

**FORM EIA-923
POWER PLANT
OPERATIONS REPORT**

**OMB No. 1905-0129
Approval Expires: 03/31/2020
Burden Hours: 2.41**

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

NOTICE: This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). Failure to comply may result in criminal fines, civil penalties and other sanctions as provided by law. For further information concerning sanctions and data protections, see the provision on sanctions and the provision concerning confidentiality of information in the instructions. Title 18 USC 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.

	Yes	No
Is this a regulated utility power plant? (yes/no)		
Is this a combined heat and power plant? (Yes/No)		

For combined heat and power (CHP) plants:

Enter the total plant efficiency of the combined heat and power plant:	
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SCHEDULE 1. IDENTIFICATION

Survey Contact: (The person filling out the form)

First Name:		Telephone:	
Last Name:		FAX:	
Title:		Email:	

Survey Contact's Supervisor: (The supervisor of the person filling out the form)

First Name:		Telephone:	
Last Name:		FAX:	
Title:		Email:	

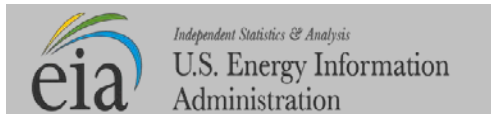
Company and Plant:

Company Name:		City:	
Plant Name:		State:	(USPS 2-digit Abbreviation)
Plant ID:		Zip Code:	(5 digits)
Plant County:			
Address:			

If you have any questions about or problems with the online filing system or if you need to correct or update any of the information on this page, please contact EIA at EIA-923@eia.gov. For questions regarding the data requested on the form, please contact:

Schedule 1: EIA-923@eia.gov

Schedules 3 and 4: [Ron Hankey](#)



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Schedule 2: [Joy Liu](#)

Schedules 6, 7, and 8: [Chris Cassar](#)

SCHEDULE 2. COST AND QUALITY OF FUEL PURCHASES - PLANT LEVEL

Required respondents:

1. Plants with one or more generating units primarily fueled by coal, natural gas, petroleum coke, distillate fuel oil, or residual fuel oil. Primary Fuel for each generator is reported on the Form EIA-860 and the total generator nameplate capacity with a Primary Fuel of coal is 50 megawatts or greater; or the total generator nameplate capacity with a Primary Fuel of any combination of natural gas, petroleum coke, distillate fuel oil, or residual fuel oil is 200 megawatts or greater.
2. Fuel transfer terminals and storage facilities serving generating plants, if the fuel purchases cannot be reported at the plant level. (See instructions)

PART A: CONTRACT INFORMATION, PURCHASES, AND COSTS

PURCHASES OF COAL, NATURAL GAS PETROLEUM PRODUCTS, AND PETROLEUM COKE:

Contract Information:

Fuel Supplier Name: Select from drop down list. If not on list, select "Name Pending" and provide name on Schedule 9.

Contract Type or Tolling Agreement: Select one of the following codes from the drop-down list: "C" for Contract; "S" for Purchase; "NC" for New Contract or Renegotiated Contract Purchase, or "T" for Tolling Agreement.

Expiration Date: Report contract expiration date

Fuel Purchases:

Energy Source: Report purchases of coal, natural gas, petroleum products, and petroleum coke.

Quantity: Report the quantity of each fuel purchase received for the use of electricity generation.

Units: Report the quantity of solid fuels purchased (in short tons). Report the quantity of liquid fuels purchased (in barrels). Report the quantity of gas purchased (in thousand cubic feet).

Average Cost per Unit:

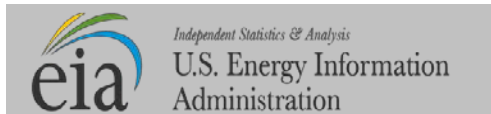
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Total Delivered Cost and Commodity Cost: Report as cents per million Btu. Round to the nearest 0.1 cent.

Report purchases of coal, natural gas, petroleum products, and petroleum coke here:

Contract Information			Purchases		Cost (Cents per million Btu to the nearest 0.1 cent.)	
Fuel Supplier Name	Purchase Type or Tolling Agreement	Contract Expiration Date (MMYY)	Energy Source	Quantity	Total Delivered Cost	Commodity Cost



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SCHEDULE 2. PART B. QUALITY AND TRANSPORTATION OF COAL, PETROLEUM PRODUCTS, AND PETROLEUM COKE

Supplier, Purchase Type, Energy Source and Quantity are carried over from PART A.

Quality of Fuel as Received: (See Table 1 in the instructions for typical ranges for fuel quality values.)

Average Heat Content: For all fuels, report the actual (not contractual) average Btu content for each fuel purchase in million (MMBtu) per ton, barrel or thousand cubic feet. Present data values to the nearest 0.001 MMBtu.

Sulfur Content: Report for coal, petroleum coke, and residual oil as a percentage by weight rounded to the nearest 0.01 percent.

Ash Content: Report for Coal and Petroleum Coke as a percentage by weight rounded to the nearest 0.01 percent.

Moisture Content: Report for coal as a percentage by weight rounded to the nearest 0.01 percent.

