

STEAM ELECTRIC GENERATING PLANT STATISTICS (Large Plants)

1. Large plants for the purpose of this schedule are steam plants of 10,000 kw. or more of installed capacity (name plate rating). Include gas-turbine and internal combustion plants of 5,000 kw. and more in this schedule. Include nuclear plants.
2. If any plant is leased or operated as a joint facility, indicate such facts by the use of asterisks and footnotes.
3. If net peak demand for 60 minutes is not available, give that which is available, specifying period.
4. If a group of employees attends more than one generating plant, report on line 11 the approximate average number of employees assignable to each plant.

5. If gas is used and purchased on a therm basis, the B.t.u. content of the gas should be given and the quantity of fuel burned converted to M cu. ft.
6. Quantities of fuel burned (line 38) and average cost per unit of fuel burned (line 4) should be consistent with charges to expense accounts 501 and 547 (line 42) as shown on line 21.
7. If more than one fuel is burned in a plant furnish only the composite heat rate for all fuels burned.
8. The items under cost of plant represents accounts or combinations of accounts prescribed by the Uniform System of Accounts. Production

Line No.	Item (a)	Plant Name (b)			Plant Name (c)		
		Coal Tons	Gas MCF	Oil	Coal Tons	Gas MCF	Oil
1	Kind of plant (steam, internal combustion, gas turbine or nuclear)						
2	Type of plant construction (conventional, outdoor boiler, full outdoor, etc.)						
3	Year originally constructed						
4	Year last unit was installed						
5	Total installed capacity (maximum generator name plate ratings in kw.)						
6	Net peak demand on plant-kw. (60 minutes)						
7	Plant hours connected to load						
8	Net continuous plant capability, kilowatts:						
9	(a) When not limited by condenser water						
10	(b) When limited by condenser water						
11	Average number of employees						
12	Net generation, exclusive of plant use						
13	Cost of plant: (omit cents)						
14	Land and land rights						
15	Structures and improvements						
16	Equipment costs						
17	Total cost						
18	Cost per kw. of installed capacity (Line 5)						
19	Production expenses: (omit cents)						
20	Operation supervision and engineering						
21	Fuel						
22	Coolants and water (nuclear plants only)						
23	Steam expenses						
24	Steam from other sources						
25	Steam transferred (Cr.)						
26	Electric expenses						
27	Misc. steam power expenses (or nuclear)						
28	Rents						
29	Maintenance supervision and engineering						
30	Maintenance of structures						
31	Maintenance of boiler plant (or reactor plant)						
32	Maintenance of electric plant						
33	Maintenance of misc. steam plant (or nuclear)						
34	Total production expenses						
35	Expenses per net kwh. (Mills-2 places)						
36	Fuel: Kind	Coal	Gas	Oil	Coal	Gas	Oil
37	Unit: (Coal-tons of 2,000 lb.) (Oil-barrels of 42 gals.) (Gas-M cu. ft.) (Nuclear, indicate)-	Tons	MCF		Tons	MCF	
38	Quantity (units of fuel burned)						
39	Average heat content of fuel burned (B.t.u. per lb. of coal, per gal. of oil, or per cu. ft. of gas)						
40	Average cost of fuel per unit, as delivered f.o.b. plant during year						
41	Average cost of fuel per unit burned						
42	Avg. cost of fuel burned per million B.t.u						
43	Avg. cost of fuel burned per kwh. net generation						
44	Avg. B.t.u. per kWh net generation						

STEAM ELECTRIC GENERATING PLANT STATISTICS (Large Plants)

expenses do not include Purchased Power, System Control and Load Dispatching, and Other Expenses classified as "Other Power Supply Expenses."

9. For I.C. and G.T. plants report Operating Expenses, Acc'ts. Nos. 548 and 549 on line 26 "Electric Expenses," and Maintenance Acc'ts. Nos. 553 and 554 on line 32 "Maintenance of Electric Plant." Indicate plants designed for peak load service. Designate automatically operated plants.

