| U.S. Department of U.S. Energy Inform Form EIA-860 (2012 | ation Administration | ANNUAL ELECTRIC GENERATOR REPORT INSTRUCTIONS | Form Approved OMB No. 1905-0129 Approval Expires: 10/31/2013 Burden Hours: 9.4 Hours |
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| PURPOSE | equipment (including of the United States, and specified reporting pe Electric Power Month | generators, boilers, cooling systems of those scheduled for initial commerciod. The data from this form appearly, Electric Power Annual, and the Act to monitor the current status and tree | tric generating plants and associated s and flue gas desulfurization systems) in rcial operation within 10 years of the ar in several EIA publications; including the Annual Energy Review. The data collected ends of the electric power industry and to |
| REQUIRED RESPONDENTS | plants that: 1) have a MW or greater; and 2) connected to the local | total generator nameplate capacity where the generator(s), or the faci or regional electric power grid and | ng plants and proposed (10-year plans) (sum for generators at a single site) of 1 ility in which the generator(s) resides, is has the ability to draw power from the grid related details to determine total capacity at |
| | interconnected grid, g | enerators that are connected to a "p | which are not a part of the North American public grid," meaning a local or regional to the public, must be reported on Form EIA- |
| | The operator or plann plants. | ed operator of jointly-owned plants | should be the only respondent for those |
| RESPONSE DUE DATE | Submit the completed | Form EIA-860 directly to the EIA a | nnually on or before March 31. |
| METHODS OF FILING RESPONSE | submit it to: EIA-8600 | <u>eia.gov</u> . All subsequent filings car ystem uses security protocols to pro | all applicable portions of this form and n be done electronically using EIA's secure otect information against unauthorized |
| | | ons on filling out this form or have in email requesting assistance to: | not registered with the e-file Single Sign-On EIA-860@eia.gov. |
| | If you have registered | with SSO, log on at https://signon.g | eia.gov/ssoserver/login. |
| | | chnical problem with logging into or HelpCenter@eia.gov or 202-586-95 | using the e-file system, contact the Help 595 |
| | If you need an alterna | te means of filing your response, co | ontact the Help Center. |
| | Please retain a compl | eted copy of this form for your files. | |

Please retain a completed copy of this form for your files.

CONTACTS

Internet System Questions: For questions related to the e-filing system, see the help contact information immediately above.

Data Questions: For questions about the data requested on Form EIA-860, contact the survey staff:

Suparna Ray

Fax Number: 202-287-1960

Email: Suparna.Ray@eia.gov

Vlad Dorjets
Fax Number: 202-287-1960
Email: Vlad.Dorjets@eia.gov

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GENERAL INSTRUCTIONS

- Verify all EIA-provided information. If incorrect, revise the incorrect entry and provide the correct information. State codes are two-letter U.S. Postal Service abbreviation. Provide any missing information. If filing a paper copy of this form, typed or legible handwritten entries are acceptable. Allow the original entry to remain readable. See more specific instructions for correcting data in SCHEDULE 2. POWER PLANT DATA, and SCHEDULE 3. GENERATOR INFORMATION.
- 2. Check all data for consistency with the same or related data that appear in more than one schedule of this form or in other forms or reports submitted to EIA. Explain any inconsistencies in SCHEDULE 7. COMMENTS.
- 3. For planned power plants and/or planned equipment, use planning data to complete the form.
- 4. Report in whole numbers (i.e., no decimal points), except where explicitly instructed to report otherwise.
- 5. Indicate negative amounts by using a minus sign before the number.
- 6. Report date information as a two-digit month and four-digit year, e.g., "11 1980."
- 7. Furnish the requested information to reflect the status of your current or planned operations as of the end of the data year. If your company no longer operated a specific power plant as of December 31, report the name of the operator as of December 31 along with related contact information (including contact person's name, telephone number, and email address, if known) in SCHEDULE 7. COMMENTS. Do not complete the form for that power plant.
- 8. To request additional blank schedules contact the U.S. Energy Information Administration using the contact information on page 1, or download the form from http://www.eia.gov/cneaf/electricity/page/forms.html.
- 9. For definitions of terms, refer to the U.S. Energy Information Administration glossary at http://www.eia.gov/glossary/index.html.
- 10. For the purpose of determining reporting requirements, the capacity of a power plant is the sum of the maximum ratings (in megawatts) on the nameplates of all applicable generators at a specific site. For photovoltaic (PV) solar, use the AC ratings of the array for a specific site.

ITEM-BY-ITEM INSTRUCTIONS

SCHEDULE 1. IDENTIFICATION

- Survey Contact: Verify contact name, title, address, telephone number, fax number, and email address.
- 2. **Supervisor of Contact Person for Survey:** Verify the contact's supervisor's name, title, address, telephone number, Fax number and email address.
- 3. **Report For:** Verify all information, including operator name, operator identification number, and year for which data are being reported. These fields cannot be revised online. Contact EIA if corrections are needed.

If any of the above information is incorrect, revise the incorrect entry and provide the correct information. Provide any missing information.

Operator and Preparer Information:

- 4. For Legal Name of Operator, enter the name. The operator of the power plant is the electric power producer owner/joint owner of the plant or a subsidiary of the electric power producer who has a working interest in the plant and who is responsible for making the strategic decisions related to the management and physical operation of the power plant. The operator entity may also be an electric power producer or a subsidiary of an electric power producer who operates a power plant that is wholly owned by another electric power producer. Operator excludes energy services companies under contract to operate the plant for the electric power producer; in these cases, the electric power producer should be reported as the legal operator.
- 5. For Current Address of Principal Business Office of Plant Operator, enter the principal

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name and address of where the operator's principal office is located. Include an attention line, room number, building designation, etc.

- 6. For Preparer's Legal Name, enter the name if different from Legal Name of Operator.
- 7. For **Current Address of Preparer's Office** enter preparer's current address if it is different from the address of the **Legal Name of Operator**.
- 8. For **Is the Operator an Electric Utility or Owned by an Electric Utility**; check "Yes" if so. Otherwise check "No."

SCHEDULE 2. POWER PLANT DATA

Verify or complete one section for each existing power plant and each power plant planned for initial commercial operation within 10 years of the specified reporting period. To report a new plant or a plant that is not already identified, use a blank SCHEDULE 2.

- 1. For line 1, **Plant Name** and **EIA Plant Code**, enter the name of the power plant, and the EIA Plant Code for the power plant (if available). Each power plant must be uniquely identified. When assigning a name to a plant, use its full name (i.e. do not shorten Alpha Generating Station to Alpha) and include as much detail as possible (e.g.,Beta Paper Mill, Gamma Landfill Gas Plant, Delta Dam). The plant name may include additional details like owner name and business structure but "Corporation" should be shorted to "Corp" and "Incorporated" should be shortened to "Inc." Enter "NA 1," "NA 2," etc., for unnamed planned facilities.
- 2. For line 2, Street Address, enter the street address of the power plant.
- 3. For line 3, **County Name** and **City Name**, enter the county and city in which the plant is (will be) located. Enter "NA" for planned facilities that have not been sited. If a mobile power plant, indicate with a note in SCHEDULE 7. COMMENTS.
- 4. For line 4, **State**, enter the two-letter U.S. Postal Service abbreviation for the State in which the plant is located. Enter "NA" for planned facilities for which the State has not been determined. If the State is "NA," the county name must be "NA."
- 5. For line 5, **Zip Code**, enter the zip code of the plant. Provide, at a minimum, the five-digit zip code; however, the nine-digit code is preferred.
- 6. For line 6, **Latitude and Longitude**, enter the latitude and longitude of the plant in degrees, minutes, and seconds or in decimal format. The coordinates should relate to a central point within the plant's property such as a generator and not the offices of the plant's owner or operator.
- 7. For line 7, Enter **Datum** for latitude and longitude, if known; Otherwise enter "UNK." The longitude and latitude measurement for a location depends in part on the coordinate system (or "datum") to which the measurement is keyed. "Datum systems" used in the United States, include the North American Datum 1927 (NAD27), North American Datum 1983 (NAD83) and World Geodetic Survey 1984 (WGS84).
- 8. For line 8a, **NERC Region**, enter the NERC region in which the plant is located.
- 9. For line 8b, **Is this Plant in a RTO or ISO Territory?**, check "Yes" or "No" for whether the plant in the service territory of a Regional Transmission Organization or Independent System Operator.
- 10. For line 8c, **Name of RTO or ISO**, if you answered "Yes" in line 8b, select the RTO or ISO from the list. If your RTO or ISO does not appear on the list, select "Other" and explain in SCHEDULE 7. COMMENTS.
- 11. For line 9, **Name of Water Source**, enter the name of the principal source from which cooling water for thermal-electric plants and water for generating power for hydroelectric plants is directly obtained or the water source for hydrokinetic projects. If more than one water source is (will be) used, enter the name(s) of the other sources of water in SCHEDULE 7. COMMENTS. Enter "Municipality" if the water is from a municipality. Enter "wells" if water is from wells. Enter

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"NA" for planned facilities for which the water source is not known.

- 12. Responses for line 10, **Steam Plant Status**, and line 11, **Steam Plant Type**, are entered by EIA survey managers for all plants that are combustible-fueled steam generator (including steam generators with duct firing) with 10 MW or more nameplate capacity, combined cycle steam generators without duct firing, nuclear generators, and solar thermal generators using a steam cycle with 100 MW or more nameplate capacity. If the **Steam Plant Status** or **Steam Plant Type** is not accurate, please contact the survey manager.
- 13. For line 12, **Primary Purpose of the Plant**, enter the North American Industry Classification System (NAICS) code that best describes the primary purpose of the reporting plant. Electric utility plants will generally use code 22. Independent power producers whose sole or primary business is the sale of electricity will also generally use code 22. For industrial and commercial generators whose primary business is an industrial or commercial process (e.g., paper mills, refineries, chemical plants, etc.), use Table 2 in these instructions to determine the code.
- 14. For line 13, **Does this plant have Federal Energy Regulatory Commission (FERC) Qualifying Facility (QF) Cogenerator Status?**, check "Yes" or "No"; if "Yes" provide all QF docket numbers granted to the facility. Please do not include the prefix (e.g. QF, EWG, etc.) when entering the docket numbers. Only include the numerical portion of the docket number, including dashes.
- 15. For line 14, **Does this plant have Federal Energy Regulatory Commission (FERC) Qualifying Facility (QF) Small Power Producer Status?**, check "Yes" or "No"; if "Yes" provide all QF docket numbers granted to the facility. Please do not include the prefix (e.g. QF, EWG, etc.) when entering the docket numbers. Only include the numerical portion of the docket number, including dashes.
- 16. For line 15, **Does this plant have Federal Energy Regulatory Commission (FERC) Qualifying Facility (QF) Exempt Wholesale Generator Status?**, check "Yes" or "No"; if "Yes" provide all QF docket numbers granted to the facility. Please do not include the prefix (e.g. QF, EWG, etc.) when entering the docket numbers. Only include the numerical portion of the docket number, including dashes.
- 17. For line 16a, **Owner of Transmission/Distribution Facilities**, enter the name of the current owner of the transmission or distribution facilities to which the plant is interconnected. If the plant is interconnected to multiple owners, enter the name of the principal owner and list the other owners and their roles in SCHEDULE 7. COMMENTS.
- 18. For line 16b, **Grid Voltage (in kilovolts)**, enter the grid voltage at the point of interconnection to the transmission/distribution facilities. If the plant is interconnected to multiple transmission/distribution facilities, enter the highest grid voltage and list the other grid voltages in SCHEDULE 7. COMMENTS.

SCHEDULE 3. GENERATOR INFORMATION

- 1. Verify or complete for each existing or planned generator. Complete one column for each generator (up to three generators can be reported on one page) for all generators that are: (1) in commercial operation (whether active or inactive), or (2) expected to be in commercial operation within 10 years of the specified reporting period and are either planned, under construction, or in testing stage. Do not report auxiliary generators.
- 2. To report a new generator, use a separate (blank) section of SCHEDULE 3. To report a new generator that has replaced one that is no longer in service, update the status of the generator that has been replaced along with other related information (e.g., retirement date), then use a separate (blank) section of SCHEDULE 3 to report all of the applicable data about the new generator. Each generator must be uniquely identified within a plant. The EIA cannot use the same generator ID for the new generator that was used for the generator that was replaced.

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SCHEDULE 3. PART A. GENERATOR INFORMATION – GENERATORS

- 1. For line 1, **Plant Name**, enter the official or legal name of the power plant as reported on SCHEDULE 2. POWER PLANT DATA.
- 2. For line 2, **EIA Plant Code**, enter the EIA plant code as reported on SCHEDULE 2. POWER PLANT DATA.
- 3. For line 3, **Operator's Generator Identification**, enter the unique generator identification commonly used by plant management. Generator identification can have a maximum of four characters, and should be the same identification as reported on other EIA forms to be uniquely defined within a plant.
- 4. For line 4, **Prime Mover**, enter one of the prime mover codes below. For combined cycle units, a prime mover code must be entered for each generator.

| · · |
|--|
| Prime Mover Description |
| Energy Storage, Battery |
| Energy Storage, Compressed Air |
| Energy Storage, Concentrated Solar Power |
| Energy Storage, Flywheel |
| Energy Storage, Other (specify in SCHEDULE 7. COMMENTS) |
| Steam Turbine, including nuclear, geothermal and solar steam (does not include combined cycle) |
| Combustion (Gas) Turbine (includes jet engine design) |
| Internal Combustion Engine (diesel, piston, reciprocating) |
| Combined Cycle Steam Part |
| Combined Cycle Combustion Turbine Part (type of coal or solid must be reported as energy source for integrated coal gasification) |
| Combined Cycle Single Shaft (combustion turbine and steam turbine share a single generator) |
| Combined Cycle Total Unit (use only for plants/generators that are in planning stage, for which specific generator details cannot be provided) |
| Hydrokinetic, Axial Flow Turbine |
| Hydrokinetic, Wave Buoy |
| Hydrokinetic, Other (specify in SCHEDULE 7. COMMENTS) |
| Hydroelectric Turbine (includes turbines associated with delivery of water by pipeline) |
| Hydraulic Turbine, Reversible (pumped storage) |
| Turbines Used in a Binary Cycle (including those used for geothermal applications) |
| Photovoltaic |
| Wind Turbine, Onshore |
| Wind Turbine, Offshore |
| Fuel Cell |
| Other (specify in SCHEDULE 7. COMMENTS) |
| |

Combined heat and power systems often generate steam with multiple sources and generate electric power with multiple prime movers. For reporting purposes, a simple cycle prime mover should be distinguished from a combined cycle prime mover by determining whether the power generation part of the steam system can operate independently of the rest of the steam system. If these system components cannot be operated independently, then the prime movers should be reported as combined cycle types.

5. For line 5, Associated Boiler Identifications, enter the identification (ID) code for each boiler that provides steam to each combustible-fuel steam generator (including steam generators with duct firing) with 10 MW or more nameplate capacity or each combined cycle steam turbine generator without duct firing with 100 MW or more nameplate capacity (needed to associate cooling system data with generators). Boilers may be associated with multiple generators. The

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identification code should, preferably, be one that is commonly used by plant management as it will be used throughout all EIA forms. However, the code cannot be more than six characters long and cannot have any blanks. Combined cycle units with and without auxiliary firing should report codes for the heat recovery steam generators (HRSGs) on line 5.

- 6. For line 6, **Unit Code (Multi-Generator Code)**, identify all generators that are operated with other generators as a single unit. Generators operating as a single unit should have the same unit (multi-generator code) code or four-character identifier. Identify combined cycle generators that operate as a unit with a unique four-character identifier. All generators that operate as a unit in combined cycle must have the same unique identifier. If generators do not operate as a single unit, this space should be left blank.
- 7. For line 7, **Ownership**, identify the ownership for each generator using the following codes: "S" for single ownership by respondent, "J" for jointly owned with another entity or "W" for wholly owned by an entity other than respondent.
- 8. For line 8, **Is this generator an electric utility generator?**, an *electric utility generator* shall mean a generator that is owned by an electric utility, or a jointly owned generator with the greatest share of the generator being electric utility owned. (Note: If two or more owners have equal shares of ownership in a generator, it is considered to be an electric utility generator if any one of the owners meets the definition of electric utility). For each electric utility generator, check "Yes" or "No."
- 9. For line 9, Date of Sale, If Sold, enter the month and year of the sale of the generator (e.g., 12-2007), if the generator has been sold in its entirety. For changes in shares of ownership only, with no change in operator, report in SCHEDULE 4. OWNERSHIP OF GENERATORS OWNED JOINTLY OR BY OTHERS. In SCHEDULE 7. COMMENTS provide the legal name, business address, contact person, phone number and email address of the entity to which this generator was sold.
- 10. For line 10, **Can This Generator Deliver Power to the Transmission Grid?**, indicate if the generator can or cannot deliver power to the transmission grid.
- 11. For line 11, **if the prime mover is "CA,"** (combined-cycle steam), "CS" or "CC" check "Yes" if the unit has duct-burners for supplementary firing of the turbine exhaust gas. Otherwise, check "No."

