



<p>PURPOSE</p>	<p>Form EIA-923 collects information on the operation of electric power plants and combined heat and power (CHP) plants in the United States (see Required Respondents below). Data collected on this form include electric power generation, fuel consumption, fossil fuel stocks, delivered fossil fuel cost, combustion byproducts, operational cooling water data, and operational data for NOx, SO₂, particulate matter, mercury, and acid gas control equipment. These data are used to monitor the status and trends of the electric power industry and appear in U.S. Energy Information Administration (EIA) publications and public databases.</p>
<p>REQUIRED RESPONDENTS</p>	<p>Form EIA-923 is a mandatory report for all electric power plants and CHP plants that meet the following criteria:</p> <ol style="list-style-type: none"> 1) Have a total generator nameplate capacity (sum for generators at a single site) of 1 megawatt (MW) or greater; and 2) Where the generator(s), or the facility in which the generator(s) resides, is connected to the local or regional electric power grid and has the ability to draw power from the grid or deliver power to the grid. <p>To lessen the reporting burden, a sample of plants is collected on a monthly basis. Plants that are not selected to respond monthly must respond annually for the calendar year.</p> <p>In addition to power plants, facilities that do not generate electricity, but serve either as a transfer terminal or an offsite storage facility for fossil fuel stocks for generating stations, may be required to report on Form EIA-923.</p> <p>See instructions for each schedule for more specific filing requirements.</p>
<p>RESPONSE DUE DATE</p>	<p>Monthly respondents are required to file Schedules 1 through 4 and Schedule 9 of this form with EIA by the last day of the month following the reporting period. For example, if reporting for July, survey data are due to EIA on August 31.</p> <p>Supplemental respondents (those monthly respondents who file Schedules 6 through 8) are required to file the form on, or about, March 31, following the end of the reporting year.</p> <p>Annual respondents are required to file the form on, or about, the last day of February following the end of the reporting year. (Schedules 3A and 8D require monthly level data for the calendar year. All other schedules collect aggregated annual data for the calendar year.) Please note that EIA will make every effort to open the annual survey to respondents on the first business day of January. If EIA is late in opening its Internet Data Collection system the filing deadline will be extended day for day. Respondents will be notified by email of the delays and new survey opening date.</p>
<p>METHODS OF FILING RESPONSE</p>	<p>Submit your data electronically using EIA's secure e-File system. This system uses security protocols to protect information against unauthorized access during transmission.</p> <p>If you have not registered with the e-File Single Sign-On (SSO) system, send an email message requesting assistance to: EIA-923@eia.gov.</p> <p>If you have registered with SSO, log on at: https://signon.eia.gov/ssoserver/login</p> <p>If you are having a technical problem with logging into or using the e-File system, contact the Help Desk if you need an alternate means of filing your response, contact the Help Desk. Retain a completed copy of this survey form for your files.</p>



CONTACTS

E-File System Questions:

For questions related to the e-file system, see the help contact information immediately above, under the section for Methods of Filing Response.

Data Questions:

For questions about the data requested on Form EIA-923, contact:

Schedules 1 and 4: Chris Cassar christopher.cassar@eia.gov

Schedule 2: Rebecca Peterson rebecca.peterson@eia.gov

Schedules 3 and 5: Ron Hankey ronald.hankey@eia.gov

Schedules 6, 7, and 8: Orhan Yildiz orhan.yildiz@eia.gov

Form EIA-923 Fax: 202-287-1959, or 202-287-1960

Form EIA-923 Mailbox: eia-923@eia.gov



GENERAL INSTRUCTIONS

Revisions to Data Previously Reported through the e-File System

Submit revisions to data previously reported as soon as possible after the error or omission is discovered. Do not wait to revise data until the next reporting month's form is due. Revisions or adjustments to data should be made only to the survey month(s) to which they pertain (i.e., do not adjust the current month to reflect a revision or adjustment to a prior month submission).

- Log on to the e-File system, re-key revised data, indicate in Schedule 9 the nature and date of the revision, and resubmit the data. If the e-File form is locked, contact EIA to request the form be opened for revision.
- Remember to save and RESUBMIT (click on the SUBMIT button). Resubmitting will allow the validation edits to re-validate the revised data element(s).
- Send an e-mail message to eia-923@eia.gov indicating the following:
 - (1) the status of the data submission being a revision,
 - (2) the reporting month for which data is being revised,
 - (3) the data that has been revised, and
 - (4) the date of the revision.

Alternatively, if the e-File system has been closed for the reporting period, please send an email message containing your changes to eia-923@eia.gov, and indicate 'Revision' in subject line. Be sure to include your Plant ID, the specific revision, and the month that is being revised.

Revisions to Data Previously Reported by Facsimile or e-Mail Message

If you report via facsimile or email, you may send a corrected copy of the form, but be sure to indicate the four items, discussed above, in Schedule 9. Schedule 9 is for respondents to provide comments. Use Schedule 9 to explain anomalies with data or to provide any further details that are pertinent to the data and plant.

Correcting Pre-populated Information

For e-File users, much of the information on the form is pre-populated by EIA. Verify the administrative information and make corrections to the contact name, phone numbers, addresses, or email addresses. Please note that PLANT NAME, PLANT CODE, and COMPANY NAME item values cannot be changed on the forms – send an e-mail message to eia-923@eia.gov if these items are incorrect.

Correcting Errors

For e-File users, data that fail the interactive validation edits will be amassed into an edit log. Upon hitting the "Submit" button, the system will notify you if there are edits in the log. You will be directed to the log and given the opportunity to either revise the data in question or override the edit flag (thus leaving the response values that triggered the error as is). When an edit is overridden, the system will ask for a comment/explanation. Please leave a comment that explains the anomaly, rather than simply stating the data are correct. Each comment is reviewed by EIA and, if the comment does not sufficiently explain the anomaly, EIA will contact you for clarification.



ITEM-BY-ITEM INSTRUCTIONS

SCHEDULE 1. IDENTIFICATION

- Plant Name, Plant ID, State, Reporting Month and Year:** For e-File users, verify the pre-populated information for these items at the top of this (and all) pages. Report any needed corrections to EIA via e-mail message, at eia-923@eia.gov.
- Survey Contact:** Verify contact name, title, address, telephone number, fax number, and email address.
- Supervisor of Contact Person for Survey:** Verify the contact's supervisor's name, title, address telephone number, Fax number and email address. The Survey Contact and Supervisor cannot be the same person.

If any of the above information is incorrect, revise the incorrect entry and provide the corrected or missing information.
- Report For:** Verify all information, including company name, plant name, plant identification number, plant state and county, and month or year for which data are being reported. State Codes are two- character U.S. Postal Service abbreviations. These fields cannot be revised online. Send an e-mail message to EIA, at eia-923@eia.gov, if corrections are needed for this section.
- Regulatory Status:** Verify that the checkbox correctly identifies your plant as being either regulated or unregulated. Send an e-mail message to EIA, at eia-923@eia.gov, if corrections are needed.
- CHP Checkbox:** Verify that the checkbox correctly indicates whether or not this facility is a combined heat and power plant (CHP), regardless of its status as being either a utility or a nonutility. Send an e-mail message to EIA, at eia-923@eia.gov, if corrections are needed to this section.
- CHP Plant Efficiency:** If the CHP checkbox is "YES", enter the efficiency of the combined heat and power plant. Report the annual average total CHP plant efficiency.

To calculate the total plant efficiency, apply the following formula by dividing the sum of the energy outputs in British Thermal Units (Btu), including net generation and useful thermal output, by the sum of the energy inputs (total fuels consumed converted to Btu).

CHP Efficiency =

$$\frac{[\text{Gross Generation (MWh)} * 3.412 \text{ (MMBtu/MWh)} + \text{Process Steam Generation (lbs)} * 1.15 \text{ (MMBtu/1,000 lbs)}]}{\text{Total Fuel Consumption (MMBtu)}}$$

If gross generation is not available, use net generation as an approximation. Total Fuel Consumption (MMBtu) is found using Schedule 3 fuel quantities multiplied by their average heat content.



SCHEDULE 2. COST AND QUALITY OF FUEL PURCHASES

Monthly Respondents: Plants meeting the following criteria must report on Schedule 2:

1. The plant includes one or more generating units with a Primary Fuel of coal, natural gas, petroleum coke, distillate fuel oil, or residual fuel oil.
2. The total capacity with a Primary Fuel of coal is 50 megawatts (nameplate) or greater; or the total capacity with a Primary Fuel of any combination of natural gas, petroleum coke, distillate fuel oil, or residual fuel oil is 200 megawatts (nameplate) or greater. Report all fuel purchases at the plant level.

Special notes for central **fuel transfer terminals and storage facilities:**

- For fuel received at central transfer terminals or storage facilities that CANNOT be allocated to individual plants, or vendor information for cost and quality of the fuel at a terminal that is not available to the plant, the plant, the terminal or storage facility must report the fuel purchases, including cost and quality data. Terminals and storage facilities must list the plants served on Schedule 4B.
- In order to avoid duplicate data, report purchases at either the storage site or at the plant, but not both. Purchases reported by a storage site and then transferred to the plant should not be reported at the plant level. Instead, designate such transfers in Schedule 4A as a negative adjustment to stocks at the storage site and a positive adjustment to stocks at the plant, including appropriate comments on Schedule 4A.

Annual Respondents: Report Schedule 2 by aggregating purchases for the entire year in the manner specified in the instructions for Schedule 2. Part A, below.

If you did not purchase fuel for this plant during the reporting period, place a check in the "No Receipts" box.

Indicate fuel you received under tolling agreements with a "T" in the Contract Type or Tolling Agreement column. If the plant has a tolling agreement, and the toller will not divulge the cost of the fuel, you may leave both the commodity and delivered prices blank. Report all other data.

SCHEDULE 2. PART A. CONTRACT INFORMATION, PURCHASES, AND COSTS

Contract Information

1. **Fuel Supplier Name:** Supplier names and fuel codes are preprinted from the previous month's report. Delete unneeded rows. Add supplier/fuel types from the drop down lists. If the supplier is not on the list, contact EIA to have a new supplier added. If you choose "Name Pending" while waiting for a new supplier to be added, you MUST report the supplier name in an override comment in response to the edit flag before the data can be submitted.

Coal Purchases: Report data by supplier and mine source.

Purchased coal or petroleum coke which will be converted to synthesis gas at an IGCC plant:



Report the fuel as it is received (i.e., as coal or petroleum coke).