10. If any plant is equipped with combinations of steam, hydro, internal combustion or gas turbine equipment, each should be reported as a separate plant. However, if a gas turbine unit functions in a com-

bined cycle operation with a conventional steam unit, the gas turbine should be included with the steam plant.

11. If the respondent operates a nuclear power generating plant append: (a) a brief explanatory statement concerning accounting for the cost of power generated including any attribution of excess costs to research and development expenses; (b) a brief explanation of the fuel accounting specifying the accounting methods and types of cost units used with respect to the various components of the fuel cost, and (c) such additional information as may be informative concerning the type of plant, kind of fuel used, and other physical and operating characteristics of the plant.

Plant Name (d)	Plant Name (e)	Plant Name (f)	Plant Name (g)	Line No.
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				31
				32
				33
				34
				35
Coal	Oil	Coal	Oil	
	Barrels	Tons	Barrels	
				36
				37
				38
				39
				40
				41
				42
				43
				44

STEAM-ELECTRIC GENERATING PLANT STATISTICS (Large Plants)

Average Annual Heat Rates and Corresponding Net Kwh Output for Most Efficient Generating Units

1. Report only the most efficient generating units (not to exceed 10 in number) which were operated at annual capacity factors† of 50 percent or higher. List only unit type installations, i.e., single boiler serving one turbine-generator. It is not necessary to report single unit plants in this schedule. Do not include non-condensing or automatic extraction-type turbine units operated for processing steam and electric power generation.

2. Report annual system heat rate for total conventional steam-power generation and corresponding net generation (Line 11).

3. All heat rates on this page and also on page 432/432a should be computed on the basis of total fuel burned including burner lighting and banking fuel.

Line No.	Plant Name (a)	Unit No. (b)	MW* (c)	B.t.u. Per Net Kwh. (d)	Net Generation Million Kwh. (e)	Kind of Fuel (f)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
Total System Steam Plants						
11						

*Generator rating at maximum hydrogen pressure.

†Annual Unit Capacity Factor = $\frac{\text{Net Generation—Kwh:}}{\text{Unit KW. Capacity (as included in plant total—line 5, p. 432) \times 8,760 \text{ hours}}}$

GENERATING PLANT STATISTICS (Small Plants)

1. Small generating plants for the purpose of this schedule are steam plants of less than 10,000 kw, internal combustion and gas turbine plants of less than 5,000 kw, and hydro plants of less than 2,500 kw. Installed capacity (name plate rating).
 2. Designate any plant leased from others, operated under a license from the Federal Power Commission, or operated as a joint facility, and give a concise statement of the facts in a footnote. If licensed project give project number in footnote.
 3. List plants appropriately under subheadings for steam, hydro, nuclear, internal combustion and gas turbine plants. For nuclear, see instruction 10, page 432a.
 4. If net peak demand for 60 minutes is not available, give that which is available, specifying period.
 5. If any plant is equipped with combinations of steam, hydro, internal combustion or gas turbine equipment, each should be reported as a separate plant. However, if the exhaust heat from the gas turbine is utilized in a steam turbine regenerative feed water cycle, or for preheated combustion air in a boiler, report as one plant.

1. Small generating plants for the purpose of this schedule are steam plants of less than 10,000 kw, internal combustion and gas turbine plants of less than 5,000 kw, and hydro plants of less than 2,500 kw. Installed capacity (name plate rating).
 2. Designate any plant leased from others, operated under a license from the Federal Power Commission, or operated as a joint facility, and give a concise statement of the facts in a footnote. If licensed project give project number in footnote.
 3. List plants appropriately under subheadings for steam, hydro, nuclear, internal combustion and gas turbine plants. For nuclear, see instruction 10, page 432a.
 4. If net peak demand for 60 minutes is not available, give that which is available, specifying period.
 5. If any plant is equipped with combinations of steam, hydro, internal combustion or gas turbine equipment, each should be reported as a separate plant. However, if the exhaust heat from the gas turbine is utilized in a steam turbine regenerative feed water cycle, or for preheated combustion air in a boiler, report as one plant.