Mercury and Chlorine Content: Report for coal in parts per million (ppm) rounded to the nearest 0.001 ppm. If unknown, check the appropriate box for Mercury or Chlorine is unavailable.

Fuel Transportation:

Primary Mode: Select the primary mode of transport defined as the mode over the longest distance. A list of codes is available in the instructions.

Secondary Mode: Mode of transport over the second-longest distance.

Contract Information for Natural Gas Purchases:

Natural Gas Supply Contract Type and Natural Gas Delivery Contract Type: Select "F" if delivery or supply service is provided on a firm basis or "I" if delivery or supply service is provided on an interruptible basis.

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Purchases (From Schedule 2, Part A)				Quality of Fuel as Received								Fuel Transportation		Natural Gas Contract Information	
Fuel Supplier	Purchase Type	Energy Source	Quantity	Average Heat Content (High Heating Value) (MMBtu/unit)	Sulfur Content (% weight)	Ash Content (% weight)	Moisture Content (% weight)	Mercury Content		Chlorine Content		Primary Mode	Secondary Mode	Supply Contract Type	Delivery Contract Type
								Mercury Content (ppm)	Check if Mercury Content is Not Available	Chlorine Content (ppm)	Check if Chlorine Content is Not Available				
									<input type="checkbox"/>						

SCHEDULE 2. PART C. COAL MINE INFORMATION

Supplier, Purchase Type, Energy Source and Quantity are carried over from PART A.

Coal Mine Information (required for each purchase of coal during the reporting period)

Coal Mine State: Select the two-letter U.S. Postal Service abbreviation or country code from the drop down list of coal producing states or countries.

Mine Information: Select the mine of origin from the drop-down list. Data for Mine MSHA ID, Type, Name and County will be populated based on the choice of mine from the list. Only mines in the selected Mine State are displayed. Contact EIA for assistance if an appropriate choice for the mine(s) is not included in the look-up list.

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Plant ID:		Reporting Period:	(MM) (YYYY)

Purchases (From Schedule 2, Part A)				Coal Mine Information				
Fuel Supplier	Purchase Type	Energy Source	Quantity	Coal Mine State	Coal Mine MSHA ID	Coal Mine Type	Coal Mine Name	Coal Mine County

SCHEDULE 3. PART A. BOILER AND GENERATOR INFORMATION FOR STEAM-ELECTRIC PLANTS FUEL CONSUMPTION AND GENERATION

Required Respondents: Plants with a total steam nameplate capacity of 10 megawatts or more report for each month. Respondents with total steam-fired nameplate capacity of less than 10 MW report an annual number (not broken down by month).

Report fuel consumption for each boiler and electric power generation for each generator. Boiler and Generator IDs must match those reported on Form EIA-860. If no fuel is consumed or electricity generated in a reporting period, enter zero. Do not leave blank. See instructions.

Fuel Consumption:

Prime Mover Code: Only Steam Turbine (ST) is used on Schedule 3, Part A.

Boiler ID and Boiler Status: Boiler ID is pre-populated, or choose from the drop down list of Boiler IDs as reported on Form EIA-860. Report changes in the boiler status using options provided in a dropdown list.

Energy Source: Select energy source code from the drop down list. A detailed list of codes and descriptions is found in Table 8 of the instructions. If OTH, OBS, OBG, OBL or OG is selected, specify the actual energy source in the text box at the bottom of the table.

Quantity Consumed: Report the amount of fuel consumed in the boiler for each energy source. Units are populated automatically. Solid fuels are in tons, liquids in barrels, and gases in Mcf.

Average Heat Content: Report average heat content (higher heating value) for fuel as burned. Report in MMBtu per short ton for solid fuels; in MMBtu per barrel for liquids; and MMBtu per thousand cubic feet (Mcf) for gases rounded to the nearest 0.001 MMBtu per unit.

Sulfur Content: Report for coal, petroleum coke, and residual oil as a percentage by weight to the nearest 0.01 percent.

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Ash Content: Report for Coal and Petroleum Coke the percentage of ash by weight to the nearest 0.1 percent.

Generation:

Generator ID and Generator Status: Generator ID is pre-populated, or choose from the drop down list of Generator IDs as reported on Form EIA-860. Report changes in the generator status using options provided in a dropdown list.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal, in megawatthours rounded to the nearest whole number.

Net Generation: Net generation is the gross generation minus the parasitic station load, i.e. station use, in megawatthours.

Fuel Consumption Table								
Prime Mover Code	Boiler ID	Boiler Status	Energy Source*	Quantity Consumed	Units	Average Heat Content (Higher Heating Value)	Sulfur Content	Ash Content
ST								

*Specify energy source for OTH, OBS, OBL, OBG, and OG

Electricity Generation Table			
Generator ID	Generator Status	Gross Generation (MWh)	Net Generation (MWh)

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

**SCHEDULE 3. PART B. FUEL AND GENERATION INFORMATION FOR SINGLE CYCLE GAS TURBINES,
INTERNAL COMBUSTION ENGINES, HYDROELECTRIC PUMPED STORAGE, AND OTHER ENERGY STORAGE TECHNOLOGIES**

Required Respondents: Plants with single cycle combustion turbines, IC engines, pumped storage hydroelectric and other energy storage technologies such as compressed air or batteries that deliver electric power. Annual respondents report data for the calendar year (do not break down by month).