Monthly Respondents: Report separately coal received from spot-market purchases and coal received from contract purchases. Report separately the data on coal received under each purchase order or contract from the same supplier. You may aggregate coal purchases only if the supplier, purchase type, contract date, coal rank, transportation mode, costs, fuel quality, and all mine information are identical. If coal received under a purchase order or contract originates in more than one state/county/mine, and the mines are known as well as the amount received from each mine, split the amount received, accordingly, between the number of different mines, and report identical quality and prices (unless the actual quality and prices are known).

Note that mine information is reported on Schedule 2, Part C. If the mine or group of mines is not available on the list of mines provided for data entry on the e-Filing system, contact EIA immediately (see the EIA contacts on Page 1 of the form or instructions). EIA will then be able to add appropriate choices for purchases from multiple sources to the drop-down selection list.

Annual Respondents: Report separately coal received from spot-market purchases and coal received from contract purchases. You may aggregate coal shipments only if shipments are identical in purchase type, coal rank, mine name, mine type, Mine Safety and Health Administration (MSHA) ID, state of origin, county of origin, and supplier. For aggregated purchases, report the weighted average cost and quality of the fuel. If the mine or group of mines is not available on the list of mines provided for data entry on the e-Filing system, contact EIA, immediately (see the EIA contacts on Page 1 of the form or instructions).

Petroleum Product Purchases: Report data by fuel type, supplier or broker, or refinery and, if applicable, port of entry. Report purchases of residual fuel oil, distillate fuel oil and petroleum coke.

Do Not Report the Following: Waste oil, kerosene, jet fuel, propane or other petroleum products.

Oil Received from Spot-Market Purchases and from Contract Purchases:

Monthly Respondents: Report separately oil received from spot-market purchases and oil received from contract purchases. Report individual shipments as separate line items.

Annual Respondents: Report separately oil received from spot-market purchases and oil received from contract purchases. Aggregate data for the entire year by fuel type, purchase type and supplier. If you aggregate your data, report the weighted average cost and quality of the fuel.

Natural Gas Purchases (Monthly and Annual Respondents):

Report natural gas purchases by supplier. You may aggregate gas deliveries from various suppliers only if the deliveries are spot purchases, and the transportation and supply contracts are identical (either firm or interruptible). If you aggregate your data, report the weighted average fuel cost and quality. Report each contract purchase as separate line items, never aggregate these purchases.

Do Not Report the Following:

- Other gases such as manufactured gas (coke oven, refinery, or blast furnace gas), propane, landfill gas or other miscellaneous gaseous fuels.
- Natural gas injected into storage. Report stored gas when it is received at the plant. Do not report costs associated with storage.

2. Purchase Type Codes for Coal, Petroleum and Natural Gas Receipts:

C – Contract Purchase – Fuel received under a purchase order or contract with a term of one year or longer. Contracts with a shorter term are considered spot purchases (See below.)



NC – New Contract or Renegotiated Contract Purchase – Fuel received under a purchase order or contract with duration of one year or longer, under which deliveries were first made during the reporting month

S – Spot-Market Purchase – Fuel received under a purchase order or contract with a duration of less than one year

T – Tolling Agreement – Fuel received under a tolling agreement (bartering arrangement of fuel for generation)

3. **Contract Expiration Date: If there is a contract purchase, then** enter the month and the year the purchase order or contract expires. For example, report “1113” for a November “2013” expiration date. This column should be left blank if **Purchase Type** contains an “S” for spot-market purchase or a “T” for tolling agreement.

Purchases

4. **Energy Source:** Identify purchased fossil fuels using the energy source codes listed in Table 8 for coal, petroleum coke, natural gas, distillate fuel oil and residual fuel oil.

5. **Units of Measure:**

Coal and petroleum coke: short tons on an as-received basis

Petroleum products: barrels

Natural gas: thousands of cubic feet

6. **Quantity Purchased:** Ensure that reported fuel purchases pertain to the fuel that will ultimately be used only in the electric power plant for the generation of electricity and at combined heat and power plants for useful thermal output (process steam, district heating/cooling, space heating, or steam delivered to other end users). As far as possible, do not include fuel that will be used in boilers with no connection to an electric power generator and that are not part of the electric power station, or fuel purchased for use in other equipment.

If these fuels cannot be separated, provide a comment on Schedule 9, Comments. Report start-up and flame-stabilization fuels. When fuel that is purchased by and received at the plant and is resold, report the total receipts minus the amount sold. See the instructions below regarding how to report the costs.

Cost of Fuel

7. **Total Delivered Cost (all fuels):** Enter the delivered cost of the fuel in cents per million Btu to the nearest 0.1 cent. Include all costs incurred in the purchase and delivery of the fuel to the plant. Include maintenance and depreciation costs of coal delivered in railcars owned by the plant.

Do not include unloading costs. Do not include adjustments associated with prior months' fuel costs.

Include any penalties/premiums paid or expected to be paid on the fuel delivered during the month in the delivered price for fuel shipped under contract. Make these adjustments only by revising the appropriate prior months' submissions.

Ensure that only the current month fuel costs associated with the current month fuel deliveries are reported. If fuel received at the plant is resold, report the commodity cost and the total delivered cost as the average cents per MMBtu paid for the original receipt. Do not discount the costs by the revenue received for the sale of the fuel.

8. **For natural gas**, include the following pipeline charges: Fuel losses, transportation reservation charges, balancing costs, and distribution system costs outside of the plant. Because these types of fees can skew



the cost of the fuel per MMBtu, provide an explanation in an edit log override comment (e.g., “This price includes a reservation fee of x dollars”).

- Commodity cost (Coal, Petroleum Coke, and Natural Gas Only):** Include the price of that fuel (in cents per million Btu rounded to the nearest 0.1 cent) at the point of first loading (free on board mine or transportation pipeline (FOB)), including taxes and quality-related charges or credits. Do not include loading and unloading charges, dust proofing, freeze conditioning, switching charges, diesel fuel surcharges, pipeline charges, transportation charges, or any other charges relating to the movement of the fuel to the point of use.

In the case of natural gas, the commodity cost is typically the price of the gas FOB the transmission pipeline. For coal, the commodity cost is FOB mine.

- Fuel purchased via a hedging contract:** Report the actual fuel supply contract, not the hedge contract. Report the cost net of gains/losses as a result of the contract.

SCHEDULE 2. PART B. QUALITY OF FUEL AND TRANSPORTATION INFORMATION

Quality of Fuel

- Fuel Supplier Name, Purchase Type, Quantity Purchased, and Energy Source:** Data is pre-populated for e-File users based on the data entered on Schedule 2. Part A.
- Heat Content:** Enter the actual (not contractual) average Btu content (higher heating value) for each fuel purchase, in terms of million (MMBtu) per ton for solid fuel, MMBtu per barrel for liquid fuel, and MMBtu per thousand cubic feet for gas. Present data values to the nearest 0.001 MMBtu. Refer to Table 8 for approximate heat content ranges.
- Sulfur Content:** For all coal types, petroleum coke and residual fuel oil enter the sulfur content of the fuel in terms of sulfur percentage by weight. Present data values to the nearest 0.01 percent. Refer to Table 1, below, for approximate sulfur content ranges.

Table 1

Fuel	Sulfur Content (%)	Ash Content (%)	Moisture Content (%)	Mercury Content (ppm)	Chlorine Content (ppm)
BIT	0.4 – 6.0	4.0 – 30.0	2.0 – 16.0	0.020 – 0.500	30 -- 3000
LIG	0.4 – 3.0	5.0 – 35.0	30.0 – 60.0	0.020 – 0.500	120 -- 300
SUB	0.2 – 1.5	3.0 – 15.0	10.0 – 45.0	0.020 – 0.200	40 -- 1200
ANT	0.4 – 6.0	4.0 – 30.0	2.0 – 17.0	0.020 – 0.500	30 -- 3000
RC	0.2 – 6.0	3.0 – 30.0	2.0 – 30.0	0.020 – 0.500	30 -- 3000
WC	0.3 – 6.0	5.0 – 50.0	2.0 – 60.0	0.020 – 1.200	30 -- 3000
PC	1.0 – 7.0	0.1 – 1.2			
RFO	0.2 – 4.5				

- Ash Content:** For coal and petroleum coke, enter the ash content of the fuel, in terms of ash percentage by weight. Present data values to the nearest 0.01 percent. Enter a comment in Schedule 9 if the reported ash content for coal is an estimate. Refer to Table 1, for approximate ash content ranges.
- Moisture Content:** For all coal types, enter the moisture content of the fuel, in terms of moisture



percentage by weight. Present data values to the nearest 0.01 percent. Refer to Table 1, below, for approximate moisture content ranges.

6. **Mercury Content:** For coal only, enter the mercury content, in parts per million (ppm). Present data values to the nearest 0.001 ppm. If lab tests of the coal receipts do not include the Mercury content, enter the amount specified in the contract with the supplier. Refer to Table 1, for approximate mercury content ranges. If the mercury content is not known, mark the checkbox provided for mercury content.
7. **Chlorine Content:** For coal, only, enter the chlorine content, in parts per million (ppm). Present data values to the nearest 0.001 ppm. If lab tests of the coal do not include the Chlorine content, enter the amount specified in the contract with the supplier. Refer to Table 1, for approximate chlorine content ranges. If the Chlorine content is not known, mark the checkbox provided for Chlorine content.

Natural Gas Contract Information

8. Natural Gas Supply and Delivery Service Contract Type Codes:

F – Firm – Gas transportation service or supply contract provided on a firm basis (i.e., the contract with the gas transportation company anticipates no interruption of gas transportation or supply service).

Firm transportation service takes priority over interruptible service.

I – Interruptible – Gas transportation service or supply provided under schedules, or contracts, which anticipate and permit interruption on short notice, such as in peak-load seasons, by reason of the claim of firm service customers and higher priority users.

Note: Report natural gas received under firm contracts separately from interruptible contracts.

Fuel Transportation

9. **Predominant Mode:** Report the method used to transport the fuel over the longest distance from point of origin to consumer (the point of origin is the mine for coal deliveries). If the fuel was purchased from a broker or a fuel terminal, and the original mode of transportation is unknown to the purchaser, provide a reasonable assumption for the longest distance from the coal mine (e.g., coal moved from western to eastern states is most likely transported predominately by rail). If the shipment involves only one mode of transportation, that mode is considered the predominant mode. If the shipment involves more than one mode of transportation, see the description of secondary mode below.
10. **Secondary Mode:** If you used more than one mode of transportation in a single shipment, the secondary mode of transportation is the second longest distance used to transport the fuel to consumer. If you used more than two transportation modes in a single shipment, report only the predominant and secondary modes.