Line No.	Name of Plant (a)	Year Orig. Const. (b)	Installed Capacity, Name Plate Rating-KW (c)	Net Peak Demand KW (60 Min.), (d)	Net Generation Excluding Plant Use (e)	Cost of Plant (Omit cents) (f)	Plant Cost per KW Inst. Capacity (g)	Production Expenses (Omit cents)			Kind of Fuel (k)	Fuel Cost Cents per Million B.t.u. (l)	
								Operation Exc't. Fuel (h)	Fuel (i)	Maintenance (j)			
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STEAM-ELECTRIC GENERATING PLANTS

1. Include in this schedule steam-electric plants of 10,000 kw. (name plate rating) or more of installed capacity.
2. Report the information called for concerning generating plants and equipment at end of year. Show unit type installation, boiler and turbine-generator, on same line.
3. Exclude from this schedule, plant, the book cost of which is included in Account 121, Nonutility Property.
4. Designate any generating plant or portion thereof for

which the respondent is not the sole owner. If such property is leased from another company give name of lessor, date and term of lease, and annual rent. For any generating plant, other than a leased plant or portion thereof for which the respondent is not the sole owner but which the respondent operates or shares in the operation of, furnish a succinct statement explaining the arrangement and giving particulars as to such matters as percent ownership by respondent, name of co-owner, basis of sharing output, expenses or revenues, and how

Line No.	Name of Plant	Location of Plant	BOILERS				
			Number and Year Installed	Kind of Fuel and Method of Firing	Rated Pressure psig.	Rated Steam Temperature*	Rated Max. Continuous M lbs. Steam per Hour
			(c)	(d)	(e)	(f)	(g)
1	(a)	(b)			++++	++++	++++
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Note reference:

*Indicate reheat boilers thusly, 1050/1000.

STEAM-ELECTRIC GENERATING PLANTS (Continued)

expenses and/or revenues are accounted for and accounts affected. Specify if lessor, co-owner, or other party is an associated company.

5. Designate any generating plant or portion thereof leased to another company and give name of lessee, date and term of lease and annual rent and how determined. Specify whether lessee is an associated company.

6. Designate any plant or equipment owned, not operated,

and not leased to another company. If such plant or equipment was not operated within the past year explain whether it has been retired in the books of account or what disposition of the plant or equipment and its book cost are contemplated.

7. Include in this schedule gas-turbines operated in a combined cycle with a conventional steam unit with its associated steam unit.

TURBINE-GENERATORS**											Plant Capacity, Maximum Generator Name Plate Rating††††	Line No.
Year Installed	TURBINES				GENERATORS							
	Max. Rating Kilowatt †††††	Type†	Steam Pressure at Throttle psig. †††††	R.P.M.	Name Plate Rating in Kilowatts		Hydrogen Pressure ††		Power Factor	Voltage K.v.†††		
					At Minimum Hydrogen Pressure	At Maximum Hydrogen Pressure	Min.	Max.				
(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	
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Note references:

** Report cross-compound turbine-generator units on two lines - H.P. section and L.P. section.

† Designate units with shaft connected boiler feed pumps. Give capacity rating of pumps in terms of full load requirements.

†† Indicate tandem-compound (T.C.); cross-compound (C.C.); single casing (S.C.); topping unit (T.), and non-condensing (N.C.). Show back pressures.

††† Designate air cooled generators.

†††† If other than 3 phase, 60 cycle, indicate other characteristic.

††††† Should agree with column (n).

†††††† Include both ratings for the boiler and the turbine-generator of dual-rated installations.

