natural Gas ↓	Total ALL Coal (excluding Coal Coke & Breeze) ↓	
6.	Enter the total quantity of the energy source (column) you reported as consumed during 2006. Copy this figure from the above worksheet questions.	500	Kilowatthours Enter figure from question 3.	1,000 cubic feet Enter figure from question 4.	Short tons Enter figure from question 5.	
7.	Is the total quantity reported in question 6 greater than zero?	501	1. Yes 2. No: Skip to question 6, next column.	1. Yes 2. No: Skip to question 6, next column.	1. Yes 2. No: Skip to next section.	
8.	Enter the amount of the total quantity you reported in question 6 that could NOT have been replaced within 30 days by another energy source during 2006. Consider both the equipment limitations of your boilers, heaters, and combustors and any other practical reason. Do not consider differences in energy prices when estimating the amount.	510	Kilowatthours	1,000 cubic feet	Short tons	

	Fuel Switching Capability	: Electi	ricity, Natural (Gas and Total C	Coal
		"Census Use Only"	(10) Total Electricity Received Transfers + purchase ↓	(30) Total Natural Gas ↓	(46) Total ALL Coal (excluding Coal Coke & Breeze) ↓
9.	Is the total quantity in question 8 equal to zero?	511	 1. Yes: Skip to question 11. 2. No 	 1. Yes: Skip to question 11. 2. No 	 1. Yes: Skip to question 11. 2. No
10.	Referring to the quantity shown ir quantity unswitchable.	n question	n 8, please check	all the reasons th	at made this
	The boilers, heaters, or other fuel-consuming equipment are NOT <u>capable</u> of using another fuel for at least part of the operations during the year.	526			
	Switching to the usable alternatives would adversely affect the products.	528			
	Although the heating equipment could use another fuel, there was no readily available supply of it during at least part of the year.	533			
	Environmental restrictions related to air quality limit the amount of the physically usable alternative fuel that could be used instead.	534			
	A long-term contract is in-place that requires the purchase of certain amounts of this fuel in any case.	536			
	Storage of usable alternative fuels is not available due to potential environmental impact of storage tanks.	537			
	Other please specify:	999			
	Don't know	539			

	Fuel Switching Capability	: Electi	ricity, Natural (Gas and Total (Coal
		"Census Use Only"	(10)	(30)	(46)
			Total Electricity Received Transfers + purchase ↓	Total Natural Gas ↓	Total ALL Coal (excluding Coal Coke & Breeze) ↓
11.	 Enter the results of subtracting the quantity reported in question 8 from the quantity reported in question 6. This represents the total quantity of energy consumption that could have been replaced in 30 days by one or more alternative energy sources in 2006. Note: the sum of the quantities in question 13 through 20 should equal or exceed this quantity. 	520	Kilowatthours	1,000 cubic feet	Short tons
12.	Is the total quantity reported in question 11 greater than zero?	521	1. Yes 2. No: Skip to next column.	1. Yes 2. No: Skip next column.	1. Yes 2. No: Skip to next section.
13.	Of the quantity switchable in question 11 what is the maximum amount that could have been replaced by <u>electricity</u> ?	530		1,000 cubic feet	Short tons
14.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>total coal</u> , <u>excluding coal coke and breeze</u> ?	670	Kilowatthours	1,000 cubic feet	
15.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>total coal</u> <u>coke and breeze, excluding coal</u> ?	690	Kilowatthours	1,000 cubic feet	
16.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>natural</u> <u>gas</u> ?	570	Kilowatthours		Short tons

	Fuel Switching Capability	: Electi	ricity, Natural (Gas and Total C	Coal
			(10)	(30)	(46)
		"Census Use Only"	Total Electricity Received Transfers + purchase ↓	Total Natural Gas ↓	Total ALL Coal (excluding Coal Coke & Breeze) ↓
17.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>total</u> <u>diesel fuel and distillate fuel oil</u> ?	590	Kilowatthours	1,000 cubic feet	Short tons
18.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>liquefied</u> <u>petroleum gas (LPG)</u> ?	610	Kilowatthours	1,000 cubic feet	Short tons
19.	Of the quantity reported as switchable in question 11 what is the maximum amount that could have been replaced by <u>residual</u> <u>fuel oil</u> ?	630	Kilowatthours	1,000 cubic feet	Short tons
20.	Of the quantity reported as switchable in question 11 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
	Please Specify:	990			