Report at the prime mover level summing data for all units of the same prime mover type. Annual respondents report calendar year data. If no fuel is consumed in a reporting period, enter zero. Do not leave blank. See instructions.

Fuel Consumption:

Prime Mover Code: Choose from the following codes.

GT - Single cycle gas turbines

IC - Internal combustion engines

FC - Fuel Cells

PS - Reversible (pumped storage) hydraulic units

CE - Compressed air units (CE)

BA - Battery electric storage units

FW - Flywheel electric storage units.

OT - Other miscellaneous prime mover types if not reported on Schedule 3D.

Energy Source: Select energy source code from the drop down list. A detailed list of codes and descriptions is found in Table 8 of the instructions. If OTH, OBS, OBG, OBL or OG is selected, specify the actual energy source in the text box at the bottom of the table.

Quantity Consumed: Report the amount of fuel consumed for electric power generation and if a CHP, for other useful thermal output. If no fuel was consumed in this reporting period, report a zero; do not leave blank.

Units: Report fuel consumption in tons for solids, barrels for liquids, Mcf for gases or in megawatthours for energy used for storage technologies such as pumped storage hydroelectric, compressed air or other energy storage technologies.

Average Heat Content: Report average heat content (higher heating value) for fuel as burned. Report in MMBtu per short ton for solid fuels; in MMBtu per barrel for liquids; and MMBtu per thousand cubic feet (Mcf) for gases rounded to the nearest 0.001 MMBtu per unit.

Generation:

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Prime Mover Code: Report for codes GT, IC, FC, PS, CE, BA, FW, and OT.

Peaking Unit (Yes/No): Enter "Y" if the unit(s) can be described as a "peaking unit" as opposed to a base load unit; and "N" if the unit cannot be described as a "peaking unit."

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal, in MWh.

Net Generation: Net generation is the gross generation minus the parasitic station load, i.e. station use, in MWh.

For pumped storage hydroelectric, report net and gross generation and MWh consumption in the following relationship: Net generation (MWh) = Gross Generation (MWh) – Energy Consumed for storage/pumping (MWh).

Fuel Consumption Table					Electricity Generation Table			
Prime Mover Code	Energy Source*	Quantity Consumed	Units	Average Heat Content (Higher Heating Value)	Prime Mover Code	Peaking Unit (Yes/No)	Gross Generation (MWh)	Net Generation (MWh)

*Specify energy source for OTH, OBS, OBL, OBG, and OG.

SCHEDULE 3. PART C. FUEL AND GENERATOR INFORMATION FOR COMBINED-CYCLE PLANTS

Fuel Consumption:

Prime Mover: Report for single-shaft combined cycle (CS), combustion turbines (CT) and steam turbines (CA) in combined cycle configurations.

Generator or HRSG ID and Status: IDs are prepopulated, or choose from the drop down list from the IDs provided on the Form EIA-860. Contact EIA if an ID needs to be added.

Plant Name:		Plant State:	(USPS Abbreviation)
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Energy Source: Select energy source code from the drop down list. A detailed list of codes and descriptions is found in Table 8 of the instructions. For heat recovery steam generators (HRSG) that do NOT utilize supplemental firing, use energy source code WH and leave quantity consumed blank.

If **OTH, OBS, OBG, OBL or OG** is selected, specify the actual energy source in the text box at the bottom of the table.

Fuel Consumption: Report fuel consumed in each combustion turbine and each heat recovery steam generator (HRSG) if supplemental firing is utilized. If the HRSG does not use supplemental firing, report the energy source as WH and leave the consumption blank.

Quantity Consumed: Report fuel quantities for each HRSG and each combustion turbine. IGCC units report the synthesis gas consumed in the combustion turbine and see below for fuel consumed in the gasifier.

Units: Report solids in tons, liquids in barrels and gases in Mcf.

Average Heat Content: Report average heat content (higher heating value) for fuel as burned. Report in MMBtu per short ton for solid fuels; in MMBtu per barrel for liquids; and MMBtu per thousand cubic feet (Mcf) for gases rounded to the nearest 0.001 MMBtu per unit.

Generation:

Prime Mover: See above.

Generator ID: Generator IDs are prepopulated and must match the ID provided on the Form EIA-860.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal, in megawatthours rounded to the nearest whole number.

Net Generation: Net generation is the gross generation minus the parasitic station load, i.e. station use, in megawatthours.

Fuel Consumption Table						
Prime Mover Code	HRSG or Generator ID	Status	Energy Source	Quantity Consumed	Units	Average Heat Content (Higher Heating Value)
CS						
CT						
CA						
*Specify energy source for OTH, OBS, OBL, OBG, and OG.						

Electricity Generation Table			
Prime Mover Code	Generator ID	Gross Generation (MWh)	Net Generation (MWh)
CS			
CT			
CA			

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

SCHEDULE 3, PART C. FUEL AND GENERATOR INFORMATION FOR COMBINED-CYCLE PLANTS (continued)

IGCC PLANTS GASIFIER FUEL CONSUMPTION

Required Respondents: IGCC Plants.