HYDROELECTRIC GENERATING PLANTS

1. Include in this schedule Hydro plants of 10,000 kw (name plate rating) or more of installed capacity.
2. Report the information called for concerning generating plants and equipment at end of year. Show associated prime movers and generators on the same line.
3. Exclude from this schedule, plant, the book cost of which is included in Account 121, Nonutility Property.
4. Designate any plant or portion thereof for which the respondent is not the sole owner. If such property is leased from another company, give name of lessor, date and term of lease, and annual rent. For any generating plant, other than a leased plant, or portion thereof, for which the respondent is not the sole owner but which the respondent operates or shares in the operation of, furnish a succinct statement ex-

Line No.	Name of Plant (a)	Location (b)	Name of Stream (c)	WATER WHEELS			
				Attended or Unattended (d)	Type of Unit* (e)	Year Installed (f)	Gross Static Head With Pond Full (g)
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*Horizontal or vertical. Also indicate type of runner—Francis (F), fixed propeller (FP), automatically adjustable propeller (AP), Impulse (I). Designate reversible type units by appropriate footnote.

HYDROELECTRIC GENERATING PLANTS (Continued)

plaining the arrangement and giving particulars as to such matters as percent ownership by respondent, name of co-owner, basis of sharing output, expenses, or revenues, and how expenses and/or revenues are accounted for and accounts affected. Specify if lessor, co-owner, or other party is an associated company.

5. Designate any plant or portion thereof leased to another company and give name of lessee, date and term of lease and

annual rent and how determined. Specify whether lessee is an associated company.

6. Designate any plant or equipment owned, not operated, and not leased to another company. If such plant or equipment was not operated within the past year explain whether it has been retired in the books of account or what disposition of the plant or equipment and its book cost are contemplated.

WATER WHEELS—Continued			GENERATORS						Total Installed Generating Capacity in Kilowatts (name plate ratings) (q)	Line No.
Design Head (h)	R.P.M. (i)	Maximum hp. Capacity of Unit at Design-Head (j)	Year Installed (k)	Voltage (l)	Phase (m)	Frequency or d.c. (n)	Name Plate Rating of Unit in Kilowatts (o)	Number of Units in Plant (p)		
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INTERNAL-COMBUSTION ENGINE AND GAS-TURBINE GENERATING PLANTS

1. Include in this schedule internal-combustion engine and gas-turbine plants of 5,000 kilowatts and more.

2. Report the information called for concerning plants and equipment at end of year. Show associated prime movers and generators on the same line.

3. Exclude from this schedule, plant, the book cost of which is included in Account 121, Nonutility Property.

4. Designate any plants or portion thereof for which the respondent is not the sole owner. If such property is leased from another company, give name of lessor, date and term of lease, and annual rent. For any generating plant other than a leased plant, or portion thereof, for which the respondent is not the sole owner but which the respondent operates or shares in the operation of, furnish a succinct statement explaining the arrangement and giving particulars as to such

Line No.	Name of Plant (a)	Location of Plant (b)	PRIME MOVERS			
			Internal-Combustion or Gas-Turbine (c)	Year Installed (d)	Cycle* (e)	Belted or Direct Connected (f)
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Note references:

*Indicate basic cycle for gas-turbine: open or closed.

Indicate basic cycle for internal-combustion: 2 or 4.

TRANSMISSION LINE STATISTICS

1. Report information concerning transmission lines, cost of lines, and expenses for year. List each transmission line. Show highest voltages first.

2. Transmission lines as embraced by this schedule include such lines as come within the definition of transmission system plant as given in the Uniform System of Accounts. Substation costs and expenses are not to be included in the costs and expenses reported in this schedule.

3. Grouping of plant costs and expenses of transmission lines for accounting purposes is permitted by the Uniform System of Accounts. For the purposes of this schedule: (a) group plant costs, columns (j), (k), and (l), for lines less than 110,000 volts and report plant costs for each line of 110,000 volts or more according to principal type of construction i. e. wood pole (including H frame), steel tower, and other type of construction; (b) group expenses, columns (m), (n), (o), and (p), for lines less than 110,000 volts and for each voltage for lines of

110,000 volts and over. The plant cost and expense data may be reported by individual lines if so required by a state commission. The information called for by columns (a) to (i), inclusive, shall be reported for each line with brackets or other means to show the transmission lines included within the groups for the accounting purposes of this schedule.