Fuel Switching Capability: Electricity, Natural Gas and Total Coal

What is the lowest percentage of price difference of the less expensive substitute that would cause your establishment to switch from this fuel, regardless of whether or not your establishment actually switched energy sources during 2006 or did so because of a less expensive substitute? (If you have more than one possible alternative for the energy source, choose the fuel that would be your most preferred alternative.)

The formula for percentage of price difference is:

- Percent of Price Difference = ((PC-PA)/PC) * 100%
- Where PC=Price per British thermal unit of current fuel
- PA=Price per British thermal unit of alternative fuel

		"Census Use Only"	(10)	(30)	(46)
		622	Total Electricity Received Transfers + purchase ↓	Total Natural Gas ↓	Total ALL Coal (excluding Coal Coke & Breeze) ↓
			Check one for eac	ch energy source (column) reported
21.	Would not switch regardless of product of the switch regardless of product of the switch regardless of the switch regardl	ice			
	Would switch at price difference 1 percent.	-10			
	Would switch at price difference 1 percent.	1-25			
	Would switch at price difference 2 percent.	26-50		4	
	Would switch at price difference of percent.	over 50	5	5	\square_5
	Reasonable estimates cannot be pr	rovided.			
	Would switch to the more expensive substitute if price premium were reasonable.	ve			

Fuel Switching Capability: Total LPG & NGL, Diesel & Distillate and Residual

- Capability to use substitute energy sources means that this establishment's combustors (for example, boilers, furnaces, ovens, blast furnaces) had the equipment, either in place or available for installation in 2006, so that substitutions could actually have been introduced within 30 days without extensive modifications.
- 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.
- In addition to the capability of your equipment, when formulating your estimates:
 - Make sure to consider both the equipment limitations of your boilers, heaters, and combustors and any other practical reasons when determining the availability of supply during 2006.

Equipment limitations include:

- The boilers, heaters, or other fuel-consuming equipment are not capable of using anything other than specify fuel for at least part of the operations.
- Although the boilers, heaters, or combustors would allow using another fuel, doing so would adversely affect a product. Ex. altering the pigment in a paint-drying application.

Practical reasons include:

- There is no ready supply of an alternative energy source.
- Environmental restrictions related to air quality limit the amount of the physically usable alternative fuel that could be used instead.
- A long-term contract in-place that requires the purchase of certain amounts of the energy source in any case.
- Storage of alternative fuels is not available due to potential environmental impact of storage tanks.
- Do not limit your estimated capability by differences in relative prices of energy sources.
- This section is intended to measure your capability to switch, not whether you would switch if you could.
- 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.
- If records of fuel-switching capability are not regularly maintained, reasonable approximations are acceptable.
- Enter a zero if the fuel could not be switched for the specific energy source.
- Please proceed through this section column-by-column.

	Fuel Switching Capability: Tota	al LPG o	& NGL, Diesel	& Distillate and	l Residual
	next four questions are designed as a w that you have already filled out to reco				e sections of the
1.	Referring back to the Petroleum-based question 7 page 1. Please enter the repo NGL. Enter the figure in the box.	24503			
2.	Referring back to the Petroleum-based question 11 page 3. Please enter the rep distillate fuel consumed. Enter the figur	22503			
3.	Referring back to the Petroleum-based question 14 page 4. Please enter the rep fuel consumed. Enter the figure in the b	orted quar		21503	
		"Census Use Only"	(24)	(22)	(21)
			Total LPG & NGL	Total Diesel Fuel & Distillate Fuel Oil	Residual Fuel Oil
			↓	↓	↓
4.	Enter the total quantity of the energy source you reported as consumed during 2006.	500	Gallons Enter figure from question 1.	Barrels Enter figure from question 2.	Barrels Enter figure from question 3.
5.	questions. Is the total quantity reported in				
	question 4 greater than zero?	501	 1. Yes 2. No: Skip to question 4, next column. 	1. Yes 2. No: Skip to question 4, next column.	1. Yes 2. No: Skip to next section.
6.	Enter the amount of the total quantity you reported in question 4 that could NOT have been replaced within 30 days by another energy source during 2006. Consider both the equipment limitations of your boilers, heaters, and combustors and any other practical reason. Do not consider differences in energy prices when estimating the amount.	510	Gallons	Barrels	Barrels