Do Not Report the Following:

- “Truck” as a transportation mode, if trucks are used to transport coal exclusively on private roads between the mine and rail load-out or barge terminal.
- The transportation modes used entirely within a mine, terminal, or power plant (e.g., trucks used to move coal from a mine pit to the mine load-out; conveyors at a power plant used to move coal from the plant storage pile to the plant).

11. **Mine-Mouth Coal Plants:** Report “Conveyor” as the predominant mode, if the conveyor feeding coal to the plant site originates at the mine. Otherwise, report the predominant mode (typically truck or rail) used to move the coal to the plant site.

12. Transportation Modes Codes:



RR – Rail: Shipments of fuel moved to consumers by rail (private or public/commercial). Included is coal hauled to or away from a railroad siding by truck, if the truck did not use public roads.

RV – River: Shipments of fuel moved to consumers via river by barge. Not included are shipments to Great Lakes coal loading docks, tidewater piers, or coastal ports.

GL – Great Lakes: Shipments of coal moved to consumers via the Great Lakes. These shipments are moved via the Great Lakes coal loading docks, which are identified by name and location, as follows:

- Conneaut Coal Storage & Transfer, Conneaut, Ohio
- NS Coal Dock (Ashtabula Coal Dock), Ashtabula, Ohio
- Sandusky Coal Pier, Sandusky, Ohio
- Toledo Docks, Toledo, Ohio
- KCBX Terminals Inc., Chicago, Illinois
- Superior Midwest Energy Terminal, Superior, Wisconsin

TP – Tidewater Piers and Coastal Ports: Shipments of coal moved to Tidewater Piers and Coastal Ports for further shipments to consumers, via coastal water or ocean. The Tidewater Piers and Coastal Ports are identified by name and location, as follows:

- Dominion Terminal Associates, Newport News, Virginia
- McDuffie Coal Terminal, Mobile, Alabama
- IC Railmarine Terminal, Convent, Louisiana International

- Marine Terminals, Myrtle Grove, Louisiana Cooper/T. Smith Stevedoring Co. Inc., Darrow, Louisiana
- Seward Terminal Inc., Seward, Alaska

- Los Angeles Export Terminal, Inc., Los Angeles, California
- Levin-Richmond Terminal Corp., Richmond, California
- Baltimore Terminal, Baltimore, Maryland
- Norfolk Southern Lamberts Point P-6, Norfolk, Virginia
- Chesapeake Bay Piers, Baltimore, Maryland
- Pier IX Terminal Company, Newport News, Virginia
- Electro-Coal Transport Corp., Davant, Louisiana

WT – Water: Shipments of fuel moved to consumers by other waterways.

TR – Truck: Shipments of fuel moved to consumers by truck. Not included is fuel hauled to or away from a railroad siding by truck, on non-public roads.

TC – Tramway/Conveyor: Shipments of fuel moved to consumers by tramway or conveyor.

SP – Slurry Pipeline: Shipments of coal moved to consumers by slurry pipeline.

PL – Pipeline: Shipments of fuel moved to consumers by pipeline.

OP – On-Site Production: Fuel is produced on site, making fuel shipment unnecessary.



SCHEDULE 2. PART C. COAL MINE INFORMATION

1. **Fuel Supplier Name, Purchase Type, Quantity Purchased, and Energy Source: Data** is pre-populated for e-File users based on the data entered on Schedule 2. Part A.
2. **State or Country of Origin:** Choose the two-letter U.S. Postal Service abbreviation or country code from the drop-down selection list of coal producing states (countries). For imported coal, insert the two-letter country code, shown below:

AS – Australia; **CN** – Canada; **CL** – Colombia; **IS** – Indonesia; **PL** – Poland;

RS – Russia; **VZ** – Venezuela; **OT** – Other (specify the country in Schedule 9).

The state of origin is mandatory. If purchases originate from a broker, barge site or other third party, you must contact the broker, barge site or other party and find out the state(s) where the coal originates. If the broker or supplier is not forthcoming with State of Origin information or Mine Information, provide the name and telephone number of the supplier on Schedule 9, Comments.

If coal purchased under a purchase order or contract originates in more than one state, determine from the supplier the most dominant or probable state(s) of origin for the coal. Contact EIA to have the supplier and state(s) added to the drop-down list of choices for state of origin and mine information on Schedule 2. Part C. If the amount of coal from each state/mine is known, allocate the purchase among multiple states, or report the state from which the majority of the coal originates, and report identical quality and cost data (unless the actual quality and costs are known).

If the coal state of origin or mine information is not available on the provided for data entry on the e-Filing system, contact EIA immediately (see the EIA contacts on Page 1 of the form or instructions). EIA will then add appropriate choices for purchases from multiple sources to the drop-down selection list.

3. **Mine Information:** Choose from the drop-down list the mine of origin. The list will display only those mines located in the state/country of origin. The displayed information includes the mine operating company, for informational purposes, to aid in identifying the mine of origin. Upon choosing a mine, the MSHA ID, Mine Name, Mine Type and Mine County will automatically be populated.

Mine information is mandatory. If coal purchased under a purchase order or contract originates in more than one state, determine from the supplier the most dominant or probable mine(s) of origin for the coal. List the mines on Schedule 9, Comments. If the broker or supplier is not forthcoming with state of origin information or mine information, provide the name and telephone number of the supplier on Schedule 9, Comments.

In cases where coal originates from multiple mines or the specific mine information cannot be determined, list the tipple/loading point or dock on Schedule 9, Comments. EIA will add appropriate choices to the drop-down list of mine information to accommodate multiple mines or undetermined mine sources. Use Schedule 9, Comments, to provide detailed explanations of mine origin data, including names of multiple mines for a specific supplier/broker or dock, or the most probable origin of the coal (county/state), if not specifically known.

If the coal state of origin or mine information is not available on the provided for data entry on the e-Filing system, contact EIA immediately (see the EIA contacts on Page 1 of the form or instructions). EIA will then add appropriate choices for purchases from multiple sources to the drop-down selection list.

SCHEDULE 3. PART A. BOILER AND GENERATOR INFORMATION FOR



STEAM-ELECTRIC COMBUSTIBLE-FUELED PLANTS

- Required Respondents:** Report on Schedule 3, Part A the fuel consumption for each boiler and electric power generation for each generator associated with the boiler(s) for plants with steam turbines that burn organic fuels. Do not report for steam turbines where the exclusive energy source is nuclear, geothermal, solar, or where purchased steam or waste heat is used.

For plants that report annually and have a generator nameplate capacity of 10 megawatts and above, report Schedule 3A for each month.

Report the data in groups of associated boilers and generators. Most of these groupings are pre-populated on the e-File system form, according to the information provided on boiler/generator associations reported on Schedule 6A of the Form EIA-860, "Annual Electric Generator Report." Please contact EIA for corrections to these groupings or to add new Boiler or Generator IDs.

Do not leave fields blank. If no fuel was consumed and/or no electric power generated for the plant, enter zeros.

- Prime Mover Code:** Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines.

For a complete list of prime mover codes, refer to Table 7. Only **ST** is used in Schedule 3, Part A. For e-File users, the Prime Mover code is pre-populated.

- Boiler ID:** Most Boiler IDs are pre-populated (Boiler IDs are taken from the latest reported EIA-860, Annual Electric Generator Report) on the e-File system form. If a new Boiler ID needs to be added to Schedule 3A, choose the ID from the drop-down list. If the Boiler ID is not on the list, contact EIA to have it added. Boiler IDs must match those reported on the Form EIA-860.

- Boiler Status:** Enter one of the codes listed in Table 2 below:

Table 2

Code	Boiler Status
OP	Operating (in commercial service or out of service less than 365 days)
OS	Out of service (365 days or longer)
RE	Retired (no longer in service and not expected to be returned to service)
SB	Standby (or inactive reserve); i.e., not normally used, but available for service
SC	Cold Standby (Reserve); deactivated (usually requires 3 to 6 months to reactivate)
TS	Operating under test conditions (not in commercial service)

- Energy Source:** Use the Fuel Codes in Table 8. For blended coal products, report an estimated allocation for each coal rank, if this allocation can be determined. Alternatively, report the blended quantity under energy source code "CBL" for Coal –Blended, and an estimated allocation between coal ranks is acceptable. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page.
- Quantity Consumed:** For each month, report the amount of fuel consumed for electric power generation



and, at combined heat and power stations, for useful thermal output.

7. **Type of Physical Units:** Report fuel consumption in the following units: solids in tons; liquids in barrels (one barrel equals 42 U.S. gallons); and gases in thousands of cubic feet (Mcf).
8. **Average Heat Content:** For each month, report the heat content of the fuels burned to the nearest 0.001 million Btu (MMBtu) per physical unit. Report the heat content of the fuel as the gross or "higher heating value" (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water.

The heating value of fuels that is generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value. If the fuel heat content cannot be reported "as burned," obtain data from the fuel supplier on an "as received" basis. If this is the case, indicate on Schedule 9 that the fuel heat content data are "as received." Report the value in the following units: solids in million Btu (MMBtu) per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8 for approximate ranges of heat content of specific energy sources.

9. **Sulfur Content (petroleum, petroleum coke, and coal):** For each month, enter sulfur content to nearest 0.01 percent by weight. Report sulfur content for the following fuel codes: ANT, BIT, LIG, RC, SUB, WC, CBL, PC, RFO, and WO. Refer to Table 1 for approximate sulfur content ranges.
10. **Ash Content (coal and petroleum coke only):** For each month, enter ash content to the nearest 0.1 percent. Report ash content for the following fuel codes: ANT, BIT, LIG, SUB, WC, CBL, RC, and PC. Refer to Table 1 for approximate ash content ranges.

Report actual values. If necessary, report estimated values, and state that the value is an estimate on Schedule 9.

Enter zero when an energy source was not consumed for the reporting period or, if using the e-File system, delete the unused line. Do not leave blank.

11. **Generator ID:** Most Generator IDs are pre-populated and grouped with the associated boilers, on the e-File system form. For a Generator ID that is not pre-populated, choose the ID from the drop-down selection list of Generator IDs that were reported for your plant on the Form EIA-860. If the Generator ID is not on the selection list, contact EIA to have the ID added to your form. Generator IDs must match those reported on the Form EIA-860.

Data must be reported in megawatthours (MWh), rounded to whole numbers, with no decimals. If no generation occurred, report zero. Do not leave fields blank.

12. **Generator Status:** Enter one of the codes listed in Table 3 below.