Consumption:

Gasifier ID: Report a unique identifier for the gasifier(s). Note gasifier IDs are not required on the Form EIA-860. Once reported, subsequent years will have the Gasifier ID prepopulated.

Energy Source: Select the energy source code for the fuel input to the gasifier unit — coal or petroleum coke.

Quantity Consumed: Enter the quantity of fuel consumed.

Units: Report solid fuel in short tons.

Average Heat Content: Report average heat content (higher heating value) for fuel as burned. Report in MMBtu per short ton for solid fuels.

Sulfur Content: Enter the sulfur content of the fuel in terms of percent sulfur by weight, to the nearest 0.01 percent.

Ash Content: Enter the ash content of the fuel in terms of percent ash by weight, to the nearest 0.1 percent.

IGCC PLANTS						
Fuel Consumption Data for Gasifier Unit(s)						
Gasifier ID	Energy Source	Quantity Consumed	Units	Average Heat Content (High Heating Value)	Sulfur Content	Ash Content

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

SCHEDULE 3. PART D.

Required Respondents: Wind, solar, nuclear, conventional hydroelectric and geothermal plants as well as plants using waste heat or purchased steam as the sole energy source. Nuclear plants report for each unit, and all others report by prime mover and energy source types.

Prime Mover Code: Prime mover codes are prepopulated, or can be chosen from the drop down list.

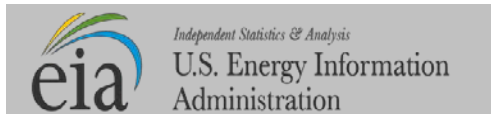
Energy Source: Select the energy source code from the drop down list.

Gross Generation: Enter the total amount of electric energy produced by generating units and measured at the generating terminal, in megawatthours rounded to the nearest whole number.

Net Generation: Net generation is the gross generation minus the parasitic station load, i.e. station use, in megawatthours.

Industrial and Commercial Combined Heat and Power plants (CHP): Where net generation cannot be determined, report gross generation, leave net generation blank and provide a comment on Schedule 9. Note that net generation is gross generation minus the power plant's parasitic load (auxiliary equipment) and is NOT the sales to the grid.

Generation Table				
Prime Mover Code	Energy Source	Nuclear Unit Code	Gross Generation (MWh)	Net Generation (MWh)



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SCHEDULE 4. PART A. FOSSIL FUEL STOCKS AT THE END OF THE REPORTING PERIOD FOR COAL, PETROLEUM COKE, DISTILLATE FUEL OIL, AND RESIDUAL FUEL OIL.

Required Respondents: Plants with one or more generating units primarily fueled by coal, natural gas, petroleum coke, distillate fuel oil, or residual fuel oil must report if their total generator nameplate capacity with a primary fuel of coal is 50 or more MW, or if their total generator nameplate capacity with a primary fuel of any combination of natural gas, petroleum coke, distillate fuel oil, or residual fuel oil is 200 MW or greater, (The primary fuel for each generator is reported on the Form EIA-860.) Plants that meet this criteria are required to report their stocks at the end of each reporting period. If Schedule 2, Cost and Quality of Fuel Purchases, is not required, no adjustment to the stocks is required and the fuel balance is not applicable.

Do not report stocks for waste coal, natural gas, biomass, or for any other petroleum products other than distillate fuel oil or residual fuel oil.

Energy Source and Units: Select energy source code from the drop down list. A detailed list of codes and descriptions is found in Table 8 of the instructions. Report solids in short tons and liquids in barrels. End of Prior Year/Month Stocks, Receipts and Consumption are pre-populated from previously reported data on current Schedules 2 and 3 and prior reporting period Schedule 4A. If required, please complete receipts on Schedule 2 and Consumption on Schedule 3A to 3C prior to completing Schedule 4A. For plants not required to complete Schedule 2, these data fields will be blank and are not required to be completed.

End of Current Month/Year Stocks: Report the tons or barrels of fuel on site at the end of the reporting period. Do not include fuels in transit. Do not leave blank. Enter zero if appropriate.

Adjustments to Stocks: Report fuel not accounted for by consumption on Schedule 3A to 3C. Adjustments to stocks include recalibration of stockpiles, transfers to and from central fuel storage terminals, sales or transfers to other entities or plants or onsite use for purposes other than electricity generation. The adjustment should create a zero fuel balance for plants required to complete Schedule 2, fuel receipts. Neither is the Balance applicable to Natural Gas, which is not required on Schedule 4A. Adjustments to Stocks may be negative or positive. All adjustments must have a corresponding comment entered at the bottom of the table.