4. Exclude from this schedule any transmission lines for which plant costs are included in Account 121, Nonutility Property.

5. The type of supporting structure reported in column (e) should indicate whether (1) single pole, wood or steel; (2) H-frame, wood or steel poles; (3) tower; or (4) underground construction. If a transmission line has more than one type of supporting structure, indicate the mileage of each type of construction by the use of brackets and extra lines in the schedule. Minor portions of a transmission line of a different type of construction need not be distinguished from the remainder of the line.

Line No.	DESIGNATION		VOLTAGE *		Type of supporting structure (e)	LENGTH (pole miles)**		Number of circuits (h)
	From (a)	To (b)	Operating (c)	Designed (d)		On structures of line designated (f)	On structures of another line (g)	
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35								
36								
TOTAL								

* Where other than 60 cycle, 3 phase, so indicate.
 ** In the case of underground lines, report circuit miles.

TRANSMISSION LINES ADDED DURING YEAR

1. Report below the information called for concerning transmission lines added or altered during the year. It is not necessary, however, to report minor revisions of lines.

2. Provide separate subheadings for overhead and underground construction and show each transmission line separately.

If actual costs of completed construction are not readily available for reporting in columns (l) to (o), it is permissible to report in these columns, the estimated final completion costs. Designate, however, if estimated amounts are reported. Include costs of Clearing Land and Rights-of-Way, and Roads and Trails, in column (l) with appropriate footnote, and costs of Underground Conduit in column (m).

3. If design voltage differs from operating voltage indicate such fact by footnote; also where line is other than 60 cycle, 3 phase indicate such other characteristic.

Line No.	LINE DESIGNATION		Line Length in miles (c)	SUPPORTING STRUCTURE		CIRCUITS PER STRUCTURE		CONDUCTORS			Voltage Kv (Operating) (k)	LINE COST (omit cents)					
	From (a)	To (b)		Type (d)	Average Number per mile (e)	Present (f)	Ultimate (g)	Size (h)	Specification (i)	Configuration and spacing (j)		Land and land rights (l)	Poles, towers and fixtures (m)	Conductors and devices (n)	Total (o)		
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SUBSTATIONS

1. Report below the information called for concerning substations of the respondent as of the end of the year.
 2. Substations which serve but one industrial or street railway customer should not be listed hereunder.
 3. Substations with capacities of less than 5000 kva, except those serving customers with energy for resale, may be grouped according to functional character, but the number of such substations must be shown.
 4. Indicate in column (b) the functional character of each substation, designating whether transmission or distribution and whether attended or unattended.
 5. Show in columns (f), (j), and (k) special equipment such as rotary converters, rectifiers, condensers, etc. and auxiliary equipment for increasing capacity.
 6. Designate substations or major items of equipment leased from others, jointly owned with others, or operated otherwise than by reason of sole ownership by the respondent.

For any substation or equipment operated under lease, give name of lessor, date and period of lease and annual rent. For any substation or equipment operated other than by reason of sole ownership or lease, give name of co-owner or other party, explain basis of sharing expenses or other accounting between the parties, and state amounts and accounts affected in respondent's books of account. Specify in each case whether lessor, co-owner, or other party is an associated company.

Line No.	Name and location of substation (a)	Character of substation (b)	VOLTAGE			Capacity of substation in kva (in service) (f)	Number of transformers in service (g)	Number of spare transformers (h)	CONVERSION APPARATUS AND SPECIAL EQUIPMENT			
			Primary (c)	Secondary (d)	Tertiary (e)				Type of equipment (i)	Number of units (j)	Total capacity (k)	
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