Table 3

13. Gross Generation: the amount of electricity produced by generating units measured	Status Code	Status Code Description	Generation Enter total amount of electricity generated and reported
	OP	Operating - in service (commercial operation) and producing some electricity. Includes peaking units that are run on an as needed (intermittent or seasonal) basis.	
	SB	Standby/Backup - available for service but not normally used (has little or no generation during the year) for this reporting period	
	OA	Out of service - was not used for some or all of the reporting period but was either returned to service on December 31 or will be returned to service in the next calendar year.	
	OS	Out of service - was not used for some or all of the reporting period and is NOT expected to be returned to service in the next calendar year.	
	RE	Retired - no longer in service and not expected to be returned to service	
	TS	Operating under test conditions (not in commercial service)	



at the generating terminal. For each month, enter that amount in megawatthours.

14. **Net Generation:** Enter the net generation (gross generation minus the parasitic station load, i.e., station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign, not with parentheses. For each month, enter the Net Generation amount in megawatthours.

If your plant is a combined heat and power plant in the Industrial or Commercial Sector, you may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation, and leave net generation blank.

SCHEDULE 3. PART B. FUEL AND GENERATOR INFORMATION FOR SINGLE-CYCLE GAS TURBINES, INTERNAL COMBUSTION ENGINES, HYDROELECTRIC PUMPED STORAGE, AND COMPRESSED AIR STORAGE

1. **Required Respondents:** Report on Schedule 3. Part B the energy consumption and electric generation for plants with single cycle gas turbines (**GT**), internal combustion engines (**IC**), fuel cells (**FC**), electric power input to pumped-storage hydroelectric plants (**PS**), compressed air units (**CE**), other energy storage technologies such as batteries (**BA**) and flywheel (**FW**) electric storage units, or other miscellaneous prime mover types (**OT**). Do not report conventional hydroelectric plants and all other plants that are not required to report energy consumed (e.g., wind, solar, geothermal, and nuclear). Do not report for each individual unit. For example, report natural gas consumed and megawatthours produced for all single cycle gas turbines at the plant as a single value.

Report the fuel consumption and generation output for each prime mover type as a group (side by side) on Schedule 3, Part B. Report a single value for each fuel type consumed by prime mover type. Report only a single value for generation per prime mover type.

For combined-cycle, single-shaft units, report fuel consumption of the CS turbine, and generation for the common generator.

Report the energy consumed for storage (pumping energy, etc.) in megawatthours (energy storage technologies, include pumped storage hydroelectric, compressed air, batteries, or other storage technologies). Report the net generation as the difference between the gross generation and the energy consumed for storage. The net generation may be negative whenever the energy consumed for storage exceeds the net generation (use a minus sign instead of parentheses).

For electronic filers, the system will automatically check for the following relationship:

Net generation (MWh) = Gross Generation (MWh) – Energy Consumed for storage/pumping (MWh)

Please note that energy storage technologies must report all three equation elements (net generation, gross generation and energy consumed). The respondent will be alerted if any of the three elements is missing, or the required equality among the elements (equation above) fails. In order to properly submit the survey, the respondent must clear the alert by entering an explanation in Schedule 9 for the missing element(s) and/or the equation failure.

2. **Prime Mover Code:** Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines.



For a complete list of prime mover codes, refer to Table 7. For e-File users, the Prime Mover Code is pre-populated. If the pre-populated code is incorrect, choose the correct code from the drop-down list.

3. **Energy Source:** Use the fuel codes in Table 8. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page.
4. **Quantity Consumed:** For each prime mover type, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output. Include start-up and flame-stabilization fuels. Report the energy consumed for pumping water, compressing air, or energy storage in megawatthours.
5. **Type of Physical Units:** Report fuel consumption in the following units:
 - Solids – Tons
 - Liquids – Barrels (one barrel equals 42 U.S. gallons)
 - Gases – Thousands of cubic feet (Mcf)
 - Energy Storage -- Megawatthours
6. **Average Heat Content:** For each month, report the heat content of the fuels burned to the nearest 0.001 MMBtu (million Btu) per physical unit (MMBtu per ton/barrel/thousand cubic feet). The heat content of the fuel should be reported as the gross or “higher heating value” (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value. If the fuel heat content cannot be reported “as burned,” data may be obtained from the fuel supplier on an “as received” basis. If this is the case, indicate on SCHEDULE 9 that the fuel heat content data are “as received.” Report the value in the following units: solids in MMBtu per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8 for approximate ranges of heat content for specific fuels. Heat content can be blank if fuel consumed is zero and for pumped storage and compressed air plants.
7. **Peaking Unit (Yes/No):** From a drop-down list select “Yes” if any prime mover unit is operated as a peaking unit – select “No” otherwise. Peaking units typically run only during hours of high demand (or peak demand) as opposed to base load units that run continuously except for maintenance or other outages.

Report the net and gross generation for each prime mover type as one value.

8. **Gross Generation:** Report the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, report the MWh generated.
9. **Net Generation:** Report the net generation (gross generation minus the parasitic station load, i.e., station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign (do not use parentheses). For each month, enter the net generation amount in MWh.

If you have a combined heat and power plant in the Industrial or Commercial Sector, you may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross generation minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation, and leave net generation blank.

Report data in MWh, rounded to whole numbers, with no decimals.



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

1. **Required Respondents:** Report on Schedule 3. Part C single-shaft combustion turbines (**CS**) and, combined-cycle units in groups of associated combustion turbines (**CT**), Heat Recovery Steam Generators (HRSGs) and steam turbines (**CA**).

If you are an annual respondent with a CA unit generator nameplate capacity of 10MW or above, for both the CA and CT turbine units report an individual Schedule 3. Part C for each month in the reporting year.

The Generator IDs and Prime Mover Codes are pre-populated on the e-File system form. If these values are incorrect, please contact EIA for corrections

For combined-cycle units, excluding single shaft units, report fuel consumed in EACH HRSG and in EACH combustion turbine-generator ID combination, and report generation for each combustion turbine and each steam turbine.

If multiple fuels are consumed in the combustion turbine or HRSG, report consumption for each fuel type, but generation may be reported as a single value for the unit.

In a separate section, IGCC plants report the coal or petroleum fuel input to the gasifier and the associated heat, sulfur and ash contents.

2. **Prime Mover Code:** Prime movers are devices that convert one energy form (such as heat from fuels or the motion of water or wind) into mechanical energy. Examples include steam turbines, combustion turbines, reciprocating engines, and water turbines.

For a complete list of prime mover codes, refer to Table 7. In Schedule 3 D report for codes CT and CA only. For e-File users, the Prime Mover Code is pre-populated. If the pre-populated code is incorrect, choose the correct code from the drop-down list.

3. **Energy Source:** Use the fuel codes in Table 8. For energy source codes OTH, OBS, OBG, OBL and OG, specify the fuel in the area at the bottom of the page. IGCC plants should report the synthesis gas consumed in each combustion turbine and the heat input to the HRSG units as Waste Heat (WH).
4. **Quantity Consumed:** For each HRSG or combustion turbine-generator ID combination, report the amount of fuel consumed for electric power generation and, at combined heat and power stations, for useful thermal output. IGCC units should report the synthesis gas consumed. Non-supplementary fired steam turbines should report Waste Heat as the energy source. The Quantity Consumed may be left blank for Waste Heat.

5. **Type of Physical Units:** Fuel consumption must be reported in the following units:

Solids – Tons

Liquids – Barrels (one barrel equals 42 U.S. gallons)

Gases – Thousands of cubic feet (Mcf)

Energy Storage – Megawatthours

6. **Average Heat Content:** For each month, report the heat content of the fuels burned to the nearest 0.001 MMBtu (million Btu) per physical unit (MMBtu per ton/barrel/thousand cubic feet). Report the heat content of the fuel as the gross or “higher heating value” (rather than the net or lower heating value). The higher heating value exceeds the lower heating value by the latent heat of vaporization of the water. The



heating value of fuels generally used and reported in a fuel analysis, unless otherwise specified, is the higher heating value.

If the fuel heat content cannot be reported "as burned," obtain data from the fuel supplier on an "as received" basis. If this is the case, indicate on Schedule 9 that the fuel heat content data are "as received."

Report the value in the following units: solids in MMBtu per ton; liquids in MMBtu per barrel; and gases in MMBtu per thousand cubic feet (Mcf). Refer to Table 8, for approximate ranges of heat content for specific fuels. Leave heat content blank if fuel consumed is zero.

7. **Generator ID:** Most Generator IDs are pre-populated and grouped with the associated boilers, on the e-File system form. For a Generator ID that is not pre-populated, choose the ID from the drop-down selection list of Generator IDs that were reported for your plant on the Form EIA-860. If the generator ID is not on the selection list, contact EIA to have the ID added to your form. Generator IDs must match those reported on the Form EIA-860.
8. **Generator Status:** Enter one of the codes listed in Table 3 above.
9. **Gross Generation:** Report the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, report the MWh generated.
10. **Net Generation:** Report data in MWh, rounded to whole numbers, with no decimals.

Report the Net Generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign (do not use parentheses). For each month, enter the net generation amount in MWh.

If you have a combined heat and power plant in the Industrial or Commercial sector, you may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross generation minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation, and leave net generation blank.

11. **Boiler ID:** Most Boiler IDs are pre-populated (Boiler IDs are taken from the latest reported EIA-860, Annual Electric Generator Report) on the e-File system form. If a new Boiler ID needs to be added to Schedule 3, Part D, choose the ID from the drop-down list. If the Boiler ID is not on the list, contact EIA to have it added. Boiler IDs must match those reported on the Form EIA-860.
12. **Boiler Status:** Enter one of the codes listed in Table 2 above.
13. **IGCC Plants – Supplemental Fuel Data for Gasifier Unit:** Report the fuel input to the gasifier unit (coal or petroleum coke) along with the average heat, sulfur, and ash contents.

SCHEDULE 3. PART D. GENERATION FROM NUCLEAR, NONCOMBUSTIBLE AND RENEWABLE ENERGY SOURCES

1. **Required Respondents:** Complete this schedule if you have nuclear plants or wind, solar, geothermal, conventional hydroelectric or other plants where the energy source is not required to be reported on Schedules 3A, 3B or 3C, such as purchased steam or waste heat. Fuel consumption data is not required for these types of plants. Report generation by energy source for nuclear, wind, solar, geothermal, conventional hydroelectric and miscellaneous sources such as purchased steam or waste heat. Report nuclear data by generating unit. For all other plant types, ignore the Unit Column.