Fuel Balance: The balance is applicable only to coal and oil stocks where Schedule 2, Fuel Purchases, is also reported. The balance for coal and oil stocks must be zero. If needed, enter an adjustment and comment to bring the balance to zero. Balance is calculated as follows:

$$\text{Balance} = \text{End of Current Month/Year Stocks} - [\text{Prior Month/Year Stocks} + \text{Receipts} - \text{Consumption} + \text{Adjustments to Stocks}]$$

Energy Source	Units	End of Prior Month/Year Stocks	Receipts	Consumption	End of Current Month/Year Stocks	Adjustments to Stocks	Fuel Balance
Energy Source	Comments for Adjustments						

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SCHEDULE 4. PART B. FOSSIL FUEL DISTRIBUTION FROM CENTRAL FUEL TERMINALS TO POWER PLANTS

Required Respondents: Central fuel distribution terminals that purchase fossil fuels for distribution to the utility's power plants. Report distributions of coal, residual oil (No. 5 and No. 6 fuel oils), distillate-type oils (No. 2 oil, jet fuel, and kerosene), natural gas, and petroleum coke. See instructions.

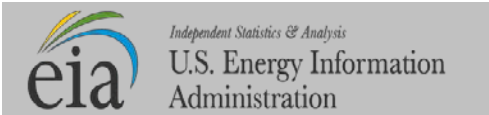
Plant ID: Enter the Plant ID for the plant to which fuels were distributed. The Plant ID will be prepopulated in subsequent months.

Plant Name: Enter the name of the plant to which fuels were distributed. The Plant Name will be prepopulated in subsequent months.

Fuel Type: Report fuel type using energy source codes. A list of codes can be found in the instructions in Table 8.

Quantity of Fuel Shipped to Plant: Report the quantities of each fuel type shipped to the listed plants. Report solid fuels in short tons, liquids in barrels and gases in Mcf. Enter zero if applicable. Do not leave fields blank.

FUEL TERMINAL – PLANT RELATIONSHIPS AND FUEL SHIPMENTS			
Plant ID A	Plant Name B	Fuel Type C	Quantity of Fuel Shipped to Plant D



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Schedule 5 is reserved for future use.

Plant Name:		Plant State:	(USPS Abbreviation)
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SCHEDULE 6. NONUTILITY ANNUAL SOURCE AND DISPOSITION OF ELECTRICITY

Required Respondents:

Nonutility plants (i.e., unregulated plants). Report calendar year data. Report all values in megawatthours (MWh). **See Instructions.**

Source of Electricity:

1. Gross Generation: Report the Total Gross Generation from all prime movers at the plant. Ensure that Total Gross Generation equals the sum of the Gross Generation reported each month on Schedules 3A to 3D.

2. Other Incoming Electricity: Report all incoming electricity to the facility from purchases, transfers, exchanges, or other arrangements.

3. Total Sources: The sum of gross generation and other incoming electricity. Total Source must equal Total Disposition.

Disposition of Electricity:

4. Station Use: Station Use is electricity that is used to operate an electric generating plant (e.g., parasitic loads form auxiliary equipment), regardless of whether the electricity is produced at the plant, or comes from another source).

5. Direct Use (Industrial and Commercial Sector Plants, both CHP and non-CHP): Report the amount of electricity consumed onsite for processes, such as manufacturing, district heating/cooling, hospital services and campus services, and uses other than power plant station use.

6. Total Facility Use: The sum of Station Use and Direct Use.

7. Retail Sales to Ultimate Customers: Report the amount of electricity sold directly to an end-use customer (i.e. energy consumed by the customer, onsite, and is not resold to other customers). A positive entry requires corresponding revenue data on Schedule 7B.

8. Sales for Resale: Report the amount of electricity sold for resale (wholesale sales). A positive entry requires corresponding revenue data on Schedule 7A.

9. Provided under Tolling Agreements: Report the amount of electricity provided under a tolling agreement.

10. Other Outgoing Electricity: Report all other outgoing electricity from the facility, such as transfers and exchanges.

11. Total Disposition: The sum of disposition items. Ensure that Total Disposition equals Total Sources.

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Types of Other Incoming Electricity: If a positive value is entered in (2), list all types of incoming electricity included in item (2). Types of Other Incoming Electricity may include purchases, tolling agreements, transfers, exchanges, or other arrangements.

Types of Other Outgoing Electricity: If a positive value is entered in Item (10), list all types of outgoing electricity included in Item (10), such as transfers, exchanges, or other types.

Sources of Electricity		Disposition of Electricity	
1. Gross Generation		4. Station Use	
2. Other Incoming		5. Direct Use	
		6. Total Facility Use (Total)	
		7. Retail Sales to Ultimate	
		8. Sales for Resale (MWh)	
		9. Provided under Tolling	
		10. Other Outgoing	
3. Total Sources		11. Total Disposition	
Total Sources must equal Total Disposition: Item 3 = Item 11.			

Types of Other Incoming Electricity	Types of Other Outgoing Electricity
List the types of incoming electricity included in Item 2. Other Incoming Electricity	List the types of outgoing electricity included in Item 10 Other Outgoing Electricity

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SCHEDULE 7.A. ANNUAL REVENUE FROM SALES FOR RESALE

Required Respondents: Nonutility (i.e. unregulated) plants that report sales for resale on Schedule 6, Item 8. (Report in thousand dollars. For example \$1,987,234 should be entered as 1,987.)

Sales for Resale are energy supplied to electric utilities, cooperatives, municipalities, federal and state electric agencies, power marketers, or other entities, for resale to end-use consumers.