	Fuel Switching Capability: Tote	al LPG d	& NGL, Diesel	& Distillate and	d Residual
		"Census Use Only"	(24) Total LPG & NGL	(22) Total Diesel Fuel & Distillate Fuel Oil ↓	(21) Residual Fuel Oil ↓
7.	Is the total quantity in question 6 equal to zero?	511	 1. Yes: Skip to question 9. 2. No 	 1. Yes: Skip to question 9. 2. No 	 1. Yes: Skip to question 9. 2. No
8.	Referring to the quantity shown in quantity unswitchable.	n question	n 6, please check	all the reasons th	at made this
	The boilers, heaters, or other fuel-consuming equipment are NOT <u>capable</u> of using another fuel other than this fuel for at least part of the operations during the year.	526			
	Switching to the usable alternatives would adversely affect the products.	528			
	Although the heating equipment could use another fuel, there was no readily available supply of it during at least part of the year.	533			
	Environmental restrictions related to air quality limit the amount of the physically usable alternative fuel that could be used instead.	534			
	A long-term contract is in-place that requires the purchase of certain amounts of this fuel in any case.	536			
	Storage of usable alternative fuels is not available due to potential environmental impact of storage tanks.	537			
	Other please specify:	999			
	Don't know	539			

		"Census Use Only"	(24)	(22)	(21)
			Total LPG & NGL	Total Diesel Fuel & Distillate Fuel Oil	Residual Fuel Oil
			\downarrow	\rightarrow	\downarrow
9.	Enter the results of subtracting the quantity reported in question 6 from the quantity reported in question 4.	520	Gallons	Barrels	Barrels
	This represents the total quantity of energy consumption that could have been replaced in 30 days by one or more alternative energy sources in 2006.				
	Note: the sum of the quantities in question 11through 18 should equal or exceed this quantity.				
10.	Is the total quantity reported in question 9 greater than zero?	521	1. Yes 2. No: Skip to next column.	1. Yes 2. No: Skip to next column.	1. Yes 2. No: Skip to next section.
11.	Of the quantity switchable in question 9 what is the maximum amount that could have been replaced by <u>electricity</u> ?	530	Gallons	Barrels	Barrels
12.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>total coal</u> , <u>excluding coal coke and breeze</u> ?	670	Gallons	Barrels	Barrels
13.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>total coal</u> <u>coke and breeze, excluding coal</u> ?	690	Gallons	Barrels	Barrels

j	Fuel Switching Capability: Tota	al LPG a	& NGL, Diesel	& Distillate an	d Residual
		"Census Use Only"	(24)	(22)	(21)
			Total LPG & NGL	Total Diesel Fuel & Distillate Fuel Oil	Residual Fuel Oil
			\downarrow	↓ ↓	\downarrow
14.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>natural</u> <u>gas</u> ?	570	Gallons	Barrels	Barrels
15.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>total</u> <u>diesel fuel and distillate fuel oil</u> ?	590	Gallons		Barrels
16.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>liquefied</u> <u>petroleum gas (LPG)</u> ?	610		Barrels	Barrels
17.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by <u>residual</u> <u>fuel oil</u> ?	630	Gallons	Barrels	
18.	Of the quantity reported as switchable in question 9 what is the maximum amount that could have been replaced by any other energy source not already asked about?	650	Gallons	Barrels	Barrels
	Please Specify:	990			

Fuel Switching Capability: Total LPG & NGL, Diesel & Distillate and Residual

What is the lowest percentage of price difference of the less expensive substitute that would cause your establishment to switch from this fuel, regardless of whether or not your establishment actually switched energy sources during 2006 or did so because of a less expensive substitute? (If you have more than one possible alternative for the energy source, choose the fuel that would be your most preferred alternative.)