- Prime Mover Code:** Prime mover codes are shown in Table 7. Only HY, HA, HB, HK, BT, PV, ST, WT, WS and OT prime mover codes can be used in Schedule 3D. For e-File users, the code is pre-populated. If the pre-populated code is incorrect, choose the correct prime mover code from the drop-down list.
- Energy Source:** Enter one of the fuel codes listed in Table 8. Valid entries are NUC, WAT, WND, GEO, PUR, WH, SUN or OTH.
- Unit Code:** The nuclear unit code is pre-populated for e-File system forms. Contact EIA if the Unit Code is incorrect. Ignore this field for all other types of plants.
- Gross Generation:** Enter the total amount of electric energy produced by generating units and measured at the generating terminal. For each month, report the Gross Generation amount in MWh.
- Net Generation:** Enter the Net Generation (gross generation minus the parasitic station load, i.e. station use). If the monthly station service load exceeded the monthly gross electrical generation, report negative net generation with a minus sign (do not use parentheses). For each month, report the Net Generation amount in MWh.

If you have a combined heat and power plant in the Industrial or Commercial Sector, you may choose to leave net generation blank in cases where net generation cannot be determined. Please note that net generation is not defined as electric power sold to the grid (net of direct use), but as gross minus station use. If station use is not separable from direct use at combined heat and power plants, report only gross generation and leave net generation blank.

SCHEDULE 4. PART A. FOSSIL FUEL STOCKS AT THE END OF THE REPORTING PERIOD AND FUEL BALANCE FOR COAL, OIL, AND NATURAL GAS

- Required Respondents:** Report for stocks at plants that utilize coal, petroleum products and petroleum coke fuels. Report an adjustment whenever the amount of gas consumed does not equal the amount received as reported on Schedule 2 for plants which report on Schedule 2 (Fuel Purchases) and utilize natural gas.

If Schedule 2 is not required, or the fuel is not required on Schedule 2, no balancing or adjustment to the stocks is required.

Fuel Terminals: Report stocks held at terminals that will be distributed to the power plants served and reported on this schedule. Report shipments out of the terminal as negative adjustments, using a negative sign and not parentheses. Provide the plants and quantity of fuels moved to each plant on Schedule 4. Part B.

Report fuel stocks for only the following fuels:

- Coal: Report all stocks of coal for use by this power plant in short tons. Include both stocks held on site and stocks held off site whether owned by your plant or by an affiliated company. If the stocks are held for the plant by an affiliated company and the amount is unknown, please provide EIA the name of the company. EIA will contact them to obtain the stocks data. Do not report waste coal stocks.
- Residual oil (No. 5 and No. 6 fuel oils): Report in barrels.
- Distillate-type oils (including diesel oil, No. 2 oil, jet fuel, and kerosene): Report in barrels.
- Petroleum coke: Report in short tons.

Include back-up fuels and start-up and flame-stabilization fuels. Do not report stocks for waste coal, natural gas, or wood and wood waste or other biomass fuels. Report all fuel stocks at the plant level,



where possible. Report stocks data by a transfer terminal or storage facility only if inventory cannot be attributed to individual plants.

To avoid duplication, do not report receipts in Schedule 2 at the plant level that have already been reported by a transfer terminal or storage facility and then transferred to a plant(s). Designate such transfers in Schedule 4A as negative adjustments to stocks at the transfer terminal or storage facility and positive adjustments to stocks at the plant, and provide appropriate comments. Depending on the required data at transfer terminals or storage sites and associated plants, the energy balance may require an explanatory comment. Enter zero in the Ending Stocks column if a plant has no stocks -- do not leave the field blank.

2. **Energy Source:** For e-File users, the Energy Source Code is pre-populated. If needed, add an energy source code from the drop-down list. Energy source codes cannot be deleted from Schedule 4A. If stocks of a fuel type are no longer held at the plants, contact EIA to remove the Fuel Code from Schedule 4A.
3. **Type of Physical Units:** Report coal and petroleum coke in tons and distillate and residual oils in barrels.
4. **End of Prior Month/Year Stocks:** These data are automatically populated into the schedule from the previous reporting period for e-File system forms.
5. **Current Month's Receipts:** These data have been reported (above in Schedule 2), and the sum by energy source is automatically populated for e-File system forms.
6. **Current Month's Consumption:** These data have been reported (in Schedules 3A and 3B) and the sum by energy source is automatically populated for e-File system forms.
7. **End of Current Month/Year Stocks:** Report this month's (or year's) ending stocks. Include all on -site stocks held for eventual use in the electric power plant, regardless of actual ownership of the fuel.
8. **Adjustment to Stocks:** Whenever the balance is not zero, report an adjustment to end-of-month stocks to balance the fuel purchased, consumed and stocked. Adjustments may include stocks transferred or sold offsite, stock reconciliations, fuels utilized for other purposes, and revisions to previous months' stocks. Adjustments can be positive or negative. An explanation of the nature of the adjustment is required in the section provided on Schedule 4A.
9. **Fuel Balance:** The data balance verifies the quality of the data. The balance is the difference between Reported Ending Stocks (4) and an expected value for ending stocks calculated by the following equation: Previous Month's Ending Stocks plus Current Month's Purchases minus Current Month's Consumption plus (or minus) Adjustment to Stocks [(4) = (1) + (2) - (3) + (5)].

If the balance is a non-zero value review the data entered for fuel stocks, purchases, and consumption for accuracy, and if accurate, enter an adjustment amount to balance the fuel. The Fuel Balance value must be zero.

10. **Comment for Adjustments:** Enter a comment for all adjustment values to explain the nature of the adjustment. Examples of adjustments include fuel sold or transferred, fuel not used for the production of electricity, fuel used for other purposes at the plant (e.g., as a feed material to produce chemical byproducts such as fertilizers, reconciliations to estimated stocks, revised values to correct previous stocks data, or diesel used in trucks or other equipment).

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

Fuel Terminal-Plant Relationships and Fuel Shipments: Report the plants that received fuel during the reporting period and the quantity of the fuel transferred to each plant from terminals (plants with no



generating capacity that serve to distribute fuel to associated power plants). On the e-Filing system forms, the Plant ID will be pre-populated after the initial report is made.

SCHEDULE 5.

NOTE: In this report the old Schedule 5 has been combined with Schedules 3A to 3D.

SCHEDULE 6. NONUTILITY ANNUAL SOURCE AND DISPOSITION OF ELECTRICITY

1. **Required Respondents:** Report annual calendar year data for the source and disposition of electricity for non-utility plants (i.e., unregulated plants).
 - If you file the EIA-923 monthly, complete this schedule on the Form EIA-923 Supplemental and file on an annual basis.
 - If you file the EIA-923 annually, complete this schedule on the Form EIA-923 Annual.

Report all generation in MWh rounded to a whole number.

Source of Electricity

2. **Gross Generation (Annual):** Report the Total Gross Generation from all prime movers at the plant. Note that for monthly respondents, Total Gross Generation should equal the sum of the gross generation reported each month on Schedules 3A, 3B, 3C, and 3D.
3. **Other Incoming Electricity:** Report all incoming electricity to the facility, whether from purchases, tolling agreements, transfers, exchanges, or other arrangements.

List at the bottom of the schedule the descriptions of "Other Incoming Electricity" (e.g., purchased, exchanged).

4. **Total Sources:** The sum of the total gross electricity generated and the total incoming electricity is automatically calculated and displayed on e-File system forms. Ensure that Total Sources equal the Total Disposition (see below).

Disposition of Electricity

5. **Station Use:** Report the amount of electricity that is used exclusively to operate and maintain the electric power plant of the facility (e.g., parasitic loads from auxiliary equipment), regardless of whether the electricity is produced at the plant or comes from another source. Do not include any electricity converted and stored at an energy storage plant (such as electricity used for pumping at a hydroelectric pumped-storage plant), nor direct use (see below) of electricity by an industrial or commercial CHP plant. Do not include electricity used for other operations and processes of the facility (see Direct Use below).
6. **Direct Use (Industrial and Commercial Sector Plants, both CHP and non-CHP):** Report the amount of electricity consumed onsite for all operations other than electric power plant station use, such as electricity consumed by manufacturing processes, district heating and/or cooling, hospital services, and campus services. Electricity consumed for Direct Use can be generated by the plant or purchased from an external source.

For plants for which Station Use and Direct Use cannot be separated, you may enter zero in Station Use, and the sum of Station Use and Direct Use in the Direct Use field. In such cases, provide a comment on

Schedule 9.

7. **Total Facility Use:** The sum of station use and direct use is calculated and displayed on e-File system forms.
8. **Retail Sales to Ultimate Customers:** Report the amount of electricity sold directly to retail (end-use) customers (i.e., power that is not re-sold or distributed by another entity). Include unbilled electricity provided to affiliated and non-affiliated entities, excluding power provided as part of a tolling agreement. By entering a value in this cell, you are required to file the Form EIA-861 "Annual Electric Power Industry Report," to provide more detailed information on the nature of the retail sales.
9. **Sales for Resale:** Report the amount of electricity sold for resale (wholesale sales in MWh). If data are entered for this item, you must complete Schedule 7.
10. **Provided under Tolling Agreements:** Report the amount of electricity provided under a tolling agreement.
11. **Other Outgoing Electricity:** Report all other outgoing electricity from the facility, such as tolling agreements, transfers, and exchanges. Specify the nature of Other Outgoing Electricity on Schedule 9, Comments.
12. **Total Disposition:** The sum of station use, direct use, retail sales, sales for resale, and other outgoing electricity is automatically calculated and displayed on e-File system forms. Ensure that Total Disposition equals Total Sources (see above).

SCHEDULE 7. ANNUAL REVENUE FROM SALES FOR RESALE

Required Respondents: Report on Schedule 7, Part A if you report a positive value on Schedule 6, "Disposition of Electricity," Item 8, "Retail Sales," and Part B if you report a positive value on Schedule 6, Item (7), "Retail Sales to Ultimate Customers."

Schedule 7. Part A. Annual Revenue from Sales for Resale

Report energy supplied to other electric utilities, cooperatives, municipalities, federal and state electric agencies, power marketers, or other entities for resale to end-use consumers. Do not report energy supplied under tolling agreements that is intended for resale to end use customers. Report energy supplied under tolling agreements in "Other Outgoing Electricity.")

Report all revenue from Sales for Resale in thousand dollars, to the nearest whole number.

Schedule 7. Part B. Annual Retail Sales, Revenues, and Number of Customers from Retail Sales

Report by state and end-use customer sectors. Use Table 9 as a guide for the classification of your end-use customers, paying close attention to how your consumers should be organized into four sectors: Residential, Commercial, Industrial, and Transportation.