SCHEDULE 3, PART B. GENERATOR INFORMATION – EXISTING GENERATORS

- For line 1, Generator Nameplate Capacity, report the highest value on the nameplate in megawatts rounded to the nearest tenth as measured in alternating current (AC). If the nameplate capacity is expressed in kilovolt amperes (kVA), convert to kilowatts by multiplying the corresponding power factor by the kVA, divide by 1,000 to express in megawatts to the nearest tenth. If generator nameplate capacity is exceeded by net summer capacity, provide the reason(s) in SCHEDULE 7. COMMENTS.
- 2. For line 2, Net Capacity, enter the generator's net summer and net winter capacities for the primary energy. Report in alternating current (AC) megawatts, rounded to the nearest tenth. For generators that are out of service for an extended period or on standby or have no generation during the respective seasons, report the estimated capacities based on historical performance. For generators that are tested as a unit, a single aggregate net summer capacity and a single aggregate net winter capacity may be reported. For hydroelectric generators, report the instantaneous capacity at maximum waterflow. If net capacity is only available as direct current (DC), estimate the effective AC output and explain in SCHEDULE 7. COMMENTS.
- 3. For line 3a, **Maximum Reactive Power Output (MVAR)**, if the reactive power capability has been tested, enter the maximum reactive power outputs (MVAR) at the high side of the generator step-up transformer for generators with nameplate capacity of 10 MW or greater. A MVAR is a Mega Voltampere Reactive.
- 4. For line 3b, **Maximum Reactive Power Absorption (MVAR)**, if the reactive power capability has been tested, enter the maximum reactive power absorptions of the generator at the high

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side of the generator step-up transformer for generators with nameplate capacity of 10 MW or greater. A MVAR is a Mega Voltampere Reactive.

5. For line 4, **Status Code**, enter one of the following status codes:

| Status Code | Status Code Description |
|-------------|--|
| 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. |

- 6. For line 5, **Synchronized to the Grid**, if the status code entered on line 4 is standby (SB) please note if the generator is currently equipped such that, when operating, it can be synchronized to the grid.
- 7. For line 6, **Initial Date of Operation**, enter the month and year of initial commercial operation.
- 8. For line 7, **Retirement Date**, enter the month and year that the generator was retired.
- 9. For line 8, Is this Generator Associated with a Combined Heat and Power system?, check either "Yes" or "No." If the answer is "Yes," check whether the generator is part of a topping or bottoming cycle, as applicable. In a topping cycle system, electricity is produced first and any waste heat from that production is used in a manufacturing process or for direct heating, and/or space heating/cooling. In a bottoming cycle system, thermal output is used in a process other than electricity production and any waste heat is then used to produce electricity.
- 10. For line 9, Predominant Energy Source, enter the energy source code for the fuel used in the largest quantity (Btus) during the reporting year to power the generator. For generators that are out of service for an extended period of time or on standby, report the energy sources based on the generator's latest operating experience. Select appropriate energy source codes from Table 1 in these instructions. For generators driven by turbines using steam that is produced from waste heat or reject heat, report the original energy source used to produce the waste heat (reject heat).
- 11. For line 9a, if the predominant energy source for powering the generator is coal or petroleum coke, check all types of technology and steam conditions that apply.
- 12. For line 10, if the prime mover is ST (steam turbine) report the **Start-Up and Flame Stabilization Energy Sources** used by the combustion unit(s) associated with this generator; otherwise leave blank.
- 13. For line 11, Second Most Predominant Energy Source, enter the energy source code for the energy source used in the second largest quantity (Btus) during the reporting year to power the generator. DO NOT include a fuel used only for start-up or flame stabilization. Select appropriate energy source codes from Table 1 in these instructions. For generators driven by turbines using steam that is produced from waste heat or reject heat, report the original energy source used to produce the waste heat (reject heat).
- 14. For line 12, **Other Energy Sources**, enter the codes for other energy sources: first, list the energy sources actually used in order of predominance (based on quantity of Btus), then list ones that the generator was capable of using but was not used to generate electricity during the last 12 months. For generators that are out of service for an extended period of time or on standby, report the energy sources based on the generator's latest operating experience. Select appropriate energy source codes from Table 1 in these instructions. For generators driven by turbines using steam that is produced from waste heat or reject heat, report the original energy

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source used to produce the waste heat (reject heat).

- 15. For line 13, **Is This Generator Part of a Solid Fuel Gasification System,** check "Yes" or "No" as appropriate.
- 16. For line 14, **Number of Turbines, Buoys, or Inverters**, if energy source is wind, enter the number of turbines; if the energy source is wave energy, enter the number of buoys; if energy source is other hydrokinetics, enter the number of turbines; if the energy source is solar photovoltaic, enter the number of inverters.
- 17. For line 15a, **Tested Heat Rate**, enter the tested heat rate under full load conditions for all combustible-fueled generators, nuclear-fueled generators, concentrated solar generators and geothermal generators. Report the heat rate as the fuel consumed in British thermal units (Btus) necessary to generate one net kilowatthour of electric energy. Report the tested heat rate under full load, not the actual heat rate, which is the quotient of the total Btu(s), consumed and total net generation. If generators are tested as a unit (not tested individually), report the same test result for each generator. For generators that are out of service for an extended period or on standby, report the heat rate based on the unit's latest test. If the generator is associated with a combined heat and power (CHP) system and no tested heat rate data are available, report either the manufacturer's specification for heat rate or an estimated heat rate. DO NOT report a heat rate that includes the fuel used for the production of useful thermal output. For Internal Combustion units, a manufacturer's specification or estimated heat rate should be reported, if no tested heat rate is available. For solar photovoltaic generators, provide the average module efficiency for all installed modules. If the reported value is not a tested heat rate, specify in SCHEDULE 7. COMMENTS.
- 18. For line 15b, **Fuel Used for Heat Rate Test**, enter the fuel code or "M" for multiple fuels for the fuel used to calculate the heat rate reported above. Select appropriate energy source codes from Table 1 in these instructions. For generators driven by turbines using steam that is produced from waste heat or reject heat, report the original energy source used to produce the waste heat (reject heat).
- 19. For line 16, **Operating Efficiency for Solar Photovoltaic Generators**, enter the manufacturer's rated efficiency at standard test conditions, if available.

Proposed Changes to Existing Generators (within the next 10 years)

- 20. For line 17a, indicate whether there are any planned capacity uprates/derates, repowering, other modifications, or generator retirements scheduled to take place within the next 10 years.
- 21. For line 17b, **Planned Uprates**, enter the increase in capacity expected to be realized from the uprate. Enter the planned effective date (MM-YYYY) that the generator is scheduled to enter operation after the modification.
- 22. For line 17c, **Planned Derates**, enter the decrease in capacity expected to be realized from the derate. Enter the planned effective date (MM-YYYY) that the generator is scheduled to enter operation after the modification.
- 23. For line 17d, **Planned Repowering**, if a repowering of the generator is planned, enter the new prime mover, the new energy source, and new nameplate capacity as well as the planned effective date (MM-YYYY) that the generator is scheduled to enter operation after the repowering is complete.
- 24. For line 17e, **Other Modifications**, enter the planned effective date (MM-YYYY) that the generator is scheduled to enter commercial operation after any other planned change is complete, that is not included in lines 17b through 17d. Please provide details of the planned change in SCHEDULE 7. COMMENTS. Other planned changes may include a second uprate or derate to a unit or a reactivation of a previously retired generator.
- 25. For line 17f, **Retirement**, if the generator is expected to be retired within the next 10 years, enter the planned effective date (MM-YYYY) of that scheduled retirement.
- 26. For line 18, **Can This Generator be Powered by Multiple Fuels?**, indicate if the combustion system that powers each generator has both:

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- The regulatory permits necessary to either co-fire fuels or fuel switch, and
- The equipment, including fuel storage facilities in working order, necessary to either co-fire fuels or fuel switch.

If the answer to this question is "No," go to SCHEDULE 3, PART C. GENERATOR INFORMATION - PROPOSED GENERATORS.

Note: **Co-firing** means the simultaneous use of two or more fuels by a single combustion system to meet load. **Fuel switching** means the ability of a combustion system running on one fuel to replace that fuel in its entirety with a substitute fuel. Co-firing and fuel switching exclude the limited use of a second fuel for start-up or flame stabilization.

- 27. For line 19, **Can This Unit Co-Fire Fuels?**, indicate whether or not the combustion system that powers the generator has, in working order, the equipment and the regulatory permits necessary to co-fire fuels. If the answer is "No," skip to line 23.
- 28. For line 20, **Fuel Options for Co-Firing**, indicate up to six fuels that can be co-fired. Select appropriate energy source codes from Table 1 in these instructions. Note: fuel options listed for co-firing must also be included under either "Predominant Energy Source" (line 9), "Second Most Predominant Energy Source" (line 11), or "Other Energy Sources (line 12).
- 29. For line 21, **Can This Generator be Powered by Co-Fired Fuel Oil and Natural Gas?**, indicate if the combustion system that powers the generator can co-fire fuel oil with natural gas. If the answer is "No," skip to line 23.
- 30. For line 22, **Can This Generator be Run on 100% Oil?**, indicate whether or not the combustion system that powers the generator can run on 100 percent oil. If the answer to this question is "Yes," skip to line 23. If it is "No," indicate the maximum percentage of the heat input to the combustion system (percent of MMBtu) that can be supplied by oil when co-firing with natural gas, taking into account all applicable legal, regulatory, and technical limits. Also provide the maximum output (summer net MW) that the unit can achieve, taking into account all applicable legal, regulatory, and technical limits when making the maximum use of oil and co-firing natural gas.
- 31. For line 23, **Can This Unit to Fuel Switch?**, indicate whether or not the combustion system that powers the generator has, in working order, the equipment necessary to fuel switch and the regulatory permits to fuel switch. If "No," skip to SCHEDULE 3, PART C, GENERATOR INFORMATION PROPOSED GENERATORS.
- 32. For line 24, **Can This Unit Switch Between Oil and Natural Gas?**, indicate whether or not the combustion system that powers the generator has, in working order, the equipment and the regulatory permits necessary to switch between oil and natural gas. If "No," go to line 26. If "Yes," indicate whether the unit can switch fuels while operating (i.e., without shutting down the unit). Also enter the maximum output (summer net MW) that the unit can achieve, taking into account all applicable legal, regulatory, and technical limits, when running on natural gas, the maximum output (summer net MW) that the unit can achieve, taking into account all applicable legal, regulatory, and technical limits, when running on oil, and how long it takes to switch the generator from using 100 percent natural gas to 100 percent oil.
- 33. For line 25, **Are There Factors That Limit the Unit's Ability to Switch From Natural Gas to Oil?**, indicate whether or not there are factors that limit the operation of the generator (e.g., limits on maximum output, limits on annual operating hours), when running on 100 percent oil. Check all factors that limit the ability of this generator to switch from natural gas to oil.
- 34. For line 26, **Fuel Switching Options**, enter the codes for up to six fuels, including (if applicable) oil and natural gas, which can be used as a sole source of fuel to power the generator. Select appropriate energy source codes from the table in these instructions. Note: Fuel options listed for fuel switching must also be included under either "Predominant Energy Source" (line 9), "Second Most Predominant Energy Source" (line 11), or "Other Energy Sources (line 12).

SCHEDULE 3, PART C. GENERATOR INFORMATION – PROPOSED GENERATORS

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- 1. For line 1, Generator Nameplate Capacity, enter the highest value on the nameplate in megawatts rounded to the nearest tenth as measured in alternating current (AC). If the nameplate capacity is expressed in kilovolt amperes (kVA), convert to kilowatts by multiplying the corresponding power factor by the kVA, divide by 1,000 to express in megawatts to the nearest tenth. If the generator nameplate is not known at this time, estimate the nameplate rating for the generator and note this as an estimate in SCHEDULE 7. COMMENTS.
- 2. For line 2, **Net Capacity**, enter the generator's net summer and net winter capacities for the primary energy source. Report in alternating current (AC) megawatts rounded to the nearest tenth that are expected when the generator goes into commercial operation.
- 3. For line 3a, **Maximum Expected Reactive Power Output (MVAR)**, enter the maximum expected reactive power outputs (MVAR) at the high side of the generator step-up transformer for generators with nameplate capacity of 10 MW or greater. A MVAR is a Mega Voltampere Reactive.
- 4. For line 3b, Maximum Expected Reactive Power Absorption (MVAR), enter the maximum expected reactive power absorptions of the generator at the high side of the generator step-up transformer for generators with nameplate capacity of 10 MW or greater. A MVAR is a Mega Voltampere Reactive.
- 5. For line 4, **Status Code**, enter one of the following status codes:

| Status Code | Status Code Description |
|-------------|---|
| IP | Planned new generator canceled, indefinitely postponed, or no longer in resource plan |
| TS | Construction complete, but not yet in commercial operation (including low power testing of nuclear units) |
| Р | Planned for installation but regulatory approvals not initiated; Not under construction |
| L | Regulatory approvals pending. Not under construction but site preparation could be underway |
| Т | Regulatory approvals received. Not under construction but site preparation could be underway |
| U | Under construction, less than or equal to 50 percent complete (based on construction time to date of operation) |
| V | Under construction, more than 50 percent complete (based on construction time to date of operation) |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 6. For line 5, **Planned Original Effective Date**, enter the month and year of the original effective date that: 1) the generator was scheduled to start operation after construction is completed. (Please note that this date does not change once it has been reported the first time.)
- 7. For line 6, **Planned Current Effective Date**, enter the month and year of the current effective date that the generator is scheduled to start operation.
- 8. For line 7, **Will This Generator be Associated with a Combined Heat and Power System?** Check either "Yes" or "No."
- 9. For line 8, Will This Generator be Part of a Solid Fuel Gasification System?, check "Yes" or "No," as appropriate.
- 10. For line 9, indicate if this generator is part of a site that was previously reported by either your company or a previous owner as an indefinitely postponed or cancelled plant.
- 11. For line 10, **Expected Predominant Energy Source**, enter the energy source code for the energy source expected to be used in the largest quantity (Btus) when the generator starts commercial operation. Select appropriate energy source codes from Table 1 in these instructions.
- 12. For line 11, if the expected predominant energy source for powering the generator is coal or petroleum coke, check all the types of technology and steam conditions that apply.

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- 13. For line 12, **Expected Second Most Predominant Energy Source**, enter the energy source code for the energy sources expected to be used in the second largest quantity (Btus) when the generator starts commercial operation. Select appropriate energy source codes from Table 1 in these instructions. Do not include fuels expected to be used only for start-up or flame stabilization.
- 14. For line 13, **Other Energy Source Options**, enter the codes for other energy sources that will be used at the plant to power the generator. Enter up to four codes in order of their expected predominance of use, where predominance is based on quantity of Btu(s) to be consumed. Select appropriate energy source codes from Table 1 in these instructions.
- 15. For line 14, **Number of Turbines, Buoys, or Inverters**, if the energy source will be wind, enter the number of turbines; if the energy source will be wave energy, enter the number of buoys; if the energy source will be other hydrokinetics, enter the number of turbines; if the energy source will be solar photovoltaic, enter the number of inverters.
- 16. For line 15, **Will This Generator be Able to be Powered by Multiple Fuels?**, indicate if the combustion system that will power each generator will have both:
 - The regulatory permits necessary to either co-fire fuels or fuel switch, and
 - The equipment, including fuel storage facilities, in working order, necessary to either co-fire fuels or fuel-switch.

If the answer is "No" or "Undetermined", go to SCHEDULE 4. OWNERSHIP OF GENERATORS OWNED JOINTLY OR BY OTHERS.