Annual Revenue from Sales for Resale (\$000's):	
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SCHEDULE 7. PART B. ANNUAL RETAIL SALES, REVENUES AND NUMBER OF CUSTOMERS BY STATE

Required Respondents: Nonutility (i.e., unregulated) plants that report a positive value on Schedule 6, Item 7, Retail Sales. Report by state and end-use customer sectors (Residential, Commercial, Industrial, and/or Transportation).

Annual Retail Sales, Revenue, and Number of Customers:

State: Enter the postal code for the each state where the retail customers are located.

Retail sales: Electric power sold directly to end-use customers (i.e., the energy is consumed by the customer, onsite, and is not resold to other customers).

Revenue (\$000's): Enter in thousand dollars the associated revenue for the retail sales above.

Number of Customers: Enter the number of customers for the above retail sales.

State: (Postal Abbreviation)					
<input type="text"/>					
Item	Residential	Commercial	Industrial	Transportation	Total
Retail Sales (MWh)					
Revenue (\$000's)					
Number of Customers					

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Plant ID:		Reporting Period:	(MM) (YYYY)

State: (Postal Abbreviation)					
<input style="width: 100px; height: 20px;" type="text"/>					
Item	Residential	Commercial	Industrial	Transportation	Total
Retail Sales (MWh)					
Revenue (\$000's)					
Number of Customers					

SCHEDULE 8. ANNUAL ENVIRONMENTAL INFORMATION

Required Respondents: Thermolectric power plants with at least 10 MW of steam electric generating capacity are required to report on Schedule 8. PART C. Those with at least 100 MW nameplate steam electric generating capacity are required to report Schedule 8. PARTS A to D. Combined cycle and nuclear plants with at least 100 MW steam electric capacity are required to report PARTS A to D as applicable.

SCHEDULE 8. PART A. ANNUAL BY-PRODUCT DISPOSITION

Required Respondents: Thermolectric power plants with 100 MW or more steam electric capacity and produce combustion by-products. Select box if no combustion by-products were produced in this reporting period.

Report combustion by-product quantities in thousand tons rounded to the nearest 0.1 thousand ton. Report steam sales in million British Thermal Units (MMBtu). If actual data are unavailable, provide estimated data.

Disposal: Enter the quantity of combustion by-products disposed of in on-site landfills, on-site ponds or off-site disposal for the calendar year.

Beneficial Use: Enter the quantity of combustion by-products sold, or used either on or off site for beneficial use. If the sold or beneficially used quantities include by-products produced in previous calendar years and stored, provide a comment on Schedule 9.

Storage: Enter the quantities of combustion by-products produced in the calendar year and stored on site or off-site.

PCD = Particulate Control Device **FGD** = Flue Gas Desulfurization **FBC** = Fluidized Bed Combustion

IGCC = Integrated Gasification Combined Cycle

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<u>Combustion By-Product</u>	<u>Disposal</u>			<u>Beneficial Use</u>			<u>Storage</u>		<u>Total</u>
	<u>On-Site Landfill</u>	<u>On-Site Ponds</u>	<u>Disposal Off-Site</u>	<u>Sold</u>	<u>Used On- Site</u>	<u>Used Off- Site</u>	<u>Stored On- Site</u>	<u>Stored Off- Site</u>	
Fly ash from standard boiler/PCD units (0.1 thousand tons)									
Fly ash from units with dry FGD (0.1 thousand tons)									
Fly ash from FBC units (0.1 thousand tons)									
Bottom ash from standard boiler units (0.1 thousand tons)									
Bottom (bed) ash from FBC units (0.1 thousand tons)									
FGD gypsum (0.1 thousand)									
Other FGD by-products (0.1 thousand tons)									
Ash from coal gasification (IGCC) units (0.1 thousand tons)									
Other (specify by-product via comments on Schedule 9)									
Steam sales (MMBtu)									

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

SCHEDULE 8. PART B. FINANCIAL INFORMATION RELATED TO COMBUSTION BY-PRODUCTS

Required Respondents: Thermoelectric power plants with 100 MW or more steam electric capacity and produce combustion by-products.

See instructions. Report in thousand dollars. For example \$2,876,213.00 should be reported as 2876. O&M Expenditures and Revenue from Sales should have correspondence with the by-products reported on Schedule 8. Part A.

O&M Expenditures: Report the calendar year O&M Expenditures for each category of by-product.

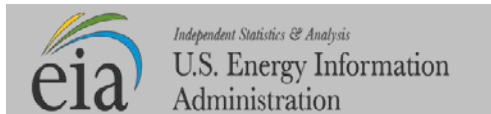
Capital Expenditures: Report the capital expenditures for air pollution, water pollution, solid waste and other pollution abatements during the calendar year.

By-Product Sales: Report the revenue from sales of combustion by-products during the calendar year.