Complete an individual Schedule 7, Part B, for each state where customers are located, only if a positive value was entered on Schedule 6, Item (7), "Retail Sales to Ultimate Customers."

1. **Retail Sales:** Report retail sales in megawatthours, by state and end-use sector.
2. **Revenue:** Report revenue associated with retail sales, by state and end-use sector.

3. **Number of customers:** Report the number of customers served, by state and end-use sector.

Note: Form EIA-861U previously collected the data now requested on Schedule 7, Part B. Form EIA-861U is no longer required.

SCHEDULE 8. ANNUAL ENVIRONMENTAL INFORMATION

Required Respondents: Report environmental information on Schedule 8 for steam-electric (thermoelectric) power plants, including nuclear and combined-cycle plants, with a total steam turbine capacity greater than, or equal to 10 megawatts, as follows:

- If you have a plant with a capacity greater than, or equal to, 100 megawatts, report on all parts of Schedule 8 (Parts A through D).
- If you have a plant with a capacity less than 100 megawatts, but greater than, or equal to 10 megawatts, report only on Schedule 8 Parts C.
- If you file the EIA-923 monthly, complete Schedule 8 on Form EIA-923 Supplemental that is filed annually.
- If you file the EIA-923 annually, complete Schedule 8 on Form EIA-923 Annual.

SCHEDULE 8. PART A. ANNUAL BY-PRODUCT DISPOSITION

1. **Required Respondents:** Complete an individual Schedule 8, Part A annually for each organic-fueled thermoelectric power plant (i.e., steam-electric plants, including nuclear and combined cycle plants) with a total steam turbine capacity of greater than, or equal to 100 megawatts.

If actual data are not available, provide an estimated value.

2. **Combustion By-Products:** If combustion byproducts were not produced, place a check in the checkbox labeled, "Select if no combustion by-products were produced."
3. **Disposal:** If a by-product is disposed of at no cost, enter the quantity of the by-product under the appropriate column (On-Site Landfill, On-Site Pond, or Disposal Off-Site), and make an entry on Schedule 9 stating that no money was exchanged for the quantity of disposed by-product reported. If there was a cost for disposal, make sure there is a corresponding entry on Schedule 8, Part B, for collection and/or disposal costs. Report costs for gypsum disposal on Schedule 8, Part B, Column 5, under "Disposal," and note these gypsum disposal costs with an entry on Schedule 9.
4. **Beneficial Use:** Ensure that entries in the Sold Column on Schedule 8, Part A are compatible with entries on Schedule 8, Part B, Columns 11 through 16, "Byproduct Sales Revenue During Year."

Do not include byproducts that were sold under the "Used On-Site" column.

5. **Storage:** If a by-product was distributed in several different ways (e.g., the byproduct was stored in a landfill and then later sold), report only the end disposition of the by-product and provide a comment on Schedule 9 explaining all previous dispositions.
6. **Fly ash from standard boiler/primary Particulate Collection Device (PCD) units:** Report fly ash from units with no Flue Gas Desulfurization (FGD) system or with FGD systems located downstream of the PCD.



7. **Fly ash from units with dry FGD:** Report fly ash from units with spray dryer or duct injection systems, where Fly Ash and FGD byproducts are collected in the same PCD. Do not include fly ash from Fluidized Bed Combustion (FBC) units.
8. **Fly ash from FBC units:** Report fly ash from Fluidized Bed Combustion (FBC) units.
9. **Bottom ash from standard boiler units:** Report bottom ash from standard boiler units and boiler slag from slagging combustors. Do not include Bottom (Bed) Ash from FBC units, or slag from coal gasification units.
10. **Bottom (bed) ash from FBC units:** Report bottom (bed) ash from fluidized bed combustion (FBC) units.
11. **FGD Gypsum:** Report by-products that are greater than 75% gypsum ($\text{CaSO}_4 \bullet 2\text{H}_2\text{O}$), by weight.
12. **Other FGD by-products:** Report all FGD byproducts not reported as "Fly ash from units with dry FGD units;" "Fly ash from FBC units;" "Bottom ash from standard boiler units;" "Bottom (bed) ash from FBC units;" and "FGD gypsum," along with additives used to stabilize the FGD byproducts.
13. **Ash from coal gasification (IGCC) units:** Report slag or solids extracted from the bottom of the gasifier, as well as fly ash removed downstream of the gasifier.
14. **Other:** Enter the amount of other by-products. Specify these "other" by-products on Schedule 9, Comments.
15. **Steam sales: Report steam sales** in million British Thermal Units (MMBtu).

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

1. **Required Respondents:** Complete an individual Schedule 8, Part A annually for each organic-fueled thermoelectric power plant (i.e., steam-electric plants, including nuclear and combined cycle plants) with a total steam turbine capacity of greater than or equal to 100 megawatts.

If actual data are not available, provide an estimated value.

Report all entries in thousand dollars, to the nearest whole number.
2. **Operation and Maintenance (O&M) Expenditures during Year:** Report costs for both collection and disposal of the indicated byproducts. If the collection and disposal costs cannot be separated, place the total cost under the "Collection" line item, and provide a comment on Schedule 9, indicating that the costs cannot be separated. Exclude depreciation expense, cost of electricity consumed, and fuel differential expense (i.e., extra costs of cleaner, thus more expensive fuel) from all operation and maintenance expenditures. Include all contract and self-service pollution abatement operation and maintenance expenditures for each line item.
3. **Fly Ash (1) and Bottom Ash (2):** Report all material and labor costs associated with the collection and disposal of the by-products, including equipment operation and maintenance costs (such as particulate collectors, conveyors, hoppers, etc.). Record expenditures for IGCC slag or fly ash collection/disposal in Column (1) or Column (2), respectively.
4. **Flue Gas Desulfurization (3):** Report all material and labor costs associated with the collection and disposal of the sulfur byproduct, including equipment O&M costs.
5. **Water Pollution Abatement (4):** Report all operation and maintenance costs for material and/or supplies



and labor costs, including equipment operation and maintenance (pumps, pipes, settling ponds, monitoring equipment, etc.), chemicals, and contracted disposal costs. Include in Collection Costs any expenditure incurred once the water that is used at the plant is drawn from its source. Begin calculating expenditures at the point of the water intake. Include in Disposal Costs any expenditure incurred once the water that is used at the plant is discharged. Begin calculating disposal expenditures at the water outlet (i.e., cooling costs).

6. **Other Pollution Abatement (5):** Report operation and maintenance expenditures that are not allocated to a particular expenditure (e.g., expenditures to operate an environmental protection office or lab). Include expenses for conducting environmental studies for expansion or reduction of operations. Exclude all expenses for health, safety, employee comfort (OSHA), environmental aesthetics, research and development, taxes, fines, permits, legal fees, Superfund taxes, and contributions. Define other pollution abatement(s) in a comment on Schedule 9.
7. **Capital Expenditures for New Structures and Equipment during Year, Excluding Land and Interest Expense:** Report all pollution abatement capital expenditures for new structures and/or equipment made during the reporting year, regardless of the date these structures and/or equipment became operational. Do not leave Columns 7, 8, 9, and 10 blank. Enter zero if the line item is not applicable, or an estimate is not available, and enter a comment in Schedule 9. Specify the nature of the expenditures for these items in a comment on Schedule 9.
8. **Air Pollution Abatement (7):** Report new structures and/or equipment purchased to reduce, monitor, or eliminate airborne pollutants, including particulate matter (dust, smoke, fly ash, dirt, etc.), sulfur dioxides, nitrogen oxides, carbon monoxide, hydrocarbons, odors, mercury, acid gases and other pollutants. Examples of air pollution abatement structures/equipment include flue gas particulate collectors, FGD units, and continuous emissions monitoring equipment (CEMs), and nitrogen oxide control devices. Specify new structures/equipment in a comment on Schedule 9.
9. **Water Pollution Abatement (8):** Report new structures and/or equipment purchased to reduce, monitor, or eliminate waterborne pollutants, including chlorine, phosphates, acids, bases, hydrocarbons, sewage, and other pollutants. Examples include structures/equipment used to treat thermal pollution; cooling, boiler, and cooling tower blowdown water; coal pile runoff; and fly ash waste water. Do not include expenditures for treatment of water prior to use at the plant. Specify new structures/equipment in a comment on Schedule 9.
10. **Solid/Contained Waste (9):** Report new structures/equipment purchased to collect and dispose of objectionable solids or contained liquids. Examples include purchases of storage facilities, trucks, etc., to collect, store, and dispose of solid/contained waste. Include equipment used for handling solid/contained waste generated as a result of air and water pollution abatement. Specify new structures/equipment in a comment on Schedule 9.
11. **Other Pollution Abatement (10):** Report amortizable expenses and purchases of new structures and or equipment when such purchases are not allocated to a particular unit or item. Examples include charges for the purchases of facilities to control hazardous waste, radiation, and noise pollution. Exclude all equipment purchased for aesthetics purposes. Specify new structures/equipment in a comment on Schedule 9.
12. **By-Product Sales Revenue during Year:** If there were no by-product sales revenues, report a zero value in Column 16 ("Total"). Report the revenue, if any, for each listed by-product. Specify the nature of "Other Pollution Abatement" revenue in a comment on Schedule 9. Ensure that entries are compatible with the entries in the "Sold" column of Schedule 8, PART A. If the revenue for a byproduct is less than \$500, enter a zero and enter a comment on Schedule 9 with the actual dollar amount. Report revenue for gypsum on Schedule 8, Part B, Column 14, and note this activity in a comment on Schedule 9. Report the total revenue for the sale of by-products in Column 16. If the revenue reported was for the sale of stockpiled by-products from previous years, make a comment on Schedule 9.



SCHEDULE 8. PART C. AIR EMISIONS CONTROL INFORMATION

- Required Respondents:** Report an individual Schedule 8, Part C, annually, for each thermoelectric or combined cycle power plant with a total steam turbine capacity greater than, or equal to, 10 megawatts. Report operational data for emissions of sulfur dioxide (SO₂), nitrogen oxides (NO_x), particulates, mercury and acid gases.
- Air Emission Controls:** Check either "YES" or "NO" to indicate whether a particular pollutant is controlled with equipment at the plant.
- Equipment IDs (B):** Ensure that various Equipment IDs, e.g., boiler, FGP, FGD, or other unit IDs, match and correspond to the IDs reported on Schedule 6 of the Form EIA-860. The Equipment IDs and type of equipment are pre-populated for e-file users. If the information is not pre-populated please contact EIA.

Enter multiple lines for units that control more than one type of air emission.