The formula for percentage of price difference is:

- Percent of Price Difference = ((PC-PA)/PC) * 100%
- Where PC=Price per British thermal unit of current fuel
- PA=Price per British thermal unit of alternative fuel

		"Census Use Only"	(24)	(22)	(21)
		622	Total LPG & NGL	Total Diesel Fuel & Distillate Fuel Oil ↓	Residual Fuel Oil ↓
			✓ Check one for each	ch energy source (d	column) reported
19.	Would not switch regardless of pr difference.	rice			
	Would switch at price difference 1 percent.				
	Would switch at price difference 1 percent.	11-25			
	Would switch at price difference 2 percent.	26-50			
	Would switch at price difference of percent.	over 50		5	5
	Reasonable estimates cannot be pr	rovided.			
	Would switch to the more expensi substitute if price premium were reasonable.	ve			

For Questions 19 through 30: Please mark only one answer for each energy-management question.					
19.	Does this establishment have an energy mana direct or plan energy strategies relating to energy within the establishment)	1 □ Yes -► 2 □ No {13460} 3 □ Don't Know			
20.	Does your establishment set goals for improv	1 □ Yes → 2 □ No {13470} 3 □ Don't Know			
21.	Does your establishment measure and monitor product? (i.e. lbs of steam needed per unit of	1□Yes → 2□ No {13471} 3□ Don't Know 4□ Not Applicable (NA)			
22.	Does your establishment have dedicated staff monitor and maintain the condition of steam	1 □ Yes → 2 □ No {13472} 3 □ Don't Know 4 □ Not Applicable (NA)			
23.	Does your establishment have a formal steam system maintenance program that includes the following activities:	a. At least annual testing of all steam traps	$1 \square Yes \rightarrow$ $2 \square No {13473}$ $3 \square Don't Know$ $4 \square Not Applicable (NA)$		
		b. Maintaining a steam trap database	1 □ Yes → 2 □ No {13474} 3 □ Don't Know 4 □ Not Applicable (NA)		
		c. At least annual inspections and repairs of steam leaks	1 □ Yes → 2 □ No {13475} 3 □ Don't Know 4 □ Not Applicable (NA)		
24.	Does your establishment measure oxygen and boiler and other fuel fired heating equipment	¹ □Yes → ² □ No {13476} ³ □ Don't Know			
25.	Does your establishment use the flue gases fr combustion air, preheat charge equipment/ma your establishment?	1 □ Yes → 2 □ No {13477} 3 □ Don't Know			
26.	Does your establishment's process heating system maintenance program include the following activities?	a. Furnace inspections to seal openings and repair cracks and damaged insulation in furnace walls, doors, etc.	1 □ Yes → 2 □ No {13478} 3 □ Don't Know		
		b. Cleaning of heat transfer surfaces to avoid build up of soot, scale, or other material.	1 □ Yes → 2 □ No {13479} 3 □ Don't Know		
		c. Inspecting, calibrating, and adjusting temperature/pressure sensors, controllers, valve operators, etc.	1 □ Yes → 2 □ No {13480} 3 □ Don't Know		
27.	Do you keep an inventory of all motors in yo	1 □ Yes → 2 □ No {13481} 3 □ Don't Know			
28.	Have you conducted a plant-wide study to ide systems in your establishment?	1 □ Yes → 2 □ No {13482} 3 □ Don't Know			
29.	Does your establishment have staff or equipn compressed air system leaks?	¹ □Yes → ² □ No {13483} ³ □ Don't Know			
30.	Does your establishment track the amount of	¹ □Yes → ² □ No {13484} ³ □ Don't Know			

Energy-Management Activities

Energy-Management Activities

For questions 1 through 8:

Indicate with a "yes" or a "no" under the "Participate?" column whether your establishment participated in or used the specified type of energy-management assistance between January 1, 2006 and December 31, 2006.

For any assistance for which you marked "yes", please mark the source(s) of assistance.

"In-house" means your establishment or company provided the energy-management assistance.

"Utility/Energy Supplier" refers to either your electricity, natural gas, or other energy supplier/provider.

"Product or Service Provider" includes any other third party product or service provider/supplier such as an equipment vendor, energy service company, or maintenance service company.

"Federal Program" includes assistance provided by federal government programs or agencies such as the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP).

"State or Local Program" includes all assistance provided by a state, city, or county government program or agency.

			Source of Assistance (check all that apply)					
	Type of Energy- Management	Doutisin sta9	In-house	Utility/ Energy	Product or Service	Federal Program	State or Local	Don't Know
	Assistance	Participate? {13}	{15}	Supplier {16}	Provider {17}	{18}	Program {19}	{32}
1.	Energy audit or assessment	${}_{1}\Box Yes \blacktriangleright$ ${}_{2}\Box No \{060\}$	3	4	7	8	9□	6
2.	Technical assistance (e.g., consultation, demonstrations, engineering design or analysis)	1 □ Yes- 2 □ No {070}	3	4	7	8	9	6
3.	Technical information (e.g., software, reference material)	$1^{\Box} Yes \blacktriangleright$ $2^{\Box} No \{072\}$	3	4	7	8	9	6
4.	Training (e.g., workshops, seminars, presentations)	${}_{1} \square \text{Yes} \blacksquare$ ${}_{2} \square \text{ No} \{074\}$	3	4	7	8	9	6
5.	Financial assistance (e.g., loans, tax credits, rebates, subsidies)	${}_{1} \square \text{Yes} \blacksquare$ ${}_{2} \square \text{ No } \{076\}$	3	4	7	8	9	6
6.	Electricity load control	$ {}_{1}\Box Yes \blacktriangleright $ $ {}_{2}\Box No \{080\} $	3	4	7	8	9□	6
7.	Power factor correction or improvement	${}_{1} \square \text{Yes} \blacksquare$ ${}_{2} \square \text{ No } \{380\}$	3	4	7	8	9	6
8.	Equipment installation or retrofit for the primary purpose of using a different energy source (e.g., electrification) Exclude modifications made primarily for energy efficiency; those should be included in questions 12 – 18.	1 □ Yes→ 2 □ No {240}	3 🗆	4 🗆	7	8 🗆	9 🗆	6 🗆

Energy-Management Activities

	Type of Energy-		Source of Assistance (check all that apply)					
	Management Assistance	Participate? {13}	In-house {15}	Utility/ Energy Supplier	Product or Service Provider	Federal Program	State or Local Program	Don't Know {32}
).	Standby generation	1□Yes► 2□ No {260}	3	4 ^[16]	{17} 7	8	{19} 9□	6
10.	Special rate schedule (e.g., interruptible or time-of-use)	$\begin{array}{c} 2 \square \operatorname{No} \{200\} \\ 1 \square \operatorname{Yes} \\ 2 \square \operatorname{No} \{100\} \end{array}$		4	7			6
1.	Interval metering needed to manage energy use for programs such as real-time pricing	$1^{\Box} Yes \rightarrow$ $2^{\Box} No \{250\}$		4	7□			6
ndicate iny reti 31, 200	e with a "yes" or a "no" und rofits for the primary purpo 6. For any activity for whi defined above question 1.	se of improving er	nergy efficien	cy for the indic	ated system be	etween Januar	y 1, 2006 and I	December
				Source	of Assistance	(check all tha	at apply)	
	System	Installed Equipment or Retrofit? {13}	In-house {15}	Utility/ Energy Supplier {16}	Product or Service Provider {17}	Federal Program {18}	State or Local Program {19}	Don't Know {32}
12.	Steam production/system	₁□Yes►			7	8	9	6
	(e.g., boilers, burners, insulation, piping)	$_2\square$ No {120}	3	4	7	8	9	0
13.		$_{2}$ □ No {120} $_{1}$ □ Yes $_{2}$ □ No {450}	3 □ 3 □	4	70	8	9 9	6□ 6□
	insulation, piping) Compressed air systems (e.g., compressors, sizing,	₁□Yes►						
14.	insulation, piping) Compressed air systems (e.g., compressors, sizing, leak reduction) Direct/indirect process heating Direct process cooling,	$1 \square Yes \rightarrow$ $2 \square No {450}$ $1 \square Yes \rightarrow$	3 🗆	4	7	8	_و	6
14. 15.	insulation, piping) Compressed air systems (e.g., compressors, sizing, leak reduction) Direct/indirect process heating Direct process cooling, refrigeration Direct machine drive (e.g., adjustable-speed drives, motors, pumps,	$1 \square Yes \rightarrow$ $2 \square No {450}$ $1 \square Yes \rightarrow$ $2 \square No {140}$ $1 \square Yes \rightarrow$	3 [] 3 []	4	7 🗆	8 -	9 [] 9 []	6
13. 14. 15. 16. 17.	insulation, piping) Compressed air systems (e.g., compressors, sizing, leak reduction) Direct/indirect process heating Direct process cooling, refrigeration Direct machine drive (e.g., adjustable-speed	$1 \bigcirc Yes \rightarrow$ $2 \bigcirc No \{450\}$ $1 \bigcirc Yes \rightarrow$ $2 \bigcirc No \{140\}$ $1 \bigcirc Yes \rightarrow$ $2 \bigcirc No \{160\}$ $1 \bigcirc Yes \rightarrow$	3 □ 3 □ 3 □	4	7	8	9 [] 9 [] 9 []	6

Energy Technologies

Energy Technologies							
1.							
a.	Computer control of building-wide environment (e.g.,						
	space-heating equipment, cooling equipment, lights).	14010	$\square_2 \mathbf{N} 0$				
		11010	D ₂ No				
b.	Computer control of processes or major energy-using						
0.	equipment (e.g., boilers, furnaces, conveyors used in the						
	manufacturing process).	14020					
			D ₃ Don't Know				
c.	Waste heat recovery.		U ₁ Yes				
		14030	$\square_2 \mathbf{No}$				
			D ₃ Don't Know				
d.	Adjustable-speed motors.		\square_1 Yes				
		14040	$\square_2 No$				
			D ₃ Don't Know				
e.	Oxy-fuel firing.		\square_1 Yes				
		14950	$\square_2 NO$				
			D ₃ Don't Know				
2.	Were any of the following technologies associated with cogeneration in use at your establishment anytime during 2006?						
a.	Steam turbines supplied by either conventional or						
	fluidized bed boilers.	1 10 10					
		14042					
			J Don't Know				
b.	Conventional combustion turbines with heat recovery.						
		14043					
			D ₃ Don't Know				
с.	Combined-cycle combustion turbines		$\square_1 $ Yes				
		14044	$\square_2 No$				
			Don't Know				
d.	Internal combustion engines with heat recovery.						
		14045	$\square_2 No$				
			D ₃ Don't Know				

Energy Technologies

e.	Steam turbines supplied by heat recovered from high- temperatures processes.	14046	□ 1 Yes □ 2 No □ 3 Don't Know
1			

Establishment Size and Remarks

		Establishment Size		
1.	How many buildings were on this establishment site as of December 31, 2006?		"Census Use Only"	
	Buildings include: structures enclosed by walls extending from the foundation to the roof, parking garages, even if not totally enclosed by walls and a roof, or structures erected on pillars to elevate the first fully enclosed level.		17010	Number of Buildings
	Excluded buildings are: structures (other than the exceptions noted above) that are not totally enclosed by walls and a roof, mobile homes and trailers, even if they house manufacturing activity, structures not ordinarily intended to be entered by humans, such as storage tanks, or non-buildings that consume energy (such as pumps and constructions sites).			
			17020	U 1 Don't Know.
2.	What was the approximate total enclosed square footage of the buildings located on this establishment site as of December 31, 2006?		13010	
				Total square feet
		Remarks	13011	\square 1 Don't Know.
3.	additio label o	use this space for any explanations that may be essential onal space is needed, attach a separate sheet, including th on the front of this questionnaire.		
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