Note: **Co-firing** means the simultaneous use of two or more fuels by a single combustion system to meet load. **Fuel switching** means the ability of a combustion system running on one fuel to replace that fuel in its entirety with a substitute fuel. Co-firing and fuel switching exclude the limited use of a second fuel for start-up or flame stabilization.

- 17. For line 16, **Will this Unit be Able to Co-Fire Fuels?**, indicate whether or not the combustion system that will power the generator will have the equipment necessary to co-fire fuels and the regulatory permits to co-fire fuels. If "No," skip to line 20.
- 18. For line 17, **Fuel Options for Co-Firing**, indicate up to six fuels that the generator will be designed to co-fire. Select appropriate energy source codes from Table 1 in these instructions. Note: fuel options listed for co-firing must also be included under either "Predominant Energy Source" (line 9a), "Second Most Predominant Energy Source" (line 11), or "Other Energy Sources (line 13).
- 19. For line 18, **Will This Generator be Able to be Powered by Co-Fired Fuel Oil and Natural Gas?**, indicate if the combustion system that powers the generator will be able to co-fire fuel oil with natural gas. If it cannot, skip to line 20.
- 20. For line 19, **Will This Generator be able to Run on 100% Oil?**, indicate whether or not the combustion system that will power the generator can run on 100 percent oil. If "Yes," skip to line 20, if "No," indicate the maximum percentage of the heat input to the combustion system (percent of MMBtu) that will be able to be supplied by oil when co-firing with natural gas. Also provide the maximum output (summer net MW) that the unit is expected to achieve, taking into account all applicable legal, regulatory, and technical limits, when making the maximum use of oil and co-firing natural gas.
- 21. For line 20, **Will This Unit be Able to Fuel Switch?**, indicate whether or not the combustion system that will power the generator will have the equipment necessary to fuel switch and have the regulatory permits to fuel switch. If "No," then skip to SCHEDULE 4. OWNERSHIP OF GENERATORS OWNED JOINTLY OR BY OTHERS.
- 22. For line 21, **Will This Unit be Able to Switch Between Oil and Natural Gas?**, indicate whether or not the combustion system that will power the generator will have the necessary equipment and the regulatory permits in place to switch between oil and natural gas. If "No," skip to line 23. If "Yes," indicate whether the unit will be able to switch fuels while operating (i.e., without shutting down the unit). Also enter the maximum output (summer net MW) that the unit is

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expected to achieve, taking into account all applicable legal, regulatory, and technical limits, when running on natural gas, the maximum output (summer net MW) that the unit is expected to achieve, taking into account all applicable legal, regulatory, and technical limits, when running on oil, and how long it is expected to take to switch the generator from using 100 percent natural gas to 100 percent oil.

- 23. For line 22, Limits Are There Factors That Will Limit the Unit's Ability to Switch From Natural Gas to Oil?, indicate whether or not there will be factors that will limit the operation of the generator (e.g., limits on maximum output, limits on annual operating hours), when running on 100 percent oil. Check all factors that will limit the ability of this generator to switch from natural gas to oil.
- 24. For line 23, **Fuel Switching Options**, enter the codes for up to six fuels, including (if applicable) oil and natural gas, that can be used as a sole source of fuel to power each generator. Select appropriate energy source codes from Table 1 in these instructions. Note: fuel options listed for fuel switching must also be included under either "Predominant Energy Source" (line 10), "Second Most Predominant Energy Source" (line 12), or "Other Energy Sources (line 13).

SCHEDULE 4. OWNERSHIP OF GENERATORS OWNED JOINTLY OR BY OTHERS

- Complete a separate SCHEDULE 4 for each existing and planned generator operated by the
 respondent that is, or will be, jointly owned; and each generator that the respondent operates
 but is 100 percent owned by another entity. Only the current or planned operator of jointlyowned generators should complete this schedule. The total percentage of ownership must equal
 100 percent.
- 2. For each generator, specify the **Plant Name**, **EIA Plant Code**, and **Generator Identification**, as listed on SCHEDULE 3, PART A. GENERATOR INFORMATION GENERATORS.
- 3. Enter the **Owner/Joint Owner Name and Address**, in order of percentage of ownership, of each generator. Enter the **EIA Owner Code** for the owner, if known, otherwise leave blank. Enter the **Percent Owned** to two decimal places, i.e., 12.5 percent as "12.50." If a generator is 100 percent owned by an entity other than the operator, then enter the percentage ownership as "100.00."
- 4. Include any notes or comments in SCHEDULE 7. COMMENTS.

SCHEDULE 5. NEW GENERATOR INTERCONNECTION INFORMATION

- 1. Complete a separate SCHEDULE 5 for each generator that started commercial operation during the data year (calendar year for which this survey is being filed). For example, if Reporting is as of December 31, 2007, then data year is 2007.
- 2. For line 1, enter the **Name of the Power Plant** and the **EIA Power Plant Code**, as previously reported in SCHEDULE 3, PART A, GENERATOR INFORMATION GENERATORS.
- 3. For line 2, enter the **Generator ID**, as previously reported in SCHEDULE 3, PART A, GENERATOR INFORMATION GENERATORS.
- 4. For line 3, **Date of Actual Generator Interconnection**, report the month and year that the interconnection was put into place.
- 5. For line 4, **Date of Initial Interconnection Request**, report the month and year that the first request for interconnection was filed with the grid operator.
- 6. For line 5, **Interconnection Site Location**, specify the nearest city or town, and the state, where the interconnection equipment is located.
- 7. For line 6, **Grid Voltage at the Point of Interconnection**, specify the grid voltage, in kV, at the point of interconnection between the generator and the grid.
- 8. For line 7, **Owner of the Transmission or Distribution Facilities to Which Generator is Interconnected,** provide the name of the owner of the transmission or distribution facilities to

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which the generator is interconnected. If the name of the owner of the facilities is unknown, provide the name of the contracting party.

- 9. For line 8, **Total Cost Incurred for the Direct, Physical Interconnection**, specify the total cost incurred, in thousands of dollars, to accomplish the physical interconnection.
- 10. For line 9, **Equipment Included in the Direct Interconnection Cost**, check each of the types of equipment that are included in the cost amount reported on line 8. If there are significant types of equipment that are not included in the list, please specify what additional equipment was needed for the interconnection in SCHEDULE 7. COMMENTS.
- 11. For line 10, (a) Total Cost for Other Grid Enhancements/Reinforcements Needed to Accommodate Power Deliveries From the Generator, specify the amount incurred, in thousands of dollars, for any other grid enhancements or reinforcements that were needed to accommodate power deliveries from the new generator. If these costs, or some portion of these costs, will be repaid to your company at some time in the future by the owner of the grid, or by the party with whom you contracted for the interconnection, please check "Yes" in line 10b; otherwise, check "No" in 10b.
- 12. For line 11, Were Specific Transmission Use Rights Secured As A Result Of The Interconnection Costs Incurred, check "Yes" or "No."

SCHEDULE 6. BOILER INFORMATION

This schedule is required to be completed for all existing and planned (10 year plans) combustible-fueled steam generators (including heat recovery steam generators with and without duct firing and combustible renewable-fueled generators), all nuclear generators and applicable solar thermal generators with a total generator nameplate capacity of at least 10 megawatts.

PART B, PART C, PART F, and PART I are only to be completed by those generators that meet the conditions above that have a total generator nameplate capacity of at least 100 megawatts.

Nuclear generators, steam generators without duct firing, and applicable solar generators using a steam cycle should complete PART F only.

SCHEDULE 6, PART A. PLANT CONFIGURATION

The e-file system will pre-populate the boiler identification codes throughout SCHEDULE 6 based on the codes entered in SCHEDULE 3, PART A. Plants with a Steam Plant Type of 1, as defined and set on line 11 of SCHEDULE 2, should complete all lines on SCHEDULE 6, PART A. Plants with a Steam Plant Type of 2 should only complete lines 2, 3, and, if applicable, lines 5 and 6. Plants with a Steam Plant Type of 3 should complete lines 2, 3 and 4. Planned equipment that is on order and expected to go into commercial service within 10 years must be reported. If two or more pieces of equipment (e.g., two generators) are associated with a single boiler, report each identification code, separated by commas, under the appropriate boiler. Do not change pre-populated equipment identifications.

- 1. For line 1, using each boiler as a starting point, complete the entire column under the boiler identification with the requested information on each piece of associated existing or planned equipment (e.g., generators, cooling systems, etc.).
- 2. For lines 2, 4, 5, 6, 7, and 8, if a piece of equipment (e.g., a generator or a cooling system) serves two or more boilers, repeat the identification information for that equipment under each appropriate boiler.
- 3. For line 2, **Associated Generator ID(s)**, do not report auxiliary generators. Multiple generators operated as a single unit (e.g., cross compound and topping generators) should be identified as a group with one identification code. Combined cycle units with auxiliary firing report only the steam generators. Do not report the combustion turbine portion of the combined cycle unit.
- 4. For line 3, **Generator Associations with Boiler as Actual or Theoretical,** indicate "A" for actual association during year or "T" for theoretical associations.

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- 5. For line 4, **Associated Cooling System ID(s)**, a cooling system is an equipment system that provides water to the condensers and includes water intakes and outlets, cooling towers and ponds, pumps, and pipes. Identify a single plant cooling system, not separate systems, unless systems are physically separated, e.g., have separate water intake and outlet structures, where each system can be operated independently.
- 6. For line 5, **Associated Flue Gas Particulate Collector ID(s)**, if a combination particulate collector is associated with a single boiler, identify the collectors as a single group. If the particulate collector also removes sulfur dioxide, identify the unit in lines 5 and 6 using the same identification code.
- 7. For line 6, **Associated Flue Gas Desulfurization Units ID(s)**, for reporting purposes identify an associated flue gas desulfurization unit to include all the trains (or modules) associated with a single boiler. If the flue gas desulfurization unit also removes particulate matter, identify the unit in lines 5 and 6 using the same identification code.
- 8. For line 7, **Associated Flue ID(s)**, a flue is defined as an enclosed passageway within a stack for directing products of combustion to the atmosphere. For stacks with multiple flues, report in one column all flues that serve the boiler identified in line 1. Separate multiple entries with commas. If the stack has a single flue, use the stack identification for the flue identification.
- 9. For line 8, **Associated Stack ID(s)**, a stack is defined as a tall, vertical structure containing one or more flues used to discharge products of combustion into the atmosphere.

SCHEDULE 6, PART B. BOILER INFORMATION – AIR EMISSION STANDARDS (DATA NOT REQUIRED FOR PLANTS LESS THAN 100 MW)

- 1. Complete a separate page for each existing or planned boiler as reported on SCHEDULE 6, PART A, line 1.
- 2. For line 2a, **Type of Boiler Standards Under Which the Boiler Is Operating**, indicate the standards as described in the U.S. Environmental Protection Agency regulation under 40 CFR. Select from the following codes of the New Source Performance Standards (NSPS):

| D | Standards of Performance for fossil-fuel fired steam boilers for which |
|----|--|
| | construction began after August 17, 1971. |
| Da | Standards of Performance for fossil-fuel fired steam boilers for which |
| | construction began after September 18, 1978. |
| Db | Standards of Performance for fossil-fuel fired steam boilers for which |
| | construction began after June 19, 1984. |
| Dc | Standards of Performance for small industrial-commercial-institutional steam |
| | generating units. |
| N | Not covered under New Source Performance Standards. |

- 3. For line 2b, **Is Boiler Operating Under a New Source Review (NSR) Permit?**, check "Yes" or "No": if "Yes," enter date and identification number of the issued permit.
- 4. For line 3, **Type of Statute or Regulation**, select from the following the most stringent type of statute or regulation code:
 - FD Federal ST State LO Local
 - NA No Applicable Standard
- 5. For line 4, Emission Standard Specified, refer to the numeric value for the unit of measurement in line 5. If no numeric value is specified, report "NA." For Sulfur Dioxide (column (b)), if the standard requires both an emission rate and a percent scrubbed, report the emission rate in terms of pounds of sulfur dioxide per million Btu on line 4a and report the percent scrubbed in terms of percent sulfur removal efficiency (by weight) on line 4b.

6. For line 5, **Unit of Measurement Specified**, column (a), Particulate Matter, select from the following unit of measurement codes (PB* is the preferred measurement):

| Code | Unit of Measurement |
|------|---|
| OP | Percent of opacity |
| PB* | Pounds of Particulate matter per million Btu in fuel |
| PC | Grains of particulate matter per standard cubic foot of stack gas |
| PG | Pounds of particulate matter per thousand pounds of stack gas |
| PH | Pounds of particulate matter emitted per hour |
| UG | Micrograms of particulate matter per cubic meter |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

7. For line 5, **Unit of Measurement Specified**, column (b), Sulfur Dioxide, select from the following unit of measurement codes (DP* is the preferred measurement):

| Code | Unit of Measurement |
|------|---|
| DC | Ambient air quality concentration of sulfur dioxide (parts per million) |
| DH | Pounds of sulfur dioxide emitted per hour |
| DL | Annual sulfur dioxide emission level less than a level in a previous |
| | year |
| DM | Parts per million of sulfur dioxide in stack gas |
| DP* | Pounds of sulfur dioxide per million Btu in fuel |
| SB | Pounds of sulfur per million Btu in fuel |
| SR | Percent sulfur removal efficiency (by weight) |
| SU | Percent sulfur content of fuel (by weight) |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

8. For line 5, **Unit of Measurement Specified**, column (c), Nitrogen Oxides, select from the following unit of measurement codes (NP* is the preferred measurement):

| Code | Unit of Measurement |
|------|--|
| NH | Pounds of nitrogen oxides emitted per hour |
| NL | Annual nitrogen oxides emission level less than a level in a previous |
| | year |
| NM | Parts per million of nitrogen oxides in stack gas |
| NO | Ambient air quality concentration of nitrogen oxides (parts per million) |
| | |
| NP* | Pounds of nitrogen oxides per million Btu in fuel |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

9. For line 6, **Time Period Specified**, select from the following codes to indicate the period over which measurements were averaged:

| Code | Time Period |
|------|-----------------|
| NV | Never to exceed |
| FM | 5 minutes |
| SM | 6 minutes |
| FT | 15 minutes |
| ОН | 1 hour |
| WO | 2 hours |
| TH | 3 hours |
| EH | 8 hours |
| DA | 24 hours |
| WA | 1 week |
| MO | 30 days |
| ND | 90 days |
| YR | Annual |

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| PS | Periodic stack testing |
|----|---|
| DT | Defined by testing |
| NS | Not specified |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 10. For line 7, Year Boiler Was or Is Expected to Be in Compliance With Federal, State and/or Local Regulations, if the boiler is currently in compliance, enter the year the boiler came into compliance or the year of the regulation, whichever came last. Report "9999" only if a revision of a governing regulation is being sought or no plans have been approved to bring the boiler into compliance.
- 11. For line 8, **If Not in Compliance**, **Strategy for Compliance**, select from the following strategy for compliance codes (separate multiple entries (up to three) with commas):

| Code | Strategy for Compliance |
|------|--|
| ВО | Burner out of service |
| FR | Flue gas recirculation |
| LA | Low excess air |
| LN | Low nitrogen oxide burner |
| MS | Currently meeting standard |
| NC | No plans to control |
| OV | Overfire air |
| SE | Seeking revision of governing regulation |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

12. For line 9, Existing, and line 10, Planned Strategies to Meet the Sulfur Dioxide and Nitrogen Oxides Requirements of Title IV of the Clean Air Act Amendment of 1990, column (b), select from the following strategy for compliance codes (separate multiple entries (up to three) with commas):

| Code | Strategy for Compliance (Sulfur Dioxide) |
|------|---|
| CF | Fluidized Bed Combustor |
| CU | Control unit under Phase I extension plan |
| IF | Install flue gas desulfurization unit (other than Phase I extension plan) |
| NC | No change in historic operation of unit anticipated |
| ND | Not determined at this time |
| RP | Repower Unit |
| SS | Switch to lower sulfur fuel |
| SU | Designate Phase II unit(s) as substitution unit(s) |
| TU | Transfer unit under Phase I extension plan |
| UC | Decrease utilization - designate Phase II unit(s) as compensating unit(s) |
| UE | Decrease utilization - rely on energy conservation and/or improved efficiency |
| US | Decrease utilization - designate sulfur-free generators to compensate |
| UP | Decrease utilization - purchase power |
| WA | Allocated allowances and purchase allowances |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

| Code | Strategy for Compliance (Nitrogen Oxides) |
|------|---|
| AA | Advanced Overfire Air |
| BF | Biased Firing (alternative burners) |
| CF | Fluidized Bed Combustor |
| FR | Flue Gas Recirculation |
| FU | Fuel Reburning |
| H2O | Water Injection |
| LA | Low Excess Air |

| LN | Low NOx Burner |
|-----|--|
| NH3 | Ammonia Injection |
| NC | No change in historic operation of unit anticipated |
| ND | Not determined at this time |
| OV | Overfire Air |
| RP | Repower Unit |
| SC | Slagging |
| SN | Selective Noncatalytic Reduction |
| SR | Selective Catalytic Reduction |
| STM | Steam Injection |
| UE | Decrease utilization - rely on energy conservation and/or improved |
| | efficiency |
| NA | Not Applicable |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

SCHEDULE 6, PART C. BOILER INFORMATION – DESIGN PARAMETERS (DATA FOR LINES 3 – 18 NOT REQUIRED FOR PLANTS LESS THAN 100 MW)

- 1. Complete for each existing or planned boiler as reported on SCHEDULE 6, PART A, line 1. If a procurement contract has been signed for an upgrade or retrofit of a boiler: 1) complete a separate page for the existing boiler; 2) explain In SCHEDULE 7. COMMENTS how long the existing equipment will be out of service; and 3) using the same boiler identification, complete a separate SCHEDULE 6, PART C for the planned upgrade or retrofit.
- 2. For line 2, enter boiler status. Select from the following codes.

| Code | Boiler Status |
|------|--|
| CN | Cancelled (previously reported as "planned") |
| CO | New unit under construction |
| OP | Operating (in commercial service or out of service less than 365 days) |
| OS | Out of service (365 days or longer) |
| PL | Planned (expected to go into commercial service within 10 years) |
| 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) |

- 3. For line 3, **Boiler Actual or Projected In-service Date**, and line 4, **Boiler Actual or Projected Retirement Date**, the month-year date should be entered as follows: August 1959 as 08-1959. If the month is unknown, use the month of June.
- 4. For line 5, **Boiler Manufacturer**, select one code from the following boiler manufacturers' codes:

| Code | Boiler Manufacturer |
|------|-------------------------|
| Al | Aalborg Industries |
| AL | Alstrom |
| AS | American Shack |
| AT | Applied Thermal Systems |
| BR | BROS |
| BW | Babcock and Wilcox |
| DJ | De Jong Coen by |
| CE | Combustion Engineering |
| CN | Coen |
| DL | Deltak |
| DS | Doosan |
| EC | Econotherm |

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| ER | Erie City Iron Works |
|-----|---|
| ET | Entek |
| FW | Foster Wheeler |
| GE | General Electric |
| GT | Gotaverken |
| HT | Hitachi |
| ID | Indeck |
| IH | In House Design |
| IHI | Ishikawajima-Harima Heavy Industries |
| IS | Innovative Steam Technology |
| KL | Keeler Dorr Oliver |
| KP | Kvaerner Pulping |
| KW | Kawasaki Heavy Industries |
| ME | Mitchell Engineering |
| NB | Nebraska Boiler |
| NM | NEM |
| NT | Nooter/Erickson |
| PB | Peabody |
| PR | Pyro Power |
| RS | Riley Stoker |
| ST | Sterling |
| TM | Tampell |
| TS | Toshiba |
| VO | Vogt Machine Company/Vogt Power |
| WE | Westinghouse |
| WG | Wiegl Engineering |
| WI | Wickes |
| ZN | Zurn |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

5. For line 6, **Type of Firing Used with Primary Fuels**, select from the following firing codes (separate multiple entries (up to three) with commas):

| Firing | Firing Type Description |
|--------|---|
| Code | |
| AF | Arch Firing |
| CB | Cell Burner |
| CF | Concentric Firing |
| CY | Cyclone Firing |
| DB | Duct Burner |
| FB | Fluidized Bed Firing |
| FF | Front Firing |
| OF | Opposed Firing |
| RF | Rear Firing |
| SF | Side Firing |
| SS | Spreader Stoker |
| TF | Tangential Firing |
| VF | Vertical Firing |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 6. For lines 8 through 11, enter firing rate data for primary fuels as entered in line 13. Do not enter firing rate for startup or flame stabilization fuels. For waste-heat boilers with auxiliary firing, enter the firing rate for auxiliary firing and complete line 12 for waste heat.
- 7. For line 12, a waste-heat boiler is a boiler that receives all or a substantial portion of its energy input from the noncombustible exhaust gases of a separate fuel-burning process.

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- 8. For line 13, **Primary Fuels Used**, see table of energy source (fuel) codes. Show design firing rates for each fuel in the associated lines 8, 9, 10, and 11. Do not include startup fuels. Predominance is based on Btu.
- 9. For line 16, **Total Air Flow**, report at standard temperature and pressure, i.e., 68 degrees Fahrenheit and one atmosphere pressure.
- 10. For line 17, Wet or Dry Bottom, enter "W" for Wet or "D" for Dry. Wet Bottom is defined as slag tanks that are installed at furnace throat to contain and remove molten ash from the furnace. Dry Bottom is defined as having no slag tanks at furnace throat area; throat area is clear; bottom ash drops through throat to bottom ash water hoppers. This design is used where the ash melting temperature is greater than the temperature on the furnace wall, allowing for relatively dry furnace wall conditions.

SCHEDULE 6, PART D. BOILER INFORMATION – NITROGEN OXIDE EMISSION CONTROLS

- 1. Complete a separate page for each existing or planned boiler.
- 2. For line 2, Nitrogen Oxide Control Status, select from the following status codes:

| Code | Control Status |
|------|---|
| CN | Cancelled (previously reported as "planned") |
| CO | New unit under construction |
| NA | Not Applicable |
| NC | No plants to control |
| OP | Operating (in commercial service or out of service less than 365 days) |
| OS | Out of service (365 days or longer) |
| OZ | Operated during the ozone season (May through September) |
| PL | Planned (expected to go into commercial service within 10 years) |
| 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) |

3. For line 3, **Low Nitrogen Oxide Control Process**, select from the following low nitrogen oxide control processes (separate multiple entries (up to three) with commas):

| Code | Control Process |
|------|--|
| AA | Advanced Overfire Air |
| BF | Biased Firing (alternative burners) |
| CF | Fluidized Bed Combustor |
| FR | Flue Gas Recirculation |
| FU | Fuel Reburning |
| H2O | Water Injection |
| LA | Low Excess Air |
| LN | Low NOx Burner |
| NA | Not Applicable |
| NH3 | Ammonia Injection |
| OV | Overfire Air |
| SC | Slagging |
| SN | Selective Noncatalytic Reduction |
| SR | Selective Catalytic Reduction |
| STM | Steam Injection |
| NC | No change in historic operation of unit anticipated |
| RP | Repower Unit |
| UE | Decrease utilization - rely on energy conservation and/or improved |
| | efficiency |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

4. For line 4, **Manufacturer of Low Nitrogen Oxide Control Burners**, select from the following low nitrogen oxide control burner manufacturers:

| Code | Manufacturer |
|----------|---|
| AB | Advanced Burner Technologies |
| ABB | ABB |
| AC | Advanced Combustion Technology |
| AL | Alstom |
| AP | AirPol |
| AT | Applied Thermal Systems |
| AU | Applied Utility Systems (AUS) |
| AZ | Alzeta |
| ВС | Babcock Borsig Power |
| BM | Bloom |
| BMD | Burns & McDonnell |
| BW | Babcock and Wilcox |
| CE | Combustion Engineering |
| CM | Combustion Components Associates Inc |
| CN | Coen |
| CSI | Combustion Solutions Inc |
| CT | Callidus Technologies |
| DB | Deutsche-Babcock |
| DD | Damper Design Inc |
| DQ | Duquesne Light Company & Energy Systems Associates |
| DV | Davis |
| DX | Deltex |
| EA | Eagle Air |
| EG | Energy and Environmental Research Corp (EER) |
| EL | Electric Power Technologies |
| EP | EPRI |
| ET | Entek |
| ETE | Entropy Technology and Environmental Construction Corp (ETEC) |
| FB | Faber |
| FN | Forney |
| FT | Fuel Tech Inc |
| FW | Foster Wheeler |
| GE | General Electric |
| GR | GE Energy and Environmental Research Corp (GEEER) |
| HL | Holman |
| HT | Hitachi |
| IC | International Combustion Limited |
| ID | Indeck |
| IH | In House Design |
| JZ | John Zink Todd Combustion/Todd Combustion |
| KL | Keeler Dorr Oliver |
| MB | Mitsui-Babcock |
| MI | Mitsubishi Industries |
| MT | Mobotec |
| NA | Not Applicable |
| NB | Nebraska Boiler |
| NC | Natcom, Inc |
| NE | NEI Neell lee |
| NL DA | Noell, Inc |
| PA | Procedair |
| PB | Peabody |

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| PS | Peerless Manufacturing Company |
|-----|---|
| PL | Pillard |
| PX | Phoenix Combustion |
| RD | Rodenhuis and Verloop |
| RI | Riley |
| RJ | RJM |
| RR | Rolls Royce |
| RS | Riley Stoker/Riley Power |
| RV | RV Industries |
| SC | Southern Company |
| SW | Siemans-Westinghouse |
| TC | Todd Combustion |
| TEC | Thermal Equipment Corporation |
| TM | Tampella |
| TS | Toshiba |
| WG | Weigel Engineering |
| ZC | Zeeco |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

SCHEDULE 6, PART E. BOILER INFORMATION – MERCURY EMISSION CONTROLS

1. For line 2, if "Yes" is checked on line 1, enter all applicable mercury emissions controls codes, separated by commas, from the following list:

| Code | Mercury Emission Control |
|------|--|
| ACI | Activated Carbon Injection System |
| BS | Baghouse, shake and deflate |
| BP | Baghouse, pulse |
| BR | Baghouse, reverse air |
| DS | Dry Scrubber |
| EC | Electrostatic precipitator, cold side, with flue gas conditioning |
| EH | Electrostatic precipitator, hot side, with flue gas conditioning |
| EK | Electrostatic precipitator, cold side, without flue gas conditioning |
| EW | Electrostatic precipitator, hot side, without flue gas conditioning |
| FGD | Flue Gas Desulfurization |
| LIJ | Lime Injection |
| WS | Wet Scrubber |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

SCHEDULE 6, PART F. COOLING SYSTEM INFORMATION – DESIGN PARAMETERS (DATA NOT REQUIRED FOR PLANTS LESS THAN 100 MW)

- If a procurement contract has been signed for an upgrade or retrofit of a cooling system: 1) complete a separate page for the existing cooling system; 2) specify in SCHEDULE 7. COMMENTS how long the existing equipment will be out of service; and 3) using the same cooling system identification, complete a separate SCHEDULE 6, PART F. COOLING SYSTEM INFORMATION DESIGN PARAMETERS for the planned upgrade or retrofit.
- 2. For line 2, Cooling System Status, select from the following equipment status codes:

| Code | System Status |
|------|---|
| CN | Cancelled (previously reported as "planned") |
| CO | New unit under construction |
| OP | Operating (in commercial service or out of service less than 365 days) |
| OS | Out of service (365 days or longer) |
| PL | Planned (expected to go into commercial service within 10 years) |
| RE | Retired (no longer in service and not expected to be returned to service) |

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| 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) |

3. For line 4a, **Type of Cooling System**, select from the following cooling system codes (separate multiple entries (up to four) with commas):

| Code | Cooling System Description |
|------|--|
| DC | Dry (air) cooling system |
| HRC | Hybrid: recirculating cooling pond(s) or canal(s) with dry cooling |
| HRF | Hybrid: recirculating with forced draft cooling tower(s) with dry cooling |
| HRI | Hybrid: recirculating with induced draft cooling tower(s) with dry cooling |
| OC | Once through with cooling pond(s) or canal(s) |
| OF | Once through, fresh water |
| OS | Once through, saline water |
| RC | Recirculating with cooling pond(s) or canal(s) |
| RF | Recirculating with forced draft cooling tower(s) |
| RI | Recirculating with induced draft cooling tower(s) |
| RN | Recirculating with natural draft cooling tower(s) |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 4. For line 4b, in the case of a hybrid cooling system, indicate the percent of total cooling load that is served by any dry cooling components.
- 5. For line 5a, **Source of Cooling Water**, provide name of river, lake, etc. For line 5b, select the **Type of Cooling Water Source** from the following codes:

| Code | Type of Water Source |
|------|--|
| SW | Surface Water (ex: river, canal, bay) |
| GW | Ground Water (ex: aquifer, well) |
| PD | Plant Discharge Water (ex: wastewater treatment plant discharge) |
| ОТ | Other (specify in SCHEDULE 7. COMMENTS) |

For line 5c, Type of Cooling Water, select the Type of Cooling Water from the following codes:

| Code | Type of Water |
|------|---|
| BR | Brackish Water |
| FR | Fresh Water |
| TW | Treated Wastewater |
| SA | Saline Water |
| ОТ | Other (specify in SCHEDULE 7. COMMENTS) |

- 7. For line 6, **Design Cooling Water Flow Rate at 100 percent Load at Intake**, if more than one source of cooling water is used by a cooling system, enter other sources in a footnote in SCHEDULE 7. COMMENTS. If water is purchased, report "municipal." If water is taken from wells, report "wells." If source of water is "municipal" or "wells," do not complete lines 19, 20, 21, and 22 and provide the total amount of water used at 100 percent load in line 6.
- 8. For lines 8, 9, and 10, a cooling pond is a natural or man-made body of water that is used for dissipating waste heat from power plants.
- 9. For line 12, **Type of Towers**, select from the following cooling tower codes (separate multiple

entries (up to two) with commas):

| Code | Type of Towers |
|------|---|
| MD | Mechanical draft, dry process |
| MW | Mechanical draft, wet process |
| ND | Natural draft, dry process |
| NW | Natural draft, wet process |
| WD | Combination wet and dry processes |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 10. For lines 15, 16, 17, and 18, enter the actual installed cost for the existing system or the anticipated cost to bring a planned system into commercial operation. Installed cost should include the cost of all major modifications. A major modification is any physical change which results in a change in the amount of air or water pollutants or which results in a different pollutant being emitted.
- 11. For line 15, **Total System**, the cost should include amounts for items such as pumps, piping, canals, ducts, intake and outlet structures, dams and dikes, reservoirs, cooling towers, and appurtenant equipment. The cost of condensers should not be included.
- 12. For lines 19 through 22, if the cooling system is a zero discharge type (RC, RF, RI, RN), do not complete column (b). The intake and the outlet are the points where the cooling system meets the source of cooling water found on line 5.

SCHEDULE 6, PART G. FLUE GAS PARTICULATE COLLECTOR INFORMATION

 For line 3, Flue Gas Particulate Collector Status, select from the following equipment status codes:

| 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 (expected to go into commercial service within 10 years) |
| 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). |

2. For line 4, **Type of Flue Gas Particulate Collector**, select from the following flue gas particulate collector codes (for combination units, separate multiple entries (up to three) with commas):

| Code | Description |
|------|--|
| BS | Baghouse, shake and deflate |
| BP | Baghouse, pulse |
| BR | Baghouse, reverse air |
| EC | Electrostatic precipitator, cold side, with flue gas conditioning |
| EH | Electrostatic precipitator, hot side, with flue gas conditioning |
| EK | Electrostatic precipitator, cold side, without flue gas conditioning |
| EW | Electrostatic precipitator, hot side, without flue gas conditioning |
| MC | Multiple Cyclone |
| SC | Single Cyclone |
| WS | Wet Scrubber |
| OT | Other (specify in SCHEDULE 7, COMMENTS). |

- 3. For line 5, Installed Cost of Flue Gas Particulate Collector Excluding Land, enter the actual installed cost for the existing system or the anticipated cost to bring a planned system into commercial operation. Installed cost should include the cost of all major modifications. A major modification is any physical change which results in a change in the amount of air or water pollutants or which results in a different pollutant being emitted.
- 4. For lines 6, 7, 8 and 9 enter value for fuel. Enter range of values, if applicable.

SCHEDULE 6, PART H. FLUE GAS DESULFURIZATION UNIT INFORMATION (INCLUDES COMBUSTION TECHNOLOGIES)

- If a procurement contract has been signed for an upgrade or retrofit of a Flue Gas
 Desulfurization Unit: 1) complete a separate page for the existing unit; 2) specify in SCHEDULE
 7. COMMENTS, how long the existing equipment will be out of service; and 3) using the same
 FGD identification, complete a separate SCHEDULE 6, PART H. FLUE GAS
 DESULFURIZATION UNIT for the planned upgrade or retrofit.
- 2. For line 2, Flue Gas Desulfurization Unit Status, select from the following equipment status codes:

| Code | Status |
|------|---|
| CN | Cancelled (only if previously reported as planned) |
| CO | New unit under construction |
| OP | Operating (in commercial service or out of service less than 365 days) |
| OS | Out of service (365 days or longer) |
| PL | Planned (expected to go into commercial service within 10 years) |
| RE | Retired (no longer in service and not expected to be returned to service) |
| SB | Standby (or inactive reserve, i.e., not normally used by available for service) |
| SC | Cold Standby (Reserve); deactivated. Usually requires 3 to 6 months to activate |
| TS | Operating under test conditions (not in commercial service) |

- 3. If the code selected is "OP" complete lines 4 through 14, otherwise do not complete these lines.
- 4. For line 4, **Type of Flue Gas Desulfurization Unit**, select from the following FGD unit codes (for combination units, separate multiple entries (up to four) with commas):

| Code | Type of Unit |
|------|---|
| BR | Jet bubbling reactor |
| CD | Circulating dry scrubber |
| DP | Dry powder (Sorbent) injection type |
| MA | Mechanically aided type |
| PA | Packed type |
| SD | Spray dryer type |
| SP | Spray type |
| TR | Tray type |
| VE | Venture type |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

5. For line 5, **Type of Sorbent**, select from the following sorbent codes (separate multiple entries (up to four) with commas):

| Code | Type of Sorbent |
|------|--------------------------|
| AF | Alkaline fly ash |
| CC | Calcium carbide slurry |
| CEF | CE filtrate |
| CSH | Caustic Sodium hydroxide |
| DB | Dibasic acid |
| DL | Dolomitic limestone |

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| LA | Lime and alkaline fly ash |
|----|---|
| LF | Limestone and alkaline fly ash |
| LI | Lime |
| LS | Limestone |
| MO | Magnesium oxide |
| SA | Soda ash |
| SB | Sodium bicarbonate |
| SC | Sodium carbonate |
| SF | Sodium formate |
| SL | Soda liquid |
| SS | Sodium sulfite |
| TW | Treated wastewater |
| WT | Water |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

6. For line 7, **Flue Gas Desulfurization Unit Manufacturer**, select one code from the following flue gas desulfurization unit manufacturer codes:

| Code | Manufacturer |
|------|--|
| AA | Advanced Air Technologies |
| ABB | ABB Environmental Systems |
| AL | Alstom |
| AM | American Air Filter |
| AP | Airpol |
| API | Air Pollution Industries |
| AX | Amerex Industries |
| BE | Bact Engineering |
| BI | Bleco Industries |
| BL | Bechtel Corporation |
| BMD | Burns and McDonnell |
| ВО | Bionomics |
| BPC | Belco Pollution Control |
| BPE | Babcock Power Environmental Inc (BPEI) |
| BT | Belco Technologies |
| BW | Babcock and Wilcox |
| CA | Chiyoda |
| CC | Chemico |
| CE | Combustion Engineering |
| CO | Combustion Equipment |
| DA | Delta Conveying Systems |
| DC | Ducon |
| DM | Davey McKee |
| EE | Environmental Engineering |
| EEC | Environmental Elements Corporation |
| EI | Entoleter Inc |
| FL | Flakt, Inc |
| FM | FMC |
| FW | Foster Wheeler |
| GE | General Electric |
| GF | Grafwolff |
| HA | Hamon |
| IH | In House Design |
| JO | Joy Manufacturing |
| KC | Korea Cottrell |
| KE | M.W. Kellogg |
| KR | Krebs Equipment |

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| LLB | Lurgi Lentjes Bischoff |
|-----|---|
| MC | Macrotek |
| MG | McGill Air Clean |
| MI | Mitsubishi Industry |
| MT | Mobotec |
| MX | Marselex |
| NPA | Neptune Airpol |
| NSP | NSP |
| PA | Procedair |
| PB | Peabody |
| PR | Pyro Power |
| PU | Pure Air |
| RC | Research Cottrell |
| RS | Riley Stoker |
| SHU | Saarberg-Holter Umwelttechnick GmbH |
| SK | Schenck Weigh Feeders |
| TC | Turbosonic |
| TH | Thyssen/CEA |
| TK | Turbotak |
| TP | Tempala Power |
| UE | Utility Engineering |
| UM | United McGill |
| UO | Universal Oil Products |
| WAP | Wheelabrator Air Pollution Control |
| ZN | Zurn |
| OT | Other (specify in SCHEDULE 7. COMMENTS) |

- 7. For line 15, **Removal Efficiency for Sulfur Dioxide**, report the removal efficiency as the percent by weight of gases removed from the flue gas.
- 8. For lines 20, 21, 22, and 23, enter the actual installed costs for the existing systems or the anticipated costs to bring a planned system into commercial operation. Installed cost should include the cost of all major modifications. A major modification is any physical change which results in a change in the amount of air or water pollutants or which results in a different pollutant being emitted. The total (line 23) will be the sum of lines 20, 21, and 22 which includes any other costs pertaining to the installation of the unit.

SCHEDULE 6, PART I. STACK AND FLUE INFORMATION – DESIGN PARAMETERS (DATA NOT REQUIRED FOR PLANTS LESS THAN 100 MW)

- If a procurement contract has been signed for an upgrade or retrofit of a stack or flue: 1)
 complete a page for the existing stack or flue; 2) specify in SCHEDULE 7. COMMENTS, how
 long the existing structure will be out of service; and 3) using the same flue and stack
 identifications, complete a separate SCHEDULE 6, PART I for the planned upgrade or retrofit.
- 2. For line 1, **Flue ID**, and line 2, **Stack ID**, there must be an entry. If there is only one flue, also use the stack ID as the flue ID. Identification codes must be the same as reported on SCHEDULE 6, PART A. PLANT CONFIGURATION.
- 3. For line 3, Stack (or Flue) Actual or Projected In-Service Date of Commercial Operation, the month-year should be entered as follows: e.g., August 1959 as 08-1959.
- 4. For line 4, **Status of Stack**, select one from the following equipment status codes:

| Status | Code |
|--------|---|
| CN | Cancelled (previously reported as "planned") |
| CO | New unit under construction |
| OP | Operating (in commercial service or out of service within 365 days) |

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| OS | Out of service (365 days or longer) |
|----|---|
| PL | Planned (on order or expected to go into commercial service within 10 years) |
| 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. For lines 7 and 8, the rate should be approximately equal to the cross-sectional area multiplied by the velocity, multiplied by 60.
- 6. For lines 13 and 14, seasonal average flue gas exit temperatures should be reported in degrees Fahrenheit, based on the arithmetic mean of measurements during operating hours. Summer season includes June, July, and August. Winter season includes January, February, and December.
- 7. For line 15, **Source**, enter "M" for measured or "E" for estimated.
- 8. For lines 16 and 17, **Stack Location**, enter the latitude and longitude in either degrees, minutes, and seconds or as a decimal.
- 9. For line 18, Enter **Datum** for latitude and longitude, if known; otherwise, enter "UNK." The longitude and latitude measurement for a location depends in part on the coordinate system (or "datum") the measurement is keyed to. "Datum systems" used in the United States, include the North American Datum 1927 (NAD27), North American Datum 1983 (NAD83) and World Geodetic Survey 1984 (WGS84).

SCHEDULE 7. COMMENTS

This schedule provides additional space for comments. Please identify schedule and line number and identifying information (e.g., plant code, boiler id, generator id) for each comment and use additional pages, if necessary.

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Table 1. Energy Source Codes and Heat Content

| Eval True | Energy | Unit | Higher Heating Value Range | | Engage Course Decorinties | |
|-----------------------------|----------------|---------|-------------------------------|----------------|---|--|
| Fuel Type | Source Code | Label | MMBtu Lower | MMBtu Upper | Energy Source Description | |
| Fossil Fuels | | | | | | |
| | 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 | |
| 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 | |
| | 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 | |
| Petroleum Products | RFO | barrels | 5.8 | 6.8 | Residual Fuel Oil (including No. 5, and No. 6 fuel oils, and bunker C fuel oil) | |
| | WO | barrels | 3.0 | 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 | |
| | NG | Mcf | 0.8 | 1.1 | Natural Gas | |
| Natural Gas and Other | OG | Mcf | 0.32 | 3.3 | Other Gas (specify in SCHEDULE 7. COMMENTS) | |
| Gases | PG | Mcf | 2.5 | 2.75 | Gaseous Propane | |
| | SG | Mcf | 0.2 | 1.1 | Synthetic Gas | |
| | SGC | Mcf | 0.2 | 0.3 | Coal-Derived Synthetic Gas | |
| | | | Renewabl | e Fuels | | |
| | AB | tons | 7 | 18 | Agricultural By-Products | |
| | MSW | tons | 9 | 12 | Municipal Solid Waste | |
| Solid Renewable Fuels | OBS | tons | 8 | 25 | Other Biomass Solids (specify in SCHEDULE 7. COMMENTS) | |
| | WDS | tons | 7 | 18 | Wood/Wood Waste Solids (including paper pellets, railroad ties, utility poles, wood chips, bark, and wood waste solids) | |

| T1 /T | Energy Source Code | Unit Label | Higher Heating Value Range | | | |
|--|--------------------------|---------------|-------------------------------|----------------|--|--|
| Fuel Type | | | MMBtu Lower | MMBtu Upper | Energy Source Description | |
| Renewable Fuels | | | | | | |
| | OBL | barrels | 3.5 | 4 | Other Biomass Liquids (specify in SCHEDULE 7. COMMENTS) | |
| المسلط | SLW | tons | 10 | 16 | Sludge Waste | |
| Liquid | BLQ | tons | 10 | 14 | Black Liquor | |
| Renewable (Biomass) Fuels | WDL | barrels | 8 | 14 | Wood Waste Liquids excluding Black Liquor (including red liquor, sludge wood, spent sulfite liquor, and other wood- based liquids) | |
| Casasus | LFG | Mcf | 0.3 | 0.6 | Landfill Gas | |
| Gaseous Renewable (Biomass) Fuels | OBG | Mcf | 0.36 | 1.6 | Other Biomass Gas (including digester gas, methane, and other biomass gases; specify in SCHEDULE 7. COMMENTS) | |
| | SUN | N/A | 0 | 0 | Solar | |
| | WND | N/A | 0 | 0 | Wind | |
| | GEO | N/A | 0 | 0 | Geothermal | |
| All Other Renewable Fuels | 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 | |
| | NUC | N/A | 0 | 0 | Nuclear (including Uranium, Plutonium, and Thorium) | |
| | PUR | N/A | 0 | 0 | Purchased Steam | |
| All Other Energy Sources | 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 | |
| | MWH | MWh | 0 | 0 | Electricity used for energy storage | |
| | ОТН | N/A | 0 | 0 | Specify in SCHEDULE 7. COMMENTS | |

| U.S. Department of Energy | | |
|--|--|--|
| U.S. Energy Information Administration | | |
| Form FIA 900 (2042) | | |

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Table 2. Commonly Used North American Industry Classification System (NAICS) Codes

| | Agriculture, Forestry, Fishing and Hunting | |
|--------|---|--|
| 111 | Crop Production | |
| 112 | Animal Production | |
| 113 | Forestry and Logging | |
| 114 | Fishing, Hunting and Trapping | |
| 115 | Support Activities for Agriculture and Forestry | |
| | , | |
| | Mining, Quarrying, and Oil and Gas Extraction | |
| 211 | Oil and Gas Extraction | |
| 2121 | Coal Mining | |
| 2122 | Metal Ore Mining | |
| 2123 | Nonmetallic Mineral Mining and Quarrying | |
| | | |
| | Utilities | |
| | Electric Power Generation, Transmission and Distribution (other than 2212, | |
| 22 | 2213, 22131, 22132 or 22133) | |
| 2212 | Natural Gas Distribution | |
| 22131 | Water Supply and Irrigation Systems | |
| 22132 | Sewage Treatment Facilities | |
| 22133 | Steam and Air-Conditioning Supply | |
| 23 | Construction | |
| | Manufacturing | |
| 311 | Food Manufacturing | |
| 312 | Beverage and Tobacco Product Manufacturing | |
| 313 | · · · · · · · · · · · · · · · · · · · | |
| 314 | Textile Mills (Fiber, Yarn, Thread, Fabric, and Textiles) Textile Product Mills | |
| 315 | Apparel Manufacturing | |
| 316 | · · · | |
| | Leather and Allied Product Manufacturing | |
| 321 | Wood Product Manufacturing | |
| 322 | Paper Manufacturing (other than 322122 or 32213) | |
| 322122 | Newsprint Mills | |
| 32213 | Paperboard Mills | |
| 323 | Printing and Related Support Activities | |
| 324 | Petroleum and Coal Products Manufacturing (other than 32411) | |
| 32411 | Petroleum Refineries | |
| 325 | Chemical Manufacturing (other than 32511, 32512, 325193, 325188, 3252 325211, 3253 or 325311) | |
| 32511 | Petrochemical Manufacturing | |
| 32512 | Industrial Gas Manufacturing | |
| 325193 | Ethyl Alcohol Manufacturing (including Ethanol) | |
| 325188 | Industrial Inorganic Chemicals | |
| | Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments | |
| 3252 | Manufacturing (other than 325211) | |
| 325211 | Plastics Material and Resin Manufacturing | |
| | Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing (other than | |
| 3253 | 325311) | |
| 325311 | Nitrogenous Fertilizer Manufacturing | |
| 326 | Plastics and Rubber Products Manufacturing | |
| 327 | Nonmetallic Mineral Product Manufacturing (other than 32731) | |

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|--|---|--|--|
| 32731 | Cement Manufacturing | | |
| 331 | Primary Metal Manufacturing (other t | than 331111 or 331312) | |
| | Iron and Steel Mills | , | |
| | Primary Aluminum Production | | |
| | Fabricated Metal Product Manufacturing | | |
| | · · · · · · · · · · · · · · · · · · · | | |
| | Machinery Manufacturing | | |
| | Computer and Electronic Product Ma | | |
| | Electrical Equipment, Appliance, and | | |
| | Transportation Equipment Manufactu | • | |
| | Furniture and Related Product Manu | facturing | |
| 339 | Miscellaneous Manufacturing | | |
| 421 | Wholesale Trade | | |
| 441 | Retail Trade | | |
| | Transportation and Warehousing | | |
| | Air Transportation | | |
| 482 | Rail Transportation | | |
| 483 | Water Transportation | | |
| | Truck Transportation | | |
| | Transit and Ground Passenger Trans | sportation | |
| | Pipeline Transportation | | |
| | Scenic and Sightseeing Transportation | on | |
| | | (other than 4881, 4882, 4883 or 4884) | |
| | • | · · | |
| | Support Activities for Air Transportat | , , , | |
| | Support Activities for Rail Transporta | , , | |
| | Support Activities for Water Transpo | , <u> </u> | |
| | Support Activities for Road Transpor | tation | |
| | Postal Service | | |
| 492 | Couriers and Messengers | | |
| 493 | Warehousing and Storage | | |
| | Information | | |
| 511 | Publishing Industries (except Interne | it) | |
| | Motion Picture and Sound Recording | , | |
| | Broadcasting (except Internet) | , | |
| | Telecommunications | | |
| | Data Processing, Hosting, and Related Services | | |
| | Other Information Services | ed Services | |
| 521 | Finance and Insurance | | |
| | Real Estate and Rental and Leasin Office Buildings) | g (including Convention Centers and | |
| 541 | Professional, Scientific, and Technical Services Management of Companies and Enterprises | | |
| 55 | | | |
| | Administrative and Support and W Services | /aste Management and Remediation | |
| 561 | Administrative and Support Services | | |
| | | on Services (other than 562212 or 562213) | |
| 562212 | Solid Waste Landfill | | |

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|--|--|--|--|
| 562213 | Solid Waste Combustors and Inciner | ators | |
| 611 I | Educational Services | | |
| 1 | Health Care and Social Assistance | • | |
| 621 | Ambulatory Health Care Services | | |
| 622 | Hospitals | | |
| 623 | Nursing and Residential Care Faciliti | es | |
| 624 | Social Assistance | | |
| , | Arts, Entertainment, and Recreation | on | |
| | Performing Arts, Spectator Sports, a | | |
| 712 I | Museums, Historical Sites, and Simil | ar Institutions | |
| 713 | Amusement, Gambling, and Recreation Industries | | |
| | Accommodation and Food Services | | |
| 721 | Accommodation | | |
| 722 | Food Services and Drinking Places | | |
| | Other Services (except Public Administration) | | |
| 811 | Repair and Maintenance | | |
| 812 I | Personal and Laundry Services | | |
| 813 | Religious, Grantmaking, Civic, Professional, and Similar Organizations | | |
| 814 | Private Households | | |
| 92 | Public Administration (other than 921, 922, 92214 or 928) | | |
| 921 | Executive, Legislative, and Other General Government Services | | |
| 922 | Justice, Public Order and Safety Activities (other than 92214) | | |
| | Correctional Facilities | | |
| 928 I | National Security and International Affairs (including Military Bases) | | |
| | | | |

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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-860 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 6.75 hours per response for response for respondents without environmental information and 12.5 hours per response for respondents with environmental information, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Energy Information Administration, Statistics and Methods Group, EI-70, 1000 Independence Avenue S.W., Forrestal Building, Washington, DC 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.

DATA PROTECTION PROCEDURES

Information reported on Form EIA-860 will be treated as non-sensitive and may be publicly released in identifiable form except as noted below.

The information reported for the data element "Tested Heat Rate" contained on SCHEDULE 3, PART B. GENERATOR INFORMATION – EXISTING GENERATORS will be treated as sensitive and protected 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 regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905.

The Federal Energy Administration Act requires the 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 nonstatistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Disclosure limitation procedures are applied to the sensitive statistical data published from SCHEDULE 3 PART B. GENERATOR INFORMATION – EXISTING GENERATORS, Tested Heat Rate, on Form EIA-860 to ensure that the risk of disclosure of identifiable information is very small.

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NOTICE: This report is mandatory under the Federal Energy Administration Act of 1974 (Public Law 93-275). Failure to comply may result in criminal fines, civil penalties and other sanctions as provided by law. For further information concerning sanctions and disclosure information, see the provisions stated on the last page of the instructions. Title 18 USC 1001 makes it a criminal offense for any person knowingly and willingly to make to any Agency or Department of the United States any false, fictitious, or fraudulent statements as to any matter within its iurisdiction.

| SCHEDULE 1. IDENTIFICATION | | | | | | |
|---|--|--|--|--|--|--|
| Survey Contact | | | | | | |
| Name: | Title: | | | | | |
| Address: | | | | | | |
| City: | State: Zip: | | | | | |
| Phone (include extension): | Fax: | | | | | |
| Email: | | | | | | |
| Supervisor of Contact Person for Survey | | | | | | |
| Name: | Title: | | | | | |
| Address: | | | | | | |
| City: | State: Zip: | | | | | |
| Phone (include extension): | Fax: | | | | | |
| Email: | | | | | | |
| Repor | | | | | | |
| Operator Name: | | | | | | |
| Operator ID: | | | | | | |
| Reporting as of December 31 of year: | | | | | | |
| Operator Information | | | | | | |
| Legal Name of Operator: | | | | | | |
| Current Address of Principal Business Office of Plant Operator: | | | | | | |
| | | | | | | |
| Is the Operator an Electric Utility? | [] Yes | | | | | |
| For questions or additional information about the Form EIA-860, contact the survey staff: | | | | | | |
| Vlad Dorjets Fax Number: 202-287-1960 Email: <u>Vlad.Dorjets@eia.gov</u> | Suparna Ray Fax Number: 202-287-1960 Email: <u>Suparna.Ray@eia.gov</u> | | | | | |

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|--|--|--|---|--|--|---|---|-----------------------------------|--|
| | · Name: | | | | | | | | |
| - | · ID: | | | eporting as o | f December | 31 of Yea | r: | | |
| | | S | CHEDULE 2. POWE | R PLANT DA | \TA | | | | |
| (EXIST | ING POWER PLANT | S AND THOS | SE PLANNED FOR IN | IITIAL COM | MERCIAL O | PERATIO | N WITHIN 10 | YEARS) | |
| LINE | PLANT (USE SEPARATE PAGE FOR EACH PLANT) | | | | | | | | |
| 1 | Plant Name | | | | | | | | |
| 2 | Street Address | | | | | | | | |
| 3 | County Name | City Name | | | | | | | |
| 4 | State | | | | | | | | |
| 5 | Zip Code | | | | | | | | |
| 6 | Plant Latitude (Decimal) | | | Plant Long (Decimal) | itude | | | | |
| | Plant Latitude (Degrees, Minutes, | Seconds) | | Plant Long (Degrees, I | | conds) | | | |
| 7 | Enter Datum for Latitude and Longitude, if Known; Otherwise Enter "UNK" | | | | | | | | |
| 8a | NERC Region | | | | | | | | |
| 8b | Is this Plant in an F | RTO or ISO Te | erritory? | | | | [] Yes | [] No | |
| 8c | Name of RTO or IS | O [] Sout | fornia ISO thwest Power Pool Interconnection New England |] |] Electric F] Midwest] New York] Other | so | Council of Te | ∍xas | |
| 9 | Name of Water Sou | ırce (For Purp | oose of Cooling or H | ydroelectric |) | | | | |
| 10 | Steam Plant Status | [|] existing | [] planned | · [|] retired | [] | NA | |
| 11 | Steam Plant Type | capacity [] 2. C 100 MW [] 3. A duct firin | ombustible-fueled sombustible-fueled sombustible-fueled sombustible-fueled sombustible capacity. If nuclear generatoring and solar thermante capacity. | enerators wi team genera (including s s, combined I generators | th duct firinators with nateram gene cycle stea using a ste | ng). nore than rators wit m turbine eam cycle | 10 MW but le h duct firing) generators v with 100 MW | ess than without // or more | |
| | [] 4. Non-steam fueled generators (wind, PV, geothermal, generators not meeting conditions of categories above. | | | | | | uel cell, etc.) | and | |
| 12 | , | ose of the Plant (North American Industry Classification System) | | | | | | | |
| 13 | Does this plant have Federal Energy Regulatory Commission (FERC) Qualifying Facility (QF) Cogenerator status? If Yes, provide all QF docket number(s). Separate by using a comma. | | | | | fying | [] Yes | [] No | |
| 14 | Does this plant have Federal Energy Regulatory Commission (FERC) Qualifying Facility (QF) Small Power Producer status? If Yes, provide all QF docket number(s). Separate by using a comma. | | | | | [] Yes | [] No | | |
| 15 | | pt Wholesale | ergy Regulatory Co Generator status? I comma. | | | | []Yes | [] No | |

Owner of Transmission and/or Distribution Facilities

Grid Voltage (in kilovolts)

16a

16b

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|--|--|------------------|-------------------------------------|------------------|--|------------------|------------------|--|
| Opera | Operator Name: | | | | | | | |
| Opera | Operator ID: Reporting as of December 31 of Year: | | | | | | | |
| SCHEDULE 3. GENERATOR INFORMATION (EXISTING GENERATORS AND THOSE PLANNED FOR INITIAL COMMERCIAL OPERATION WITHIN 10 YEARS) | | | | | | | | |
| SCHEDULE 3, PART A. GENERATOR INFORMATION – GENERATORS (COMPLETE ONE COLUMN FOR EACH GENERATOR, BY PLANT) | | | | | | | | |
| 1 | Plant Name | | | | | | | |
| 2 | EIA Plant Code | | | | | | | |
| | | Genera | Generator (a) Generator (b) | | nerator (b) | Generator (c) | | |
| 3 | Operator's Generator Identification | | | | | | | |
| 4 | Prime Mover | | | | | | | |
| 5 | Associated Boiler Identifications | 1 2 3 4 | 5 6 7 8 | 1 2 3 4 | 5 6 7 8 | 1 2 3 4 | 5 6 7 8 | |
| 6 | Unit Code (Multi-Generator Code) | | | | | | | |
| 7 | Ownership | | | | | | | |
| 8 | Is This Generator an Electric Utility Generator? | [] Yes | [] No | [] Y | es []No | [] Yes | [] No | |
| 9 | Date of Sale if Sold (MM-YYYY) | | | | | | | |
| 10 | Can This Generator Deliver Power to the Transmission Grid? | []Yes | [] No | [] Y | es []No | []Yes | [] No | |
| 11 | For Combined-Cycle Steam Turbines (i.e. Prime Mover = CA, CS or CC) Does this Generator Have Duct-Burners? | []Yes | [] No | [] Ye | es []No | []Yes | [] No | |
| | | | | | | | | |

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|--------|--|----------------------------------|--|--------------------------------------|--------|-----------|--|--|---------|----------------------------------|--|-----------------|-------|
| Opera | ator Name: | | | | | | Ор | erator I | D: | | _ | | |
| | Name: | | | | | | Pla | ant Cod | e: | | _ | | |
| Repo | rting as of December 31 of Year | | | | | | | | | | | | |
| | SCHEDULE 3, PA (COMPLE | | | | | | | | | | S | | |
| | | | Genera | ator (a) | | | Genera | ator (b) | | | Genera | ator (c) | |
| 1 | Generator Nameplate Capacity (AC MW) | | | | | | | | | | | | |
| • | Not One of the (A O MIA) | Summ | er: | | | Summ | er: | | | Summ | er: | | |
| 2 | Net Capacity (AC MW) | Winter | r: | | | Winte | r: | | | Winter | : | | |
| 3a | Maximum Reactive Power Output (MVAR) [Leave Blank if Test Has Not Been Conducted] | | | | | | | | | | | | |
| 3b | Maximum Reactive Power Absorption (MVAR) [Leave Blank if Test Has Not Been Conducted] | | | | | | | | | | | | |
| 4 | Status Code | | | | | | | | | | | | |
| 5 | If Status Code is Standby, Can the Generator be Synchronized to the Grid? | [] |] Yes | [] | No | [|] Yes | [] | No | [] | Yes | [] | No |
| 6 | Initial Date of Operation (MM-YYYY) | | | | | | | | | | | | |
| 7 | Retirement Date (MM-YYYY) | | | | | | | | | | | | |
| 8a | Is This Generator Associated with a Combined Heat and Power System? | [] |] Yes | [] | No | [] |] Yes | [] | No | [] | Yes | [] | No |
| 8b | If Yes, Is This Generator Part of a Topping or Bottoming Cycle? | | [] To [] Bot | pping toming | I | | [] To [] Bot | | ļ | | [] To [] Bot | pping toming | ļ |
| | ENERGY SOURCES | | | | | | | | | | | | |
| 9 | Predominant Energy Source | | | | | | | | | | | | |
| 9a | If coal-fired or petroleum coke-fired, check all combustion technologies that apply to the associated boiler(s) and steam conditions | [] F [] S [] S [] U | ulveriz luidized ub-crit uper-cu lltra sup arbon- | d Bed ical ritical per-crit | ical | [] | Pulveriz Fluidize Sub-cri Super-c Ultra su Carbon | ed Bed tical critical per-cri | tical | [] F [] S [] S [] U | Fluidize Sub-cri Super-c Ultra su | tical | tical |
| 10 | Start-Up and Flame Stabilization Energy | а | b | С | d | а | b | С | d | а | b | С | d |
| 10 | Sources (Steam Units Only) | | | | | | | | | | | | |
| 11 | Second Most Predominant Energy Source | | | | | | | | | | | | |
| 12 | Other Energy Sources | а | b | С | d | а | b | С | d | а | b | С | d |
| 12 | Other Energy Sources | | | | | _ | | | | | | | |

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|--------|---|--------|--------|--------|--------------------|--------|-------|---------|---------------------|---|------|---------|
| Opera | tor Name: | | | | | | C | Opera | tor ID: | | | |
| Plant | Name: | | | | | | F | Plant (| Code: | | | |
| Repo | ting as of December 31 of Year | : | | | | | | | | | | |
| | SCHEDULE 3, PA (COMPLE | | | | | | | | ING GENE BY PLAN | | | |
| | | | Genera | ator (| (a) | | Gene | rator | (b) | Ge | nera | tor (c) |
| 13 | Is This Generator Part of a Solid Fuel Gasification System? | [|] Yes | [|] No |] |] Yes | |] No | [] Ye | es | []No |
| 14 | Number of Turbines, Buoys, or Inverters | | | | | | | | | | | |
| 15a | Tested Heat Rate | | | | | | | | | | | |
| 15b | Fuel Used For Heat Rate Test | | | | | | | | | | | |
| 16 | Operating Efficiency for Solar Photovoltaic Generators (If Available) | | | | | | | | | | | |
| | PROPOSED CHANGES TO E | XISTIN | G GEN | ERA | TORS (W | /ITHIN | THE N | EXT | 10 YEARS |) | | |
| 17a | Are There Any Planned Modifications to This Generator, Including Retirement? | [|] Yes | [] |] No | [|] Yes |] |] No | []Y | es | [] No |
| | Planned Uprates: | | | | | | | | | | | |
| | 1. Incremental Net Summer capacity (MW) | | | | | | | | | | | |
| 17b | 2. Incremental Net Winter capacity (MW) | | | | | | | | | | | |
| | 3. Planned Effective Date (MM-YYYY) | | | | | | | | | | | |
| | Planned Derates: | | | | | | | | | | | |
| | 1. Incremental Net Summer capacity (MW) | | | | | | | | | | | |
| 17c | 2. Incremental Net Winter capacity (MW) | | | | | | | | | | | |
| | 3. Planned Effective Date (MM-YYYY) | | | | | | | | | | | |
| | Planned Repowering: | | | | | | | | | | | |
| | 1. New Prime Mover | | | | | | | | | | | |
| 17d | 2. New Energy Source | | | | | | | | | | | |
| 174 | 3. New Nameplate Capacity | | | | | | | | | | | |
| | 4. Planned Effective Date (MM-YYYY) | | | | | | | | | | | |
| 17- | Other Modifications? (explain in Notes) | [|] Yes | [] |] No | [|] Yes | [|] No | []Y | es | [] No |
| 17e | Planned Effective Date (MM-YYYY) | | | | | | | | | | | |
| 17f | Planned Generator Retirement Date (MM-YYYY) | | | | | | | | | | | |

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|--------|---|--------------------------|--------------------------|---------------------|--------------------------|-------------------------|----------------------------------|--------------------------|-------------------------|----------|--|
| | ator Name: | | | | | Operate | or ID: | | | | |
| | Name: | | | | | Plant C | ode: | | | | |
| Repo | rting as of December 31 of Year | | | | | | | | | | |
| | SCHEDULE 3, PA (COMPLE | | | | | | | | | | |
| | (2.2 | | Senerator | | | enerator | | | enerator (| (c) | |
| | FUEL SWITCHING AND CO-F | IRING C | APABILIT | Υ | | | | | | | |
| 18 | Can This Generator be | | · |] No | [] | |] N o | [] | |] No | |
| | Powered by Multiple Fuels? | | Skip to SCI 3, PART C | | | kip to SCH B, PART C | | | kip to SCH 3, PART C | | |
| 19 | Can This Unit Co-Fire | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| | Fuels? | If No | , Skip to Li | ine 23. | If No, | Skip to Li | ne 23. | If No, | Skip to Li | ne 23. | |
| | | а | b | С | а | b | С | а | b | С | |
| 20 | Fuel Options for Co-Firing | | | | | | | | | | |
| | | d | е | f | d | е | f | d | е | f | |
| | | | | | | | | | | | |
| 21 | Can This Generator be Powered by Co-Fired Fuel | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 21 | Oil and Natural Gas? | If Yes, Skip to Line 23. | | | If Yes, Skip to Line 23. | | | If Yes, | Skip to Li | ine 23. | |
| | Can This Generator be Run | [] Yes [] No | | | [] Yes [] No | | | [] | Yes [|] No | |
| | on 100% Oil? | If Yes | s, Skip to L | ine 23. | If Yes, Skip to Line 23. | | | If Yes, Skip to Line 23. | | | |
| 22 | If No, What is the Maximum Oil Heat Input When Co- Firing with Natural Gas? | - | | % | | | % | | | % | |
| | What is the Maximum Output Achievable (Net Summer Capacity in MW) When Making the Maximum Use of Oil and Co-Firing Natural Gas? | _ | N | ΛW | _ | N | 1W | _ | M | ıw | |
| 23 | Can This Unit Fuel Switch? | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 23 | Can This Onit Fuel Switch: | If No, S | Skip to Sch Part C. | nedule 3, | If No, SI | kip to Sch Part C. | edule 3, | If No, S | kip to Sch Part C. | edule 3, | |
| | Can This Unit Switch Between Oil and Natural | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 24 | Gas? | If No | , Skip to Li | ine 26. | If No, | Skip to Li | ne 26. | If No, Skip to Line 26. | | | |
| | If Yes, Can the Unit Switch Fuels While Operating? | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |

| U.S. E | Department of Energy Energy Information Administra EIA-860 (2012) | ation | | JAL ELEC RATOR R | | Appr | oval Expi | res: 10/31 | d OMB No. 1905-0129 res: 10/31/2013 : 9.4 Hours | | |
|--------|---|--------------------------------------|---|---------------------|---|---|-----------|---|---|--------|--|
| Opera | itor Name: | | | | | Operato | or ID: | | | | |
| Plant | Name: | | | | | Plant C | ode: | | | | |
| Repor | rting as of December 31 of Year | · | | | | | | | | | |
| | SCHEDULE 3, PA (COMPLE | | | | | | | | | | |
| | · | G | enerator (| (a) | Ge | enerator (| (b) | G | enerator (| (c) | |
| | What is the Maximum Net Summer Output Achievable (MW) When Running on Natural Gas? | | MW | | | M | IW | _ | M | W | |
| | What is the Maximum Net Summer Output Achievable (MW) When Running on Fuel Oil? | | N | iw | | N | iw | | M | W | |
| | How Much Time is Required to Switch This Unit From Using 100% Natural Gas to Using 100% Oil? | [] over 2 [] over 3 | hours 6 to 24 ho 24 to 72 h 72 hours. own or ui | ours | [] 0 to 6 [] over 6 [] over 7 [] Unknown | 6 to 24 ho 24 to 72 h 72 hours. | ours | [] over : | hours 6 to 24 ho 24 to 72 h 72 hours. own or ui | ours | |
| | Are There Factors That Limit the Unit's Ability to | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| | Switch From Natural Gas to Oil? | If No, | Skip to Li | ne 26. | If No, | Skip to Li | ne 26. | If No, | Skip to Li | ne 26. | |
| 25 | If Yes, Check All Factors That Apply | storage. [] Air Pe [] Other SCHEDU |] Limited on site fuel torage.] Air Permit limits] Other (specify in CHEDULE 7. | | | ed on site ermit limit (specify ILE 7. NTS) | ts | [] Limited on site fuel storage. [] Air Permit limits [] Other (specify in SCHEDULE 7. COMMENTS) | | | |
| | | а | b | С | а | b | С | а | b | С | |
| 00 | F 10 % 11 0 % | | | | | | | | | | |
| 26 | Fuel Switching Options | d | е | f | d | е | f | d | е | f | |
| | | | | | | | | | | | |

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|--------|--|-------------------------|---|--------------------------------------|--------|---------------------------|--|--|---------|--------------------------------|---|-------------|-------|
| | ator Name: | | | | | | Ор | erator | D: | | _ | | |
| Plant | Name: | | | | | | | | | | | | |
| Repor | rting as of December 31 of Year | r: | | | | | | | | | | | |
| | SCHEDULE 3, PAF (COMPLE | | | | | | | | | | RS | | |
| | | | Genera | ator (a) | | | Genera | ator (b) | | | Genera | ator (c) | |
| 1 | Generator Nameplate Capacity (AC MW) | | | | | | | | | | | | |
| _ | | Summ | ner: | | | Summ | er: | | | Summ | er: | | |
| 2 | Net Capacity (AC MW) | Winte | r: | | | Winter | r: | | | Winter | •• | | |
| 3a | Maximum Expected Reactive Power Output (MVAR) [Leave Blank if Uncertain] | | · • | | | | · <u>·</u> | | | | • | | |
| 3b | Maximum Expected Reactive Power Absorption (MVAR) [Leave Blank if Uncertain] | | | | | | | | | | | | |
| 4 | Status Code | | | | | | | | | | | | |
| | Planned Original Effective | | | | | | | | | | | | |
| 5 | Date (MM-YYYY) | | | | | | | | | | | | |
| 6 | Planned Current Effective Date (MM-YYYY) | | | | | | | | | | | | |
| 7 | Will This Generator be Associated with a Combined Heat and Power System? | [|] Yes | [] | No | [] |] Yes | [] | No | [] | Yes | [] | No |
| 8 | Will This Generator be Part of a Solid Fuel Gasification System? |] |] Yes | [] | No | [] |] Yes | [] | No | [] | Yes | [] | No |
| 9 | Is This Generator Part of a Site That Was Previously Reported as Indefinitely Postponed or Cancelled? | [|] Yes | [] | No | [] |] Yes | [] | No | [] | Yes | [] | No |
| | PLANNED ENERGY SOURCE | S | | | | | | | | | | | |
| 10 | Expected Predominant Energy Source | | | | | | | | | | | | |
| 11 | If coal-fired or petroleum coke fired, check all combustion technologies that apply to the associated boiler(s) and steam conditions | [] F [] S [] S | Pulveriz Iuidized Sub-crit Super-ci Iltra su Sarbon- | d Bed ical ritical per-crit | ical | [] [] [] | Pulveriz Fluidize Sub-cri Super-c Jltra su Carbon | ed Bed tical critical per-cri | tical | [] [] [] [] | Fluidize Sub-crit Super-c Jltra su | tical | tical |
| 12 | Expected Second Most Predominant Energy Source | | | | | | | | | | | | |
| 13 | Other Energy Sources | а | b | С | d | а | b | С | d | а | b | С | d |

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|--------|--|----------|-----------------------|---------------------|------------|---------------------|----------------------------------|-------------------------|-----------------------|--------------|--|
| | ator Name: | | | | | | or ID: | | | | |
| Plant | Name: | | | | | Plant C | ode: | | | | |
| Repo | rting as of December 31 of Year | | | | | | | | | | |
| | SCHEDULE 3, PAF (COMPLE | | | | | | | | 5 | | |
| | | G | enerator (| (a) | Ge | enerator (| (b) | G | enerator (| (c) | |
| 14 | Number of Turbines, Buoys, or Inverters | | | | | | | | | | |
| | FUEL SWITCHING AND CO-F | IRING C | APABILIT | Y | | | | | | | |
| | Will This Generator be Able | | Yes [Undeterm |] No ined | [] [] | Yes [Jndeterm |] No ined | [] | Yes [|] No ined | |
| 15 | to be Powered by Multiple Fuels? | | Undetermii SCHEDUL | | | Jndetermi CHEDUL | | | Jndetermii SCHEDUL | | |
| 16 | Will this Unit be Able to Co- | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 10 | Fire Fuels? | If No. | , Skip to Lii | ne 20. | If No, | Skip to Li | ne 20. | If No, | Skip to Li | ne 20. | |
| | | а | b | С | а | b | С | а | b | С | |
| 17 | Fuel Options for Co-Firing | - | | - | _ | | - | - | | - | |
| | | d | е | f | d | е | f | d | е | f | |
| | MACHITICS CONTRACTOR IN A ALLE | r 1 | Yes [|] No | [] | Voc [|] No | [] | Voc I |] No | |
| 18 | Will This Generator be Able to be Powered by Co-Fired | | | - | | _ | - | | | | |
| | Fuel Oil and Natural Gas? | If No. | , Skip to Lii | ne 20. | If No, | Skip to Li | ne 20. | If No, Skip to Line 20. | | | |
| | Will This Generator be able | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| | to Run on 100% Oil? | If Yes | s, Skip to Li | ine 20. | If Yes, | Skip to L | ine 20. | If Yes, | Skip to Li | ne 20. | |
| 19 | If No, What is the Expected Maximum Oil Heat Input When Co-Firing with Natural Gas? | - | | % | _ | | % | _ | | % | |
| | What is the Expected Maximum Output Achievable (Net Summer Capacity in MW) When Making the Maximum Use of Oil and Co-Firing Natural Gas? | _ | M | iw | | N | iw | | M | ıw | |
| 20 | Will This Unit be Able to | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 20 | Fuel Switch? | If No, S | Skip to Sch | edule 4. | If No, SI | kip to Sch | edule 4. | If No, S | kip to Sch | edule 4. | |
| 24 | Will This Unit be Able to | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No | |
| 21 | Switch Between Oil and Natural Gas? | If No. | , Skip to Lii | ne 23. | If No, | Skip to Li | ne 23. | If No, | Skip to Lii | ne 23. | |

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|--------|---|--|---------------------------------|----------|--|----------------------------------|----------|----------|-----------------------------------|----------|
| Opera | tor Name: | | | | | Operato | or ID: | | | |
| Plant | Name: | | | | | Plant C | ode: | | | |
| Repor | ting as of December 31 of Year | · | | | | | | | | |
| | SCHEDULE 3, PAF (COMPLE | | | | | | | | 6 | |
| | | Ge | enerator (| (a) | Ge | enerator (| (b) | G | enerator (| (c) |
| | If Yes, Will this Unit be Able to Switch Fuels While Operating? | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No |
| | What is the Expected Maximum Net Summer Output Achievable (MW) When Running on Natural Gas? | | N | 1W | | N | iw | _ | M | IW |
| | What is the Expected Maximum Net Summer Output Achievable (MW) When Running on Fuel Oil? | | N | 1W | | N | iw | _ | M | iw |
| | How Much Time is Expected | [] 0 to 6 | hours | | [] 0 to 6 | hours | | []0to6 | hours | |
| | to be Required to Switch | [] over 6 | 6 to 24 hc | ours | [] over 6 | 6 to 24 hc | ours | [] over | 6 to 24 ho | ours |
| | This Unit From Using 100% | [] over 2 | | | [] over 2 | | | | 24 to 72 h | |
| | Natural Gas to Using 100% Oil? | [] over 7 | | | [] over 7 | | | | 72 hours. | |
| | | [] Unkn | own or u | ncertain | [] Unkn | own or u | ncertain | [] Unkn | own or u | ncertain |
| | Are There Factors That Will Limit the Unit's Ability to | [] | Yes [|] No | [] | Yes [|] No | [] | Yes [|] No |
| | Switch From Natural Gas to Oil? | | Skip to Li | | | Skip to Li | | | Skip to Li | |
| 22 | If Yes, Check All Factors That Apply | [] Limite storage. [] Air Pe [] Other SCHEDU COMME! | ermit limi (specify LE 7. | ts | [] Limite storage. [] Air Pe [] Other SCHEDU COMMEN | ermit limi (specify ILE 7. | ts | storage. | ermit limit (specify JLE 7. | ts |
| | | а | b | С | а | b | С | а | b | С |
| | F 10 % 11 0 % | | | | | | | | | |
| 23 | Fuel Switching Options | d | е | f | d | е | f | d | е | f |
| | | | | | | | | | | |

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|--|----------------|------------------------------|--|
| Operator Name: | | | |
| Operator ID: | | Reporting as o | of December 31 of Year: |
| SCHEDULE 4. OW | NERSHIP OF GEI | NERATORS OWNED | JOINTLY OR BY OTHERS |
| PLANT NAME (a) | | | |
| EIA PLANT CODE (b) | | | |
| OPERATOR'S GENERATOR IDENTIF | FICATION (c) | | |
| IF JOINTLY O | WNED – OWNER | NAME AND CONTAC | CT INFORMATION (d) |
| Owner/Joint Owner 1: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 2: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 3: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 4: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 5: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 6: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 7: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 8: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 9: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA OWNER CODE: |
| Joint Owner 10: Name | | | % OWNED (e): |
| Street Address | | | |
| City, State and Zip Code | | | EIA CODE: |

Total

100%

U.S. Department of Energy

Interconnection Costs Incurred?

Form Approved OMB No. 1905-0129

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|------------|---|-------------------------------|------------|------------|----------------------------|-------------|--------|
| Operator I | Name: | | | | | | |
| Operator I | D: | Repo | rting as o | of Decembe | r 31 of Year | r: | |
| (| SCHEDULE 5. NEW G COMPLETE FOR EACH GENERATO | | | | | R YEAR 2010 | 0) |
| LINE | | | | | | | |
| 1 | Plant Name and EIA Plant Code | Name: | | Name: | | Name: | |
| | | Code: | | Code: | | Code: | |
| 2 | Generator ID | | | | | | |
| 3 | Date of Actual Generator Interconnection (MM-YYYY) | | | | | | |
| 4 | Date of Initial Interconnection Request (MM-YYYY) | | | | | | |
| 5 | Interconnection Site Location | City: | | City: | | City: | |
| | | State: | ; | State: | | State: | |
| 6 | Grid Voltage At The Point Of Interconnection (kV) | | | | | | |
| 7 | Owner of the Transmission or Distribution Facilities to Which Generator is Interconnected | | | | | | |
| 8 | Total Cost Incurred for the Direct Physical Interconnection (Thousa \$) | | | | | | |
| | Equipment Included in the Direct Interconnection Cost (Check All of the Following that Apply) | | | | | | |
| | a. Transmission or Distribution L | ine [] Yes [|] No | [] Yes | [] No | [] Yes | [] No |
| 9 | b. Transformer | [] Yes [|] No | [] Yes | [] No | [] Yes | [] No |
| | c. Protective Devices | [] Yes [|] No | [] Yes | [] No | [] Yes | [] No |
| | d. Substation or Switching Statio | n []Yes [|] No | [] Yes | [] No | [] Yes | [] No |
| | e. Other Equipment (specify in SCHEDULE 7. COMMENTS) | [] Yes [|] No | [] Yes | [] No | []Yes | [] No |
| 10 | a. Total Cost for Other Grid Enhancements/ Reinforcements Needed to Accommodate Power Deliveries From the Generator (Thousand \$) | | | | | | |
| | b. Will This Cost Be Repaid? | [] Yes [|] No | [] Yes | [] No | [] Yes | [] No |
| 11 | Were Specific Transmission Use | I 1Yes I | 1 No | [] Yes | [] No | []Ves | I INc |

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|--------|---|-----------------------|---|-------------------------|--|-----------|-----------|--|--|
| Opera | ator Name: | | | | Ope | rator ID: | | | |
| Plant | Name: | | | | Plan | t Code: | _ | | |
| Repoi | rting as of December 31 | of Year: | | | | | | | |
| | | PAR NTS EQUAL TO (| DULE 6. BOILER II RT A. PLANT CONF DR GREATER THA | IGURATION N 10 MW BU | N JT LES | | | | |
| | CON | EQUIPMENT | IES 1, 2, 3 AND, IF EQUIPMENT | | | | EQUIPMENT | | |
| LINE | EQUIPMENT TYPE | | IDENTIFICATION | | | | | | |
| | | (a) | (b) | (c) | | (d) | (e) | | |
| 1 | Boiler ID(s) | | | | | | | | |
| 2 | Associated Generator ID(s) | | | | | | | | |
| 3 | Generator Associations with Boiler as Actual or Theoretical | | | | | | | | |
| 4 | Associated Cooling System ID(s) | | | | | | | | |
| | Associated Flue Gas Particulate Collector ID(s) | | | | | | | | |
| 6 | Associated Flue Gas Desulfurization Unit ID(s) | | | | | | | | |
| 7 | Associated Flue ID(s) | | | | | | | | |
| 8 | Associated Stack ID(s) | | | | | | | | |

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|-----------|--|---|------------|---------------|---------------------------------|---------------------|-------|-------|--|
| | Name: ne:_ | | | | rator ID: : Code: | | | | |
| | as of December 31 of Year: | | | ı ıarı | . | | • | | |
| reporting | | BOILER INFORMATION | – AIR F | MISSIO | N STANDA | RDS | | | |
| | (DATA NOT R | EQUIRED FOR PLANTS E A SEPARATE PAGE FO | LESS T | HAN 10 | 0 MW) | | | | |
| LINE | , | | | | | | | | |
| 1 | Boiler ID | | | | | | | | |
| 2a | Type Of Boiler Standards Unde Operating (use codes) | r Which The Boiler Is | | D |] Da[Dc[] |] D | | | |
| 2b | Is Boiler Operating Under a New Permit? | w Source Review (NSR) | | | [] Yes | [] | | | |
| 20 | If Yes, list date (MM-YYYY) and of the issued permit | | Date | | | Permit Number | | | |
| | CATEGORY | PARTICULATE MATTER (a) | SUI | LFUR D | OXIDE | NITROGEN OXIDES (c) | | | |
| 3 | Type of Statute or Regulation (use codes) | FD[] ST[] LO[] NA[] | FD[LO[|] | ST[] NA[] | FD[LO[|] | ST[] | |
| | Emission Standard Specified | | | | | | | | |
| 4a | Emission Rate | | | | | | | | |
| 4b | Percent Scrubbed | N/A | | | | | N/A | 4 | |
| 4c | Enter "N/A" if no Standard Specified | | | | | | | | |
| 5 | Unit of Measurement Specified (use codes) | | | | | | | | |
| 6 | Time Period Specified (use codes) | | | | | | | | |
| 7 | Year Boiler Was or is Expected to Be in Compliance With Federal, State and/or Local Regulation | | | | | | | | |
| 8 | If Not in Compliance with Nitrogen Oxides Standard, Strategy for Compliance (use codes) | N/A | | N/A | | | | | |
| 9 | Select Existing Strategies to meet the Sulfur Dioxide and Nitrogen Oxides Requirements of Title IV of the Clean Air Act Amendment of 1990 (use codes) | N/A | | | | | | | |
| 10 | Select Planned Strategies to meet the Sulfur Dioxide and Nitrogen Oxides Requirements of Title IV of the Clean Air Act Amendment of 1990 (use codes) | N/A | | | | | | | |

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|----------|--|--|------------|---|----|
| Operato | r Name: | | C | perator ID: | |
| | ame: | | Р | lant Code: | |
| Reportir | ng as of December 31 of Year: | | | | |
| | (DATA FOR LINES | ART C. BOILER INFORMATION - 3 – 18 NOT REQUIRED FOR PL PLETE A SEPARATE PAGE FOR | ANTS LESS | ΓHAN 100 MW) | |
| LINE | | | | | |
| 1 | Boiler ID | | | | |
| 2 | Boiler Status (use codes) | | | | |
| 3 | Boiler Actual or Projected Date o | f Commercial Operation (MM-YY | YY) | | |
| 4 | Boiler Actual or Projected Retires | ment Date (MM-YYYY) | | | |
| 5 | Boiler Manufacturer (use code) | | | | |
| 6 | Type of Firing Used with Primary | Fuels (use codes) | | | |
| 7 | Maximum Continuous Steam Flo per hour) | w at 100 Percent Load (thousand | d pounds | | |
| 8 | Design Firing Rate at Maximum (0.1 ton per hour) | Continuous Steam Flow for Coal | (nearest | | |
| 9 | Design Firing Rate at Maximum (nearest 0.1 barrels per hour) | Continuous Steam Flow for Petro | oleum | | |
| 10 | Design Firing Rate at Maximum 0.1 thousand cubic feet per hour | | (nearest | | |
| 11 | Design Firing Rate at Maximum C fuel and unit in SCHEDULE 7. CC | | r (specify | | |
| 12 | Design Waste Heat Input Rate at (million Btu per hour) | Maximum Continuous Steam Flo | w | | |
| 13 | Primary Fuels Used in Order of P | redominance (use codes) | | | |
| 14 | Boiler Efficiency When Burning F (nearest 0.1 percent) | Primary Fuel at 100 Percent Load | I | | |
| 15 | Boiler Efficiency When Burning F 0.1 percent) | Primary Fuel at 50 Percent Load | (nearest | | |
| 16 | Total Air Flow Including Excess minute at standard conditions) | Air at 100 Percent Load (cubic fe | et per | | |
| 17 | Wet Or Dry Bottom (for coal-capa for Dry) | able boilers), (enter "W" for Wet | or "D" | | |
| 18 | Fly Ash Re-injection (enter "Y" fo | or Yes or "N" for No) | | | |

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|--|-------------------------------------|--|
| | | |

| Opera | ator Name: | | Operato | or ID: | |
|--|---|-----------------|----------------|-------------|--|
| Plant | Name: | | Plant C | ode: | |
| Repor | rting as of December 31 of Year: | | | | |
| SCHEDULE 6, PART D. BOILER INFORMATION – NITROGEN OXIDE EMISSION CONTROLS (COMPLETE A SEPARATE PAGE FOR EACH BOILER) | | | | | |
| 1 | Boiler ID | | | | |
| 2 | Nitrogen Oxide Control Status (use codes) | | | | |
| NITROGEN OXIDE CONTROL EQUIPMENT AND OR PROCESS | | | CESS | | |
| 3 | Low Nitrogen Oxide Control Process (use codes) | | | | |
| 4 | Manufacturer of Low Nitrogen Oxide Control Burners (use code) | | | | |
| | SCHEDULE 6, PART E. BOILE | R INFORMATION - | MERCURY EMISSI | ON CONTROLS | |
| 1 | Does This Boiler Have Mercury Emission Controls? | Yes [|] | No [] | |
| 2 | If "Yes," Enter All Available Emission Controls Separated by Commas (use codes) | | | | |

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|-----------|--|--|--|--|--|--|
| | Name: | | Operator ID: | | | |
| | e: | | Plant Code: | | | |
| Reporting | as of December 31 of Year: | | | | | |
| | | COOLING SYSTEM INFORMATION | | | | |
| | | REQUIRED FOR PLANTS LESS TO SEPARATE PAGE FOR EACH CO | | | | |
| LINE | (COMPLETE A S | BEPARATE PAGE FOR EACH CO | OLING STSTEM) | | | |
| 1 | Cooling System ID (as reported on SCHEDULE 6, PART A, Line 4) | | | | | |
| 2 | Cooling System Status (use co | des) | | | | |
| 3 | Cooling System Actual or Proje (MM-YYYY) | ected In-Service Date of Commer | cial Operation | | | |
| 4a | Type of Cooling System (use co | odes) | | | | |
| 4b | For Hybrid Cooling Systems, In Components | ndicate Percent of Cooling Load | Served by Dry Cooling | | | |
| 5a | Source (Name) of Cooling Water Including Makeup Water (if discharge is into different water body, specify in SCHEDULE 7. COMMENTS) | | | | | |
| 5b | Type of Cooling Water Source (use codes) | | | | | |
| 5c | Type of Cooling Water (use codes) | | | | | |
| 6 | Design Cooling Water Flow Rate at 100 percent Load at Intake (cubic feet per second) | | | | | |
| 7 | Actual or Projected In-Service Date for Chlorine Discharge Control Structures and Equipment (MM-YYYY) | | | | | |
| | | COOLING PONDS | | | | |
| 8 | Actual or Projected In-Service I YYYY) | Date (month and year of commer | cial operation (MM- | | | |
| 9 | Total Surface Area (acres) | | | | | |
| 10 | Total Volume (acre-feet) | | | | | |
| | | COOLING TOWERS | | | | |
| 11 | Actual or Projected In-service I | Date (MM-YYYY) | | | | |
| 12 | Type of Towers (use codes) | | | | | |
| 13 | Maximum Design Rate of Water | r Flow at 100 Percent Load (cubic | c feet per second) | | | |
| 14 | • | at 100 Percent Load (megawatts) | | | | |
| | | SYSTEM EXCLUDING LAND AND | CONDENSERS (thousand dollars) | | | |
| 15 | Total System | | | | | |
| 16 | Ponds (if applicable) | | | | | |

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|--|---|-------------------------------------|--|------------|--|
| 17 | 17 Towers (if applicable) | | | | |
| 18 | Chlorine Discharge Control Structures and Equipment (if applicable) | | | | |
| | COOLING WATER INTAKE AND OUTLET LOCATIONS | | | | |
| | ITEM | | INTAKE (a) | OUTLET (b) | |
| 19 | Maximum Distance from Shore (feet) | | | | |
| 20 | Average Distance below Water | | | | |

| U.S. Ener | artment of Energy gy Information Administration -860 (2012) | ANNUAL ELECTRIC GENERATOR REPORT | Form Approved OMB No. Approval Expires: 10/31/2 Burden Hours: 9.4 Hours | | |
|--|--|---|---|---------|--|
| Operator | Name: | | Operator ID: | | |
| Plant Nam | ne: | | Plant Code: | | |
| Reporting | as of December 31 of Year: | | | | |
| | | . FLUE GAS PARTICULATE COL PAGE FOR EACH FLUE GAS PA | | | |
| LINE | | | | | |
| 1 | Flue Gas Particulate Collector I | D (as reported on SCHEDULE 6, | PART A line 5) | | |
| 2 | Flue Gas Particulate Collector Actual or Projected In-Service Date of Commercial Operation (MM-YYYY) | | | | |
| 3 | Flue Gas Particulate Collector | Status (use code) | | | |
| 4 | Type of Flue Gas Particulate Collector (use codes) | | | | |
| 5 | Installed Cost of Flue Gas Particulate Collector Excluding Land (thousand dollars) | | | | |
| DESIGN FUEL SPECIFICATIONS FOR ASH (AS BURNED, TO NEAREST 0.1 PERCENT BY WEIGHT) | | | | | |
| 6 | For Coal | | | | |
| 7 | For Petroleum | | | | |
| DE | SIGN FUEL SPECIFICATIONS FO | OR SULFUR (AS BURNED, TO NE | EAREST 0.1 PERCENT BY | WEIGHT) | |
| 8 | For Coal | | | | |
| 9 | For Petroleum | | | | |
| DESIGN SPECIFICATIONS AT 100 PERCENT GENERATOR LOAD | | | | | |
| 10 | Collection Efficiency (to neares | et 0.1 percent) | | | |
| 11 | Particulate Emission Rate (pou | nds per hour) | | | |
| 12 | Particulate Collector Gas Exit Rate (actual cubic feet per minute) | | | | |
| 13 | Particulate Collector Gas Exit Temperature (degrees Fahrenheit) | | | | |

| U.S. Ener | artment of Energy gy Information Administration -860 (2012) | ANNUAL EL GENERATOR | | Form Approved OMB No Approval Expires: 10/31/ Burden Hours: 9.4 Hours | /2013 |
|-------------------------------------|---|----------------------------|----------------|---|----------|
| Operator | Name: | | | Operator ID: | |
| Plant Nam | ne: | | | Plant Code: | |
| | as of December 31 of Year: | | | | |
| SCI | HEDULE 6, PART H. FLUE GAS [| ESULFURIZATION TECHNOLO | | MATION (INCLUDING COM | MBUSTION |
| | (COMPLETE A SEPARAT | | | ESULFURIZATION UNIT) | |
| LINE | | | | | |
| 1 | Flue Gas Desulfurization Unit II | D (as reported on S | SCHEDULE 6, | PART A line 6) | |
| 2 | Flue Gas Desulfurization Unit S | Status (use codes) | | | |
| 3 | Flue Gas Desulfurization Unit A Operation (MM-YYYY) | Actual or Projected | In-Service Da | te of Commercial | |
| 4 | Type of Flue Gas Desulfurization | on Unit (use code) | | | |
| 5 | Type of Sorbent (use code) | | | | |
| 6 | Salable Byproduct Recovery (e | nter "Y" for Yes or | "N" for No) | | |
| 7 | Flue Gas Desulfurization Unit N | lanufacturer (use | code) | | |
| 8 | Annual Pond and Land Fill Requirements (nearest acre foot per year) | | | | |
| 9 | Is Sludge Pond Lined (enter "Y" for Yes, "N" for No, or "NA" for Not Applicable) | | | | |
| 10 | Can Flue Gas Bypass Flue Gas Desulfurization Unit (enter "Y" for Yes or "N" for No) | | | | |
| DESIGN FUEL SPECIFICATIONS FOR COAL | | | | | |
| 11 | Ash (to nearest 0.1 percent by weight) | | | | |
| 12 | Sulfur (to nearest 0.1 percent by weight) | | | | |
| | NUMBER OF FLUE GAS DE | SULFURIZATION I | JNIT SCRUBB | ER TRAINS (OR MODULE | S) |
| 13 | Total | | | | |
| 14 | Operated at 100 Percent Load | | | | |
| DES | IGN SPECIFICATIONS OF FLUE | GAS DESULFURIZ | ATION UNIT A | T 100 PERCENT GENERA | TOR LOAD |
| 15 | Removal Efficiency for Sulfur D | Dioxide (to nearest | 0.1 percent by | weight) | |
| 16 | Sulfur Dioxide Emission Rate (| pounds per hour) | | | |
| 17 | Flue Gas Exit Rate (actual cubic feet per minute) | | | | |
| 18 | Flue Gas Exit Temperature (degrees Fahrenheit) | | | | |
| 19 | Flue Gas Entering Flue Gas Desulfurization Unit (percent of total) | | | | |
| INS | TALLED COST OF FLUE GAS DI | ESULFURIZATION | UNIT, EXCLU | DING LAND (THOUSAND I | DOLLARS) |
| 20 | Structures and Equipment | | | | |
| 21 | Sludge Transport and Disposal | System | | | |
| 22 | Other (installed cost of flue gas desulfurization unit) | | | | |
| 23 | Total (sum of lines 20, 21, 22) | | | | |

| U.S. Ener | artment of Energy rgy Information Administration 860 (2012) | ANNUAL ELECTRIC GENERATOR REPORT | Form Approved OMB No. 1905-0129 Approval Expires: 10/31/2013 Burden Hours: 9.4 Hours | | |
|--|---|---|--|--|--|
| Operator | Name: | | Operator ID: | | |
| Plant Nan | ne: | | Plant Code: | | |
| Reporting | as of December 31 of Year: | | | | |
| | (DATA NOT F | TACK AND FLUE INFORMATION REQUIRED FOR PLANTS LESS T SEPARATE PAGE FOR EACH S | ΓHAN 100 MW) | | |
| LINE | | | , | | |
| 1 | Flue ID (as reported on SCHED | ULE 6, PART A line 8) | | | |
| 2 | Stack ID (as reported on SCHE | DULE 6, PART A line 7) | | | |
| 3 | Stack (or Flue) Actual or Project YYYY) | cted In-Service Date of Commer | cial Operation (MM- | | |
| 4 | Status of Stack (or Flue) (use c | ode) | | | |
| 5 | Flue Height at Top from Ground | d Level (feet) | | | |
| 6 | Cross-Sectional Area at Top of Flue (nearest square foot) | | | | |
| DESIGN FLUE GAS EXIT (AT TOP OF STACK) | | | | | |
| 7 | Rate at 100 Percent Load (actual cubic feet per minute) | | | | |
| 8 | Rate at 50 Percent Load (actual cubic feet per minute) | | | | |
| 9 | Temperature at 100 Percent Load (degrees Fahrenheit) | | | | |
| 10 | Temperature at 50 Percent Load (degrees Fahrenheit) | | | | |
| 11 | Velocity at 100 Percent Load (feet per second) | | | | |
| 12 | Velocity at 50 Percent Load (fe | • | | | |
| ACTUAL SEASONAL FLUE GAS EXIT TEMPERATURE (DEGREES FAHRENHEIT) | | | | | |
| 13 | Summer Season | | | | |
| 14 | Winter Season | | | | |
| 15 | Source (enter "M" for measured or "E" for estimated) | | | | |
| | | STACK LOCATION | | | |
| 16 | Stack Location - Latitude | | | | |
| 17 | Stack Location - Longitude | | | | |
| 18 | Enter Datum for Latitude and Longitude, if Known: Otherwise Enter "UNK" | | | | |

| U.S. Department of Energy |
|---|
| U.S. Energy Information Administration |
| Form EIA-860 (2012) |

ANNUAL ELECTRIC

Form Approved OMB No. 1905-0129

| Form EIA-860 (2012) | | GE | ENERATOR REPORT | Approval Expires: 10/31/2013 Burden Hours: 9.4 Hours |
|---------------------|------|----------------|---------------------------------------|---|
| Operator Name: | | | | |
| Operator ID: | | | | of December 31 of Year: |
| | | | EDULE 7. COMMENTS | |
| | | (USE ADDITION | ONAL PAGES IF NECES | SSARY) |
| COUEDIN E | | | | COMMENTS |
| SCHEDULE NUMBER | PART | LINE NUMBER | (Including all identifyi or boiler IE | ing codes such as plant code, generator ID, D to which the comment applies) |
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