Enter the air emission controlled by each unit. Enter multiple lines for each emission type, as applicable. Choose codes from the drop-down list for SO₂, NO_x, Hg, HCl, or PM.

- Equipment Type (A):** Choose from the list of codes shown in Table 6. Equipment type is pre-populated for e-file users.
- Equipment Status (C):** Select from the equipment status codes in Table 4. Equipment status for each equipment type is pre-populated for e-file users.

Table 4

Code	Status
CN	Cancelled (previously reported as "planned")
CO	New unit under construction
OP	Operating (in commercial service or out of service within 365 days)
OS	Out of service (365 days or longer)
PL	Planned (on order or expected to go into commercial service within 5 years)
RE	Retired (no longer in service and not expected to be returned to service)
SC	Cold Standby (Reserve); deactivated (usually requires 3 - 6 months to reactivate)
TS	Operating under test conditions (not in commercial service)

- Hours in Service (D):** Enter the total hours the control was in service during the reporting period (to the nearest hour).
- Emissions/Emissions Removal Efficiency Rates (E - I, K, L):** Complete the rate/efficiency and other information as applicable for each equipment type and emission controlled. Leave non-applicable cells blank. Enter the average emissions rate for particulate matter, based on the annual operating factor (to



nearest 0.01 pound per million Btu).

8. **NO_x Emission Rate (Annual) (E):** Enter the actual nitrogen oxides emission rate, in pounds per million Btu of the fuel, based on data from the continuous emission monitoring system (CEMS), where possible. If NO_x controls are present, report the actual controlled emission rate. If uncontrolled, report the actual uncontrolled emission rate. Where CEMS data are not available, report the nitrogen oxides emission rate, based on the method used to report emissions data to environmental authorities.
9. **NO_x Emission Rate (May to September) (F):** Enter the actual nitrogen oxides emission rate, in pounds per million Btu of the fuel, based on data from CEMS, where possible. If NO_x controls are present, report the actual controlled emissions rate. If uncontrolled, report the actual uncontrolled emissions rate. Where CEMS data are not available, report nitrogen oxides rates, based on the method used to report emissions data to environmental authorities. The summer emission rate may be assumed to be equivalent to the annual emission rate, where identical nitrogen oxides controls are used year round.
10. **Particulate Matter Emissions Removal Rate (Annual) (G):** Enter the average annual emission removal rate.
11. **FGD or FGP Efficiency Rate at Annual Operation Factor (H, K):** Enter removal efficiency, based on the annual operating factor. Annual operating factor, as given by the formula below, is defined as the product of design firing rate and hours of operation per year, divided by annual total fuel consumption, expressed as a percentage. If actual data are unavailable, provide estimates, based on equipment design performance specifications.

Annual Operating Factor (AOF) =

$100 * \text{Design Firing Rate (MMBtu/hr)} * \text{Hours of Operation (hr)} / \text{Total Fuel Consumption (MMBtu)}$

Removal Efficiency at Annual Operating Factor = FGP Removal Efficiency * Average AOF

In the formula, Total Fuel Consumption (MMBtu) is found using Schedule 3 fuel quantities multiplied by their average heat content.

12. **FGD or FGP Tested Efficiency Rate (at 100% Load) (I, L):** Enter the tested efficiency of the FGD and/or FGP unit for each controlled pollutant. If not tested at 100% load, provide the load at which the test was conducted in a comment on Schedule 9. If an efficiency test has not been conducted, leave field blank and provide a comment.
13. **Test Date (J, M):** Enter the date of the latest efficiency test for the FGD and/or FGP unit for each controlled pollutant. If no test was conducted, leave the test date blank.
14. **Quantity of FGD Sorbent Used (N):** Enter the quantity of FGD sorbent used during the reporting period (to the nearest 0.1 thousand tons).
15. **Electrical Energy Consumption (O):** Enter the Electrical Energy Consumed by the FGD Unit during the reporting period (in Megawatthours).
16. **Mercury Removal Efficiency (P):** Enter the removal efficiency for mercury emissions.
17. **HCl Removal Efficiency (Q):** Enter the removal efficiency for acid gas emissions, such as HCl.
18. **Operation and Maintenance Expenditures during the Year:** Report the O&M Expenditures for the Flue Gas Desulfurization (SO₂ Control) Units, excluding electricity, in thousand dollars.



SCHEDULE 8. PART D. MONTHLY COOLING SYSTEM OPERATIONS

1. **Required Respondents:** Complete an individual Schedule 8, Part D for each thermoelectric power plant (organically fueled, nuclear and combined cycle) with a total steam capacity greater than, or equal to, 100 megawatts.

Complete a separate schedule for each reporting month.

Complete a separate row for each cooling system

If actual data are not available, provide an estimated value.

If the source of cooling water is a well or municipal water system, do not complete the Cooling Water Temperature sections.

2. **Cooling System ID (A):** Ensure that the Cooling System ID matches and corresponds to the data reported on Form EIA-860. The Cooling System ID is pre-populated for e-file users. If this ID is not pre-populated, choose the ID from the drop-down selection list. If the Cooling System ID is not on the selection list, contact EIA to have new IDs added. If the data to be reported are for the entire plant (because the data cannot be broken down by separate cooling systems), choose "PLANT" from the drop-down list.
3. **Cooling System Type (B):** Use codes from the drop-down list to provide the type of cooling system (once through, recirculating, or hybrid).
4. **Cooling System Status (C):** Select from the equipment status codes on Table 5.

Table 5

Code	System Status
OP	Operating (in commercial service or out of service less than 365 days)
OS	Out of service (365 days or longer)
RE	Retired (no longer in service and not expected to be returned to service)
SB	Standby (or inactive reserve); i.e., not normally used, but available for service)
SC	Cold Standby (Reserve); deactivated (usually requires 3 to 6 months to reactivate)
TS	Operating under test conditions (not in commercial service)

5. **Hours in Service per Month (D):** Enter the hours the intake pumps operated for the cooling system for each month. Intake can be for withdrawal or diversion from a natural body of water. Monthly Hours in Service is a required field for Schedule 8D respondents.



6. **Monthly Amount of Chlorine Added to Cooling Water (E):** Report the amount of elemental chlorine to the nearest 0.001 thousand pounds. If a compound is used, determine the amount of chlorine in the compound.

Average Monthly Rate of Cooling Water: Report the rate of flow to nearest gallons per minute (GPM).

Please note that water flow rate data in previous years were reported in cubic feet per second (CFS). To convert CFS to GPM use the following conversion:

$$1 \text{ CFS} = 448.8 \text{ GPM}$$

7. **Diversion (F):** Report the water that is moved from a watercourse without immediate beneficial use for purposes, such as filling a cooling pond, or adding water to a lake from which thermoelectric power water withdrawals can occur. Diversion and withdrawal can be the same thing in some types of systems. If this is the case, report only withdrawal and leave diversion blank.
8. **Withdrawal (G):** Report the water that is removed from a water body for beneficial use, such as cooling water, boiler make-up water, ash sluicing, and dust suppression.
9. **Discharge (H):** Report the water that is returned to a water body (not a cooling pond). The water body may be the same water body from which the water was withdrawn. For zero discharge system types (recirculating systems), report zero in the discharge field. Do not report the water discharged back into the cooling pond for recirculation.
10. **Consumption (I):** Report the water that is withdrawn from a water body and not returned (discharged) because of evaporation losses and onsite consumption, such as for dust control and flue gas desulfurization.
11. **Method of Measurement (J):** If all data reported under the Average Monthly Rate of Cooling Water section have been measured, choose one of the choices for "Measured" from the drop-down selection list. If one or more entries have been estimated in a particular section, choose one of the estimation methodologies given in the drop-down selection list for that section. If "Other" is chosen, provide details of the estimation method on Schedule 9. The choices that will be included in the drop-down selection list are the following:
- Measured using a streamflow gage or weir
 - Measured using a cumulative or continuous flowmeter
 - Measured using an instantaneous flowmeter and pump running time
 - Estimated based on stated pump capacity and pump running time
 - Estimated based on another flow, such as discharge estimated from measured withdrawals
 - Consumption calculated as the difference of withdrawal and discharge flows
 - Consumption estimated from withdrawal amount and a loss coefficient
 - Estimated based on power generation
 - Estimated based on plant design characteristics
 - Permitted value, not measured
 - Other (describe in footnote)

Cooling Water Temperature: Report temperatures in degrees Fahrenheit to the nearest whole number.

12. **Average at Intake (K):** Report the average monthly cooling water temperature measured at the withdrawal



point from the natural body of water, or from the cooling pond where the water was initially diverted.

13. **Maximum at Intake (L):** Report the maximum cooling water temperature for the month measured at the withdrawal point from the natural body of water, or from the cooling pond where the water was initially diverted.
14. **Average at Discharge (M):** Report the average monthly discharged cooling water temperature measured at the discharge point into the natural body of water.
15. **Maximum at Discharge (N):** Report the maximum discharged cooling water temperature during the month, in degrees Fahrenheit, to the nearest whole number, measured at the discharge point into the natural body of water.

Notes: Water from other sources than natural water bodies, including wells, water utilities, and waste water treatment plants, is considered Withdrawal, not Diversion.

Blowdown from cooling systems that is diverted to ash systems or evaporation ponds is not considered Discharge.

16. **Method of Measurement (O):** If all data reported under the Cooling Water Temperature section have been measured, choose one of the choices for "Measured" from the drop-down selection list. If one or more entries have been estimated in a particular section, choose one of the estimation methodologies given in the drop-down selection list for that section. If "Other" is chosen, provide details of the estimation method on Schedule 9. The choices that will be included in the drop-down selection list are the following:
 - Measured continuously with a thermometer
 - Measured at intervals (for example, daily) with a thermometer
 - Discharge temperature calculated based on intake temperature
 - Intake temperature calculated based on discharge temperature
 - Estimated based on plant design characteristics
 - Permitted value, not measured
 - Other (describe in footnote)

Volume of Cooling Water (million gallons per month): Report the actual volume of water diverted, withdrawn, consumed and discharged for each cooling system ID, or for the plant, to nearest 0.001 million gallons per month.

17. **Diversion (P):** Report the water that is moved from a watercourse without immediate beneficial use for purposes, such as filling a cooling pond, or adding water to a lake from which thermoelectric power water withdrawals can occur. Diversion and Withdrawal can be the same thing in some types of systems. If this is the case, report only Withdrawal and leave Diversion blank.
18. **Withdrawal (Q):** Report the water that is removed from a water body for beneficial use, such as cooling water, boiler make-up water, ash sluicing, and dust suppression.
19. **Discharge (R):** Report the water that is returned to a water body (not a cooling pond). The water body may not be the same water body as from which the water was withdrawn. For zero discharge system types (recirculating systems), report zero in the discharge field. Do not report the water discharged back into the cooling pond for recirculation.
20. **Consumption (S):** Report the water that is withdrawn from a water body and not returned (discharged) because of evaporation losses and onsite consumption, such as for dust control and flue gas desulfurization.