<u>Operation and Maintenance (O&M) Expenditures During Year (\$000's)</u>						
<u>O&M Expenditure Type</u>	<u>Fly Ash</u>	<u>Bottom Ash</u>	<u>Flue Gas Desulfurization</u>	<u>Water Pollution</u>	<u>Other Pollution</u>	<u>Total</u>
	(1)	(2)	(3)	(4)	(5)	(6)
Collection						
Disposal						
Other						

<u>Capital Expenditures for New Structures and Equipment During Year, excluding Land and Interest Expense (\$000's)</u>				
<u>Capital Expenditure Type</u>	<u>Air Pollution Abatement</u>	<u>Water Pollution Abatement</u>	<u>Solid/Contained Waste</u>	<u>Other Pollution Abatement</u>
	(7)	(8)	(9)	(10)
Amount				

<u>Operation and Maintenance (O&M) Expenditures During Year (\$000's)</u>						
<u>By-Product Sales Revenue</u>	<u>Fly Ash</u>	<u>Bottom Ash</u>	<u>Fly and Bottom Ash Sold Intermingled</u>	<u>Flue Gas Desulfurization By-Product</u>	<u>Other By-Product Revenue</u>	<u>Total</u>
	(11)	(12)	(13)	(14)	(15)	(16)
Amount						



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Approval Expires: 03/31/2020
Burden Hours: 2.41**

Plant Name:		Plant State:	(USPS Abbreviation)
Plant ID:		Reporting Period:	(MM) (YYYY)

SCHEDULE 8. PART C. AIR EMISSIONS CONTROL INFORMATION

Required Respondents: Thermoelectric power plants with at least 10 MW nameplate steam electric generating capacity, including combined cycle plants. See instructions. Report operational data for emissions of sulfur dioxide (SO₂), nitrogen oxides (NO_x), particulates, mercury, and acid gases.

Environmental Equipment and/or Technology Type:

Equipment IDs (FGD, FGP or Boiler ID): Equipment IDs must match the ID reported on Schedule 6, Form EIA-860, "Annual Electric Generator Report." IDs are prepopulated. If a revision is needed, contact EIA.

Equipment or Technology Type: Enter the code for the type of emissions control equipment or technology. The equipment/technology type is prepopulated or can be chosen from a drop down list. Report NO_x control technologies with the associated boiler IDs.

Equipment Status: Enter the status from the drop down list.

Hours in Service: Enter the hours operated during the calendar year for each equipment or technology used for air emission control.

Nitrogen Oxide Control:

Annual NO_x Emissions Rate: Enter the average annual rate of nitrogen oxide emissions for the technology or equipment in pounds per million Btu.

Seasonal NO_x Emissions Rate (MAY to SEP): Enter the average rate of nitrogen oxide emissions for the technology or equipment in pounds per million Btu during the ozone season (May through September).

Particulate Matter Control:

Typical Particulate Matter Emissions Rate: Enter the average rate for particulate matter emissions associated with this equipment type in pounds per million Btu.

Particulate Removal Efficiency Rate at AOF: See instructions for Annual Operations Factor (AOF). Enter the removal efficiency for particulate matter associated with this equipment type as a percentage by weight to the nearest 0.1 percent.

Tested Efficiency Particulate Removal and Test Date: Enter the tested efficiency rate for this equipment at 100% load as a percentage by weight to the nearest 0.1 percent and the latest test date (MMYYYY).

Sulfur Dioxide (SO₂) Control:

Sulfur Dioxide Removal Efficiency Rate at AOF: See instructions for Annual Operations Factor (AOF). Enter the removal efficiency for sulfur dioxide associated with this equipment type as a percentage by weight to the nearest 0.1 percent.

Sulfur Dioxide Removal Tested Efficiency and Test Date: Enter the tested efficiency rate for this equipment at 100% load as a percentage by weight to the nearest 0.1 percent and the latest test date (MMYYYY).

Quantity of FGD Sorbent Used: Enter the quantity of sorbent used for sulfur dioxide control in this equipment in thousand tons rounded to the nearest 0.1 thousand.

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FGD Unit Electrical Energy Consumption: For FGD units (scrubbers) enter the amount of electricity consumed by the unit during the calendar year in megawatthours (MWh).

Mercury Removal Efficiency: Enter the efficiency for removal of mercury by this equipment as a percentage by weight to the nearest 0.1 percent.

Mercury Emissions Rate: Enter the rate of emissions of mercury by this equipment in pounds per trillion Btu.

HCl Removal Efficiency: Enter the efficiency for removal of Hydrogen Chloride or other acid gases by this equipment as a percentage by weight to the nearest 0.1 percent.

FGD Operation and Maintenance Expenditures

FGD ID: Enter the ID from the table above for each scrubber utilized for sulfur dioxide control.

O&M Expenditures, excluding electricity: Enter the expenditures to operate the FGD unit during the calendar year in thousand dollars. For example, \$234,872.00 should be entered as 235.

Annual Operations																	
<u>Environmental Equipment and/or Technology Type</u>				<u>Nitrogen Oxide (NOx) Control</u>		<u>Particulate Matter Control</u>				<u>Sulfur Dioxide (SO₂) Control</u>				<u>Mercury Control</u>		<u>HCl Removal Efficiency</u>	
Equipment IDs (FGD, FGP, or Boiler ID)	Equipment Type	Equipment Status	Hours in Service	Annual NOx Emissions Rate	Seasonal NOx Emissions Rate (May to Sep)	Typical Particulate Matter Emissions Rate (Annual Average)	Particulate Removal Efficiency Rate at AOF	Tested Efficiency Particulate Removal (at 100% Load)	Test Date	Sulfur Dioxide Removal Efficiency Rate at AOF	Sulfur Dioxide Removal Tested Efficiency (at 100% Load)	Test Date	Quantity of FGD Sorbent Used	FGD Unit Electrical Energy Consumption	Mercury Removal Efficiency	Mercury Emissions Rate	HCl Removal Efficiency
				(lbs/MMBtu)		(lbs/MMBtu)	(nearest 0.1% by weight)		(MM YYYY)	(nearest 0.1% by weight)		(MM YYYY)	(Nearest 0.1 thousand tons)	(MWh)	(nearest 0.1% by weight)	(lbs/TBtu)	(nearest 0.1% by weight)

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FGD Operation and Maintenance Expenditures During Year, Excluding Electricity (Thousand Dollars)					
FGD ID	Feed Materials and Chemicals	Labor and Supervision	Waste Disposal	Maintenance, Materials, and All Other Costs	Total

SCHEDULE 8. PART D. MONTHLY COOLING SYSTEM INFORMATION

Required Respondents: Thermoelectric power plants with a steam-electric nameplate capacity of at least 100 megawatts, including nuclear and combined cycle plants.

See instructions! An expanded section for detailed information by cooling system type has been added to the instructions. Report water use data for each month. Rates are to be reported in gallons per minute (GPM). To convert water flow rates from cubic feet per second (CFS) to gallons per minute (GPM), use conversion factor: 1 CFS = 448.8 GPM. Report volumes of water in million gallons. If actual data are unavailable use estimates.

Cooling System ID: The cooling system IDs are prepopulated from the IDs reported on the Form EIA-860. Contact EIA if changes are needed. If water use data cannot be reported for each system, use PLANT for the ID and report aggregated data for the entire plant.

Cooling System Type: The types are prepopulated from the primary type as reported on the Form EIA-860. Contact EIA if changes are needed.

Cooling System Status and Hours in Service: Choose the status for each system from the drop down list. Report the hours in service during the month.

Amount of Chlorine (Elemental): Report the amount of elemental chlorine added to the cooling water system. To determine the elemental amount of chlorine in a compound, calculate the percentage by weight of Chlorine using the atomic weight for each element in the compound. If unable to do this, provide the compound name on Schedule 9 and the pounds used.

Average Monthly Rate of Cooling Water: Report rate of water flow in gallons per minute for each point in the system as described below and in the instructions. If unsure of the definitions please see the instruction or call EIA.

Diversion: The flow for water that is moved from a natural water body without immediate beneficial use for purposes such as filling a cooling pond, or adding water to a reservoir from which thermoelectric power water withdrawals can occur.

Withdrawal: The water that is removed from a water body (including cooling ponds) for cooling i.e. water that is used through the condenser. For cooling towers this will be the makeup water.

Discharge: The water that is returned to a natural water body or multi-use reservoir (not a cooling pond). Cooling tower blowdown that is diverted to treatment or evaporation ponds is not considered Discharge. Water that is returned to a water body from evaporative or blowdown treatment ponds is discharge. The water body may be a different water body from which the water was withdrawn. For zero discharge systems (recirculating systems), report zero in the discharge field. Do not report the water discharged back into the cooling pond for recirculation.

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Consumption: Water consumed through evaporative losses in cooling towers or cooling ponds. See the appendix illustrations for definitions specific to cooling system type.

Method of Measurement: Choose from the drop down list the method used to measure the flow rates or see instructions for a list of choices.

Cooling Water Temperature: Report the temperature in degrees Fahrenheit at intake and discharge points. Report an average monthly temperature and a maximum monthly temperature. If the source of cooling water is a well or municipal water system, do not complete the Cooling Water Temperature sections.

Method of Measurement: Choose from the drop-down list the method used to measure temperatures or see the instructions for a list of choices.

Volume of Cooling Water: For each movement of water (Diversion, Withdrawal, Discharge, and Consumption, as described above) report the volume of water in million gallons per month (to the nearest 0.001 million gallons).

Month (MM)	
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Cooling System ID	Cooling System Type	Cooling System Status	Hours in Service per Month	Amount of Chlorine (Elemental) Added (to nearest 0.001 thousand pounds)	Average Monthly Rate of Cooling Water (to nearest gallons per minute)					Cooling Water Temperature (degrees Fahrenheit)					Volume of Cooling Water (to nearest 0.001 million gallons per month)				
					Diversion	Withdrawal	Discharge	Consumption	Method of Measurement	Average at Intake	Maximum at Intake	Average at Discharge	Maximum at Discharge	Method of Measurement	Diversion	Withdrawal	Discharge	Consumption	

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SCHEDULE 9: COMMENTS

Record comments as instructed for each data item. Additional comments to explain data are encouraged. Identify each comment by Schedule, Part, and data item.

Schedule	Part	Item	Comment or Footnote

Generator Retirement Dates

Required Respondents: Those plants with generators that are scheduled to retire within the next twelve months from the due date of this form. Identify generators by the ID used on the Form EIA-860. Enter the month and year of expected retirement. Provide comments as needed.

Generator ID	Proposed Retirement Date	Comment