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Burden: 2.3 Hours**

SCHEDULE 9. COMMENTS

This schedule provides space for comments. Identify the schedule, item, and identifying information (e.g., plant code, boiler ID, generator ID, prime mover) for each comment. If a plant is sold, provide the purchaser's name, a telephone number (if available), and the date of the sale.



The following tables are referenced earlier in this document.

Table 6: Technology Type Codes

Code	Description	Unit Type
JB	Jet Bubbling Reactor (Wet)	FGD
MA	Mechanically Aided Type (Wet)	FGD
PA	Packed Type (Wet)	FGD
SP	Spray Type (Wet)	FGD
TR	Tray Type (Wet)	FGD
VE	Venturi Type (Wet)	FGD
DSI	Dry Sorbent (Powder) Injection Type	FGD
ACI	Activated Carbon Injection System	FGD
CD	Circulating Dry Scrubber (Dry)	FGD
SD	Spray Dryer Type (Dry)	FGD
SN	Selective Noncatalytic Reduction	NO _x
SR	Selective Catalytic Reduction	NO _x
BS	Baghouse, shake and deflate	FGP
BP	Baghouse, pulse	FGP
BR	Baghouse, reverse air	FGP
EC	Electrostatic Precipitator, cold side with Flue Gas Conditioning	FGP
EH	Electrostatic Precipitator, hot side with Flue Gas Conditioning	FGP
EK	Electrostatic Precipitator, cold side without Flue Gas Conditioning	FGP
EW	Electrostatic Precipitator, hot side without Flue Gas Conditioning	FGP
MC	Multiple Cyclone	FGP
SC	Single Cyclone	FGP
OT	Other Equipment (Specify in Schedule 9 for comments)	



Table 7: Prime Mover Codes

Prime Mover Code	Prime Mover Description
BA	Energy Storage, Battery
BT	Turbines Used in a Binary Cycle (including those used for geothermal applications)
CA	Combined-Cycle – Steam Part
CE	Energy Storage, Compressed Air
CP	Energy Storage, Concentrated Solar Power
CS	Combined-Cycle Single-Shaft Combustion turbine and steam turbine share a single generator
CT	Combined-Cycle Combustion Turbine Part
ES	Energy Storage, Other (Specify on Schedule 9, Comments)
FC	Fuel Cell
FW	Energy Storage, Flywheel
GT	Combustion (Gas) Turbine (including jet engine design)
HA	Hydrokinetic, Axial Flow Turbine
HB	Hydrokinetic, Wave Buoy
HK	Hydrokinetic, Other
HY	Hydraulic Turbine (including turbines associated with delivery of water by pipeline)
IC	Internal Combustion (diesel, piston, reciprocating) Engine
PS	Energy Storage, Reversible Hydraulic Turbine (Pumped Storage)
OT	Other – Specify on SCHEDULE 9.
ST	Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle)
PV	Photovoltaic
WT	Wind Turbine, Onshore
WS	Wind Turbine, Offshore

Table 8: Energy Sources and Heating Value Ranges



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			"Higher Heating Value" Range		Energy Source Description
	Energy Source Code	Unit Label	MMBtu Lower	MMBtu Upper	
Fossil Fuels					
Coal	ANT	tons	22	28	Anthracite Coal
	BIT	tons	20	29	Bituminous Coal
	LIG	tons	10	14.5	Lignite Coal
	SUB	tons	15	20	Subbituminous Coal
	WC	tons	6.5	16	Waste/Other Coal (including anthracite culm, bituminous gob, fine coal, lignite waste, waste coal)
	RC	tons	20	29	Refined Coal (A coal product that is created when impurities and/or moisture are removed to improve heat content and reduce emissions. Includes any coal which meets the IRS definition of refined coal (Notice 2010-54 or any superseding IRS notices). Does not include coal processed by coal preparation plants.)
	SGC	Mcf	0.2	0.3	Coal-Derived Synthesis Gas
	CBL	Tons	10	29	Blended Coal. Use ONLY on Schedule 3 for consumption of coal where the above types are blended and an allocation by coal rank cannot be determined.
Petroleum Products	DFO	barrels	5.5	6.2	Distillate Fuel Oil (including diesel, No. 1, No. 2, and No. 4 fuel oils.
	JF	barrels	5	6	Jet Fuel
	KER	barrels	5.6	6.1	Kerosene
	PC	tons	24	30	Petroleum Coke
	RFO	barrels	5.8	6.8	Residual Fuel Oil (including No. 5 and No. 6 fuel oils, and bunker C fuel oil.
	PG	Mcf	2.5	2.75	Propane, gaseous
	SGP	Mcf	0.2	1.1	Petroleum Coke Derived Synthesis Gas
	WO	barrels	3	5.8	Waste/Other Oil (including crude oil, liquid butane, liquid propane, naphtha, oil waste, re-refined motor oil, sludge oil, tar oil, or other petroleum-based liquid wastes)
	BFG	Mcf	0.07	0.12	Blast Furnace Gas
Natural Gas and Other Gases	NG	Mcf	0.8	1.1	Natural Gas
	OG	Mcf	0.32	3.3	Other Gas (specify in Comment Section of SCHEDULE 9)
Renewable Fuels					
Solid Renewable Fuels	AB	tons	7	18	Agricultural By-Products
	MSW	tons	9	12	Municipal Solid Waste



	OBS	tons	8	25	Other Biomass Solids (specify in Comment Section of SCHEDULE 9)
	WDS	tons	7	18	Wood/Wood Waste Solids (including paper pellets, railroad ties, utility poles, wood chips, bark, and wood waste solids)
Liquid Renewable (Biomass) Fuels	OBL	barrels	3.5	4	Other Biomass Liquids (specify in Comment Section of SCHEDULE 9)
	SLW	tons	10	16	Sludge Waste
	BLQ	tons	10	14	Black Liquor
	WDL	barrels	8	14	Wood Waste Liquids excluding Black Liquor (includes red liquor, sludge wood, spent sulfite liquor, and other wood-based liquids)
Gaseous Renewable (Biomass) Fuels	LFG	Mcf	0.3	0.6	Landfill Gas
	OBG	Mcf	0.36	1.6	Other Biomass Gas (includes digester gas, methane, and other biomass gasses) (specify in Comment Section of SCHEDULE 9)
All Other Renewable Fuels	SUN	N/A	0	0	Solar
	WND	N/A	0	0	Wind
	GEO	N/A	0	0	Geothermal
	WAT	N/A	0	0	Water at a Conventional Hydroelectric Turbine, and water used in Wave Buoy Hydrokinetic Technology, Current Hydrokinetic Technology, and Tidal Hydrokinetic Technology.
All Other Fuels					
	WAT	MWh	0	0	Pumping Energy for Reversible (Pumped Storage) Hydroelectric Turbine
	MWH	MWh	0	0	Energy storage technologies, such as compressed air, batteries, and fly wheels
	NUC	N/A	0	0	Nuclear Uranium, Plutonium, Thorium
	PUR	N/A	0	0	Purchased Steam
	WH	N/A	0	0	Waste heat not directly attributed to a fuel source (WH should only be reported where the fuel source for the waste heat is undetermined, and for combined-cycle steam turbines that do not have supplemental firing.)
	TDF	tons	16	32	Tire-derived Fuels
	OTH	N/A	0	0	Specify in Comment Section of SCHEDULE 9.



Table 9: Classification of End-Use Customers

The **residential sector** includes private households and apartment buildings where energy is consumed primarily for:

- space heating
- water heating
- air conditioning
- lighting
- refrigeration
- cooking
- clothes drying

The **commercial sector** includes nonmanufacturing business establishments such as:

- hotels
- motels
- restaurants
- wholesale businesses
- retail stores
- health, social, and educational institutions
- public street and highway lighting
- municipalities
- divisions or agencies of State and Federal Governments under special contracts or agreements, and other utility departments, as defined by the pertinent regulatory agency and/or electric utility

Sometimes the commercial sector includes small manufacturing facilities as well.

The **industrial sector** includes:

- manufacturing
- construction
- mining
- agriculture (irrigation, grain drying)
- fishing
- forestry establishments

The **transportation sector** includes:

- railroads and railways (the fuel source of propulsion must be like a metro system which only exists in large cities costing millions of dollars). Should be counted as 1 customer per transportation system.

GLOSSARY	The glossary for this form is available online at the following URL: http://www.eia.gov/glossary/index.html
SANCTIONS	The timely submission of Form EIA-923 by those required to report is mandatory under Section 13(b) of the Federal Energy Administration Act of 1974 (FEAA) (Public Law 93-275), as amended. Failure to respond may result in a penalty of not more than \$2,750 per day for each civil violation, or a fine of not more than \$5,000 per day for each criminal violation. The government may bring a civil action to prohibit reporting violations, which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements. Title 18 U.S.C. 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its jurisdiction.
REPORTING BURDEN	Public reporting burden for this collection of information is estimated to average 2.0 hours per response for monthly respondents, 3.2 hours per response for annual respondents, and 4.4 hours per response for annual respondents with boiler level data. Burden hours include the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The weighted average burden for the Form EIA-923 is 2.3 hours per response. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Energy Information Administration, Office of Survey Development and Statistical Integration, EI-21Forrestal Building, 1000 Independence Avenue SW, Washington, D.C. 20585-0670; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503. A person is not required to respond to the collection of information unless the form displays a valid OMB number.



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**DISCLOSURE OF
INFORMATION**

The following information reported on this survey will be protected and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905:

- All information associated with the "Survey Contact" and the "Supervisor" of "Contact Person for Survey" on SCHEDULE 1.
- The "Total Delivered Cost" of coal, natural gas, and petroleum received at nonutility power plants and "Commodity Cost" information for all plants in SCHEDULE 2.
- "Previous Month's Ending Stocks" and "Stocks at End of Reporting Period" information reported on SCHEDULE 4.

All other information reported on Form EIA-923 is public information and may be publicly released in company identifiable form.

The Federal Energy Administration Act requires EIA to provide company- specific data to other federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of the Department of Energy (DOE), to any Committee of Congress, the Government Accountability Office, or other federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are not applied to the aggregate statistical data published from this survey. There may be some statistics that are based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent.