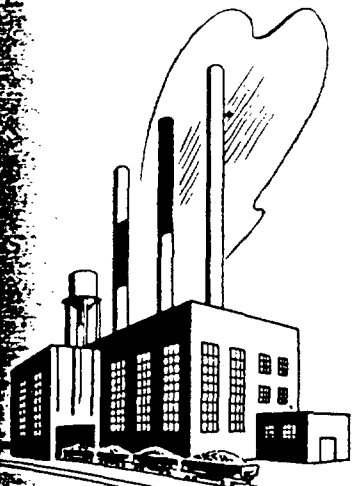


1948 MODERN PLANT SURVEY

PLAINTIFF'S EXHIBIT

WH-1844



Technical highlights of utility and industrial power-plant construction to meet unprecedented load growth; tabulated engineering features of over 700 new steam and hydroelectric stations

SINCE THE WAR'S END pitched us into the greatest wave of construction the industry has yet known, power engineers have had little time for anything but their own immediate problems—keeping existing machines rolling and putting new kilowatts on the line as fast as possible. Yet from the hundreds of new plants being built, or old ones being extended or modernized, much can be learned. Hence this special section—POWER's 69th.

Here we have tried to dig out answers to the questions you would ask if you had time to sit back and examine current practice in power-plant design. As a basis, we started with POWER's continuing survey of new plant installations. The returns proved exceptionally good, so we are able to tabulate for your reference the technical highlights of over 700 plants now being designed or built.

For the benefit of busy engineers we have analyzed this mass of data and summarized in charts and words the principal design trends in both central-station and industrial installations. In these pages you will see at a glance what other engineers have done about pres-

ures, temperatures, capacities, heat-release rates, fuels, firing equipment, boiler auxiliaries, fan and pump drives, etc.

To build some flesh on these bare bones of data, this special section also includes concise descriptions of six central stations and eight industrial power plants. We selected these to give, as far as possible, a broad cross-section of today's practice as it is influenced by geographical location, plant size and type, nature of fuels available, and type of load served. Comprehensive equipment tables show the specific choices made by individual designers.

The current high level of construction and operating costs, which is likely to continue, puts tremendous emphasis on plant design—layout simplification for lower first cost, heat-balance ingenuity for high economy, and sound equipment selection for reliability and low maintenance. Power engineers everywhere are burning the midnight oil on these problems and working out their own solutions. This special section is our report to you on what others have done—use it as a guide in working out the answers for your plant.

Industrial and Municipal Power-Plant Installations cont'd

F-D FANS				I-D FANS				FUEL				FEED PUMPS				TURBINES				CONDENSERS				
Air-Heater No. Boiler, 1000 sq ft	Air-Heater Type			Drive	Air-Volume Control	Drive	Gas-Volume Control	Firing	Type	Heating Value, 1000 Btu per lb	Ash-Fusion Temperature, F	Drive	Flow Control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Back pressure, psia	No. of Bleed Points	Generator Cooling	Surface, 1000 sq ft	No. Water Passes	Tube Material	Total Boiler Capacity Incl New Units, 1000 lb	Total Generator Capacity Incl New Units, 1000 kw
62 0	Tu	M	V	M	D	G	G	1018 ¹⁴	3M, IT					60	3600	WE	1.75	4	H	60	2	AsCu	475	66
62 0	Tu	M	V	M	D	G	G	1018 ¹⁴	3M, IT					60	3600	WE	1.75	4	H	60	2	AsCu	1350	135
70 4	Pl	M	D	M	Hy	P	C	14 0	2300	1M	R	25	3600	GE	300	0.5	4	H	25	2	Mu	1560	105	
99 4	Re	M	Hy	M	Hy	P	C	13 1	2400	4M	R	25 ¹⁴	3600	GE	1 0	4	H	23 5	2	Ad	600	50		
63 3	Tu	M	V	M	V	P, G, O	L, G, O	850 ¹⁴	2100	2M, IMT	R	35	3600	GE	0 6	7	H	25 0	2	PAd	2700	240		
15 2	Tu	M	V	M	V	P, G	C, G	13 1	2200	2M	S	43.8	3600	GE	1 0	4	H	31.3	2	Ad	1275	75		
40.7	Tu	M	D	M	Hy	P	C	13 4	2050	2M		22	3600	GE	0 5	4	H	17 5	1	Ad	615	47.5		
122 5	Tu	M	V	M	Ma	P	C	13 5	2450	3M	R	80	1800	GE	0 5	5	H	75	2	Ad	340	30		
122 5	Tu	M	V	M	Ma	P	C	13 5	2450	3M	R	80	1800	GE	0 5	5	H	75	2	Ad	1600	175		
31 7	Re	M	S, V	M	D, V	G, O	C, O	1100 ¹⁴	2M	R		20	3600	AC	75	4	H	18	2	AnAd	200	22		
48 9	Re	M	D, V	M	D, V	P	C	13 6	2400	3M, IT	S	60	3600	GE	75	4	H	45	1	AAAd	800	80		
48 9	Re	M	D, V	M	D, V	P	C	13 6	2360	3M, IT	S	60	3600	GE	0 75	4	H	50	2	AAAd	1600	160		
82 0	Re	M	V	M	Hy	P	C	12 5	2400	2M	R	31 25	3600	GE	0 5	5	H	24	2	AlBr	585	40		
82 0	Re	M	V	M	Hy	P	C	12 5	2400	2M	R	31 25	3600	GE	0 5	5	H	24	2	AlBr	1175	110		
40 8	Re	M	V	M	Hy	P	C	12 5	2400	2M	R	45	3600	WE	0 5	5	H	30	1	AlBr	690	70		
63 0	Re	M	Hy	M	Hy	P	C	12 0	2750	2M	R	60	3600	WE	1 0	4	H	47 0	2	Ad	990	101		
63 0	Re	M	Hy	M	Hy	P	C	12 0	2750	2M	R	60	3600	WE	1 0	4	H	47 0	2	Ad	2025	165		
33 3	Tu	Mp	V	Mp	V	G, O	C, O	1000 ¹⁴	2M	R		22 5	3600	GE	1 0	3	H	20 3	2	Ad	600	60		
33 3	Tu	Mp	V	Mp	V	G, O	C, O	1000 ¹⁴	2M	R		22 5	3600	WE	1 0	3	H	20 3	2	Ad	1200	120		
117 1	Re	2M	V	M	V	P, O, G	C, O, G	11 0	2100	3M, IT	R	40 ¹⁴	3600	WE	0 75	4	H	40	2	AAAd	460	45		
100 2	Pl	M	D	M	Hy	P	C	11 0	2040	1M, IT	R	30 0	3600	WE	56	4	H	32 5	2	Ad	690	67.5		
50 5	Pl	M	D	M	Hy	P	C	11 0	2200	2M, IT	R	30 0 ¹⁴	3600	WE	56	4	H	27 5	2	Ad	900	80		
64 5	Tu	M	V	M	S	P	C	18 4	1900	2M	R	25 0	3600	WE	1 0	4	H	25 0	1	Ad	1325	100		
64 5	Tu	M	V	M	D	P	C	18 4	2000	1M, IT	R	30	3600	WE	1 0	4	H	23 0	1	Ad	645	60		
51 4	Tu	M	Ma	M	Ma	P	C	9 8	1900	2M	R	35	3600	WE	0 5	4	H	45	1	PAd	700	50		
51 4	Tu	M	Ma	M	Ma	P	C	9 8	2000	1M, IT	R	50	3600	GE	0 5	4	H	45	1	AsCu ²⁰	1790	141.4		
42 4	Tu	M	V	M	V	G	C	1050 ¹⁴	2M	R		30	3600	WE	75	4	H	27 5	2	AlBr	1570	50		
66 6	Re	M	V	M	S, D	P	C	12 9	2376	1M	S	60	3600	GE	0 5	5	H	55	2	AlBr	1140	100		
54 8	Tu	Mp	Hy	Mp	Hy	P	C	11 0	2100	3M	R	30	3600	GE	0 5	4	H	12	2	AlBr	3936	307.5		
5 2	Tu	M	V	M	V	P	C	12 4	1900	4M	R	100	3600	WE	0 75	6	H	70 0	2	Ad	380	30		
8 8	Re	M	V	M	V	P, G, O	C, O	13 2	2000	1M, IT, IMT	S	40	3600	GE	0 5	4	H	32 5	2	Ads	2400	230		
70 8	Re	M	Hy	M	Hy	P	C	11 0	1900	2M	R	80	1800	GE	0 7	4	H	75 0	2	Ad	680	80		
170 8	Re	M	Hy	M	Hy	P	C	11 0	1900	2M	R	80	3600	WE	0 7	4	H	75 0	2	Ad	350	30		
52 8	Tu	M	D	M	D, V	G	C	1000 ¹⁴	1900	2M, IT	R	30	3600	GE	1 12	4	H	27 5	2	Ad	3060	320		
62 8	Tu	M	V	M	V	P	C	12 430	1900	1M, IMT	R	30	3600	WE	0 75	5	H	25 0	2	Ad	3980	400		
76 2	Re	M	D, V	M	D	P, G, O	C, O	1013 ¹⁴	2150	2M	R	30	3600	WE	0 75	4	H	30 0	2	AsCu	350	30		
43 5	Re	M	D, Hy	M	D, Hy	P	C	12 6	1900	2M, IT	R	45	3600	GE	0 75	3	H	36 0	2	Ad	1723	137.5		
47 9	Tu	M	D, Hy	M	D, Hy	P	C	10 5	1900	3M, IT	R	40 ¹⁴	3600	GE	0 5	4	H	30 0	1	AsCu	990	78		
66 7	Re	M	V	M	V	P	C	11 0	1970	2M, IMT	R	45	3600	GE	0 75	5	H	30 0	2	AAAd	2300	230		
20 8	Re	M	V	M	Hy	P, G	C, O, G	10 5	2050	1M, IT	R	15	3600	AC	0 5	4	H	15 0	2	PAd	855	80		
68 1	Tu	M	V	M	Hy	P, G	C, O, G	10 0	1930	2M		40	3600	GE	0 75	5	H	37 5	2	PAd	800	80		
15 0	Tu	M	D, V	M	D	SS(425)	C	10 5	1900	1M, IT	S, R	20	3600	WE	0 75	1	A	5 5	2	PAd	240	15		
9 0	Tu	M	D, V	M	D	SS(291)	C	10 5	1900	1M, IT	S, R	10	3600	GE	0 75	4	A	10	1	Ad	1660	109.7		
51 1	Tu	Mp	V	Mp	D	O	C	18 4	2M	R		30	3600	WE	0 75	4	H	27 5	1	AlBr	715	60		
51 1	Tu	Mp	V	Mp	D	O	C	18 4	2M	R		30	3600	WE	0 75	4	H	27 5	1	AlBr	515	40		
23 0	Tu	M	V	M	V	G	C	16 6	2M, IT	R		20	3600	AC	1 0	4	H	32 5	2	Ad	300	30		
144 0	Re	M	Ma	M	Ma	P	C	10 2	1900	3M		60	3600	WE	0 75	5	H	55 0	2	Ad	600	60		
144 0	Re	M	Ma	M	Ma	P	C	10 2	1900	3M		60	3600	GE	0 75	5	H	55 0	2	Ad	1165	120		
144 0	Re	M	Ma	M	Ma	P	C	10 2	1900	3M		60	3600	WE	0 75	5	H	55 0	2	Ad	1905	180		
43 0	Re	M	V	Mp	V	P	C	13 0	2100	2M, IMT	R	35	3600	GE	0 5	4	H	34 0	2	Ad	2545	240		
59 0	Tu	M	V	M	D	P	C	13 0 ¹⁴	2000	2M	R	30	3600	GE	0 75	4	H	27 5	2	Ad	115	5		
36 7	Re	Mp	V	Mp	V	G, O	C, O	1100 ¹⁴	2M	IT	R	25	3600	GE	1 0	4	H	30 0	2	Ad	350	30		
44 7	Tu	M	V	M	D, Hy	P, G, O	C, O	106 ¹⁴	2600	3M	R	50	3600	AC	0 75	4	H	25 0	2	AsCu	585	43		
31 8	Tu	M	V	Mp	V	P	C	12 3	2M, IMT	R		35	3600	GE	0 5	4	H	40 7	2	AlBr	1300	75		
62 4	Re	M	D, V	M	D, V	G, O	C, O	15 5	3M, IT	R		66	3600	WE	0 5	4	H	30 0	2	Ad	1000	85		
62 4	Re	M	D, V	M	D, V	G, O	C, O	15 5	3M	R		60	3600	GE	0 75	4	H	42 5	2	AlBr	750	70		
31 8	Tu	Mp	V	Mp	V	O	C	1000 ¹⁴	2M	R		22 5	3600	GE	1 0	3	H	20 4	2	Ad	800	60		
31 5	Tu	Mp	D, V	Mp	D, V	P, G	C	935 ¹⁴	1M, IT	R		33	3600	WE	1 0	4	H	25 0	1	Ad	1600	120		
24 6	Tu	M	V	Mp	V	P	C	13 5	2600	1M, IMT	R	25	3600	WE	1 25	4	H	32 5	2	AAAd	325	33		
68 0	Tu	M	V	M	V	P	C	12 0	1950	2M, IT	R	40	3600	WE	0 75	4	H	16 9	2	AlBr	663	69		
46 6	Tu	M	V	M	V	P	C	11 5	1M	R		25	3600	GE	0 5	4	H	35 0	2	AnAd	240	25.5		
51 8	Tu	M	D	M	D	P	C	13 4	1M, IT	R		30	3600	GE	1 0	5	H	20 0	1	Ad	650	59		
81 0	Re	M	V	M	V	G	C	1000 ¹⁴	1M	R		60	3600	GE	1 5	5	H	50 0	1	AsCu	975	83		
30 0	Pl	M	V	M	V	G	C	1000 ¹⁴	1M	R		60	3600	GE	1 5	5								

—Tubular
 —Underfeed stoker
 —Union Iron Works
 —"one control"
 —Henry Vogt Machine Co.
 —Wicks Boiler Co.
 —Wilmington Electric Corp.
 —Wilmington Pump & Mfg. Corp.
 —Stoker grate area, sq ft
 —Heat to 1000 F
 —Water surface, 30,200 sq ft
 —1 ton per boiler

14—12,000 to 14,000 Btu per lb
 15—20,000 to 2900 F
 16—Bleed at 400 psia
 17—1 motor, 1 turbine, 2 fans, 1 shaft
 18—one bleed point for induction steam
 19—12,000 to 13,900 Btu per lb
 20—Gas, 1015 Btu per cu ft
 21—Reheater surface, 9500 sq ft
 22—60,000-kw rating, 75,000-kw max
 23—Btu per cu ft
 24—2 turbines being installed
 25—Extraction at 200 psig for industrial sales
 26—600,000 lb per hr with 12,640-Btu
 27—Normal coal
 28—Fronting power plant
 29—bought in 1940, built in 1943
 30—2 units of 1 motor driving one i-d.
 31—one i-d fan
 32—Cupro-nickel in top rows of con-
 denser
 33—Gas-fired, 30,350 Btu oil
 34—An i-d and 1-d fan driven by one
 motor
 35—Gas-fired, 24,800 Btu oil
 36—Reheat to 855 F
 37—Radiant reheater, 2964 sq ft
 38—Reheat to 900 F
 39—Radiant reheater, 3414 sq ft
 40—12,350 to 14,400 Btu per lb
 41—2045 to 2800 F
 42—12,416 to 14,660 Btu per lb

1948 Listing of Typical Central-Station

For Notes on Uses and Limitations
of this Tabulation • See page 122

Compiled by B. G. A. Skrotzki, Associate Editor

For Notes on Uses and Limitations of this Tabulation • See page 122														
Compiled by B G A Skrotzki, Associate Editor														
Company	Location	Plant Name	Consulting Engineers	First Operation, New Units	Nominal Pressure, psi	Nominal Steam Temperature, F	BOILERS						Heat Release, 1000 Btu per sq ft per hr	
							Number	Capacity, Each 1000 lb per hr	Manufacturer	Superheater Surface, 1000 sq ft	Roller, Waterwall Surface, 1000 sq ft	Furnace Volume, 1000 cu ft		
1500 PSI AND ABOVE														
Appalachian Elec Pwr Co	Graham Sta., W. Va.	Philip Sporn	Amer Gas & Elec Serv.	7-49	2080	1050 ¹	1	930	BW	60.52	29.6	79.8	16.4	
The Ohio Power Co	Graham Sta., W. Va.	Philip Sporn	Amer Gas & Elec Serv.	6-50	2080	1050 ¹	1	930	BW	60.52	29.6	79.8	16.4	
Indiana & Mich Elec Co	Mishawaka, Ind.	Twin Branch	Amer Gas & Elec Serv.	5-49	2080	1050 ¹	1	930	BW	60.52	23.5	65.7	14.8	
City of Detroit Pub Lig Comm.	Detroit, Mich.	Mistersky	SH & G, B & R.	1950	1675	1000	1	400	BW	16.4	6.8	22.6	19.8	
Consolidated Edison Co of N Y.	Manhattan, N. Y. C.	Waterside No. 1.		12-48	1600	950	1	1000	CE	28.2	30.3	61.0	17.1	
				1948	200	500								
Consolidated Edison Co of N Y.	Bronx, N. Y. C.	Sherman Creek.		10-47	1600	950	1	1000	CE	28.2	59.0	53.7	21.9	
Columbus & So. Ohio Elec Co.	Nr. Athens, Ohio.	Poston.	Ebasco Services.	6-49	1500	955	1	425	FW	25.5	12.5	30.6	17.9	
				6-50	1500	955	1	425	FW	25.5	12.5	30.6	17.9	
Consolidated Edison Co of N Y.	Manhattan, N. Y. C.	East River.		6-50	1500	1000	1	1100	BW	39.1	21.8	88.0	15.5	
				4-51	1500	1000	1	1100	BW	39.1	21.8	88.0	15.5	
Iowa Power & Light Co.	Des Moines, Iowa	Des Moines No. 2		6-48	1500	925	1	375	CE	13.0	9.7	25.0	14.0	
1200 PSI TO 1499 PSI														
Boston Edison Co	Weymouth, Mass.	Edgar	Jackson & Moreland.	9-49	1450	1000 ¹	1	585	CE					
Buffalo Niagara Elec Corp	Dunkirk, N. Y.	Dunkirk		1950	1450	1000 ¹	1	670	CE	38.611		58	15.1	
				1950	1450	1000 ¹	1	670	CE	38.611		58	15.1	
Metropolitan Edison Co.	Reading, Pa.	Titus	Gilbert Associates.	11-50	1450	1000 ¹	1	510	CE	34.711	29.3	44.6	13.4	
				11-50	1450	1000 ¹	1	510	CE	34.711	29.3	44.6	13.4	
New England Power Co.	Salem, Mass.	Salem Harbor.	United Engrs & Const.	5-51	1450	1000 ¹	1							
				10-51	1450	1000 ¹	1							
The Ohio Power Co	Brilliant, Ohio.	Tidd	Amer Gas & Elec Serv Corp	8-48	1375	925	1	950	BW	34.7	24.2	66.5	17.1	
Florida Power & Light Co.	Cutler, Fla.	Cutler	Ebasco Services.	1949	1350	955	1	430	CE		16.9	22.0	12.1	
				1949	650	835	1	150	CE	3.5	13.3	6.0	2.3	
				1949	650	835	1	150	CE	3.5	13.3	6.0	2.3	
City Public Service Board	San Antonio, Texas.	Mission Road.	Gibbs & Hill	7-48	1350	900	1	325	BW			14.1	3.2	
Pacific Gas & Electric Co	Bakersfield, Calif.	Kern	Stone & Webster.	5-48	1350	925	2	450	BW	15.0	9.5	18.4	11.1	
West Penn Power Co.	Nr. Courtney, Pa.	Mitchell	Sanderson & Porter.	12-48	1350	925	2	500	BW	21.4	16.6	44.1	11.1	
				2-50	1350	925	1	500	BW	21.4	16.6	44.1	11.1	
West Penn Power Co	Springdale, Pa.	Springdale	Sanderson & Porter.	12-45	1250	925	1	800	BW	34.7	23.2	62.6	14.5	
Nebraska Public Power System.	Bellevue, Nebr.	Bellevue	Sargent & Lundy	6-49	1325	950	3	220	BW	12.1	9.07	14.5	3.1	
Pacific Gas & Electric Co	San Francisco, Calif.	Station P	Stone & Webster.	11-48	1300	950	4	475	BW	16.4	8.6	20.6	3.1	
Cambridge Electric Light Co	Cambridge, Mass.	Kendall Sq	Gilbert Associates.	12-48	1320	900	2	200	BW	7.9	9.9	14.3	0.7	
The Dayton Power & Light Co.	Miamisburg, Ohio.	O H Hutchings	Ebasco Services.	3-48	1300	950	1	550	CE	15.8	16.4	31.6	0.7	
				1949	1300	950	1	550	CE	15.8	16.4	31.6	0.7	
The Detroit Edison Co	Trenton, Mich.	Trenton Channel		8-49	1300	950	4	660 ¹⁶	CE		26.6	42.2	0.7	
Wisconsin Electric Power Co	Port Washington, Wis	Port Washington		9-48	1290	825 ²⁴	1	690	CE	8.525	64.2	61.0	14.4	
				6-49	1380	900 ²⁴	1	655	CE	11.027	63.8	61.0	14.4	
Buffalo Niagara Elec Corp	Nr. Buffalo, N. Y.	C R Huntley		9-48	1250	950	1	875	BW	29.1	18.4	38.8	2.1	
Central New York Power Corp	Oswego, N. Y.	Oswego		12-48	1250	950	1	875	BW	27.2	17.4	43.5	2.1	
The Cincinnati Gas & Elec Co.	Cincinnati, Ohio	West End.		11-48	1250	925	3	350	BW	15.6	19.8	12.3	1.6	
The Cincinnati Gas & Elec Co.	Columbia Park, Ohio	Columbia.	Sargent & Lundy.	11-49	1250	950	2	375	BW	24.2	22.6	31.8	1.6	
N. Y. C. Board of Transportation	Manhattan, N. Y. C.	59th Street.	Burns & Roe.	10-49	1250	950	1	600	BW	30.6	12.3	34.6	0.1	
Duke Power Co	Cliffside, N. C.	Cliffside.		3-48	1250	950	1	620	CE	24.3	24.0	39.0	0.2	
				11-48	1250	950	1	620	CE	24.3	24.0	39.0	0.2	
				11-49	1250	950	1	670	CE	24.8	27.3	42.9	0.2	
				4-50	1250	950	1	670	CE	24.8	27.3	42.9	0.2	
Connecticut Light & Power Co.	Devon, Conn.	Devon.	United Eng & Constr.	1-50	1250	950	1	600	CE		19.7	40.0	0.7	
				1-51	1250	950	1	600	CE		19.7	40.0	0.7	
Long Island Lighting Co	Port Jefferson, L. I.	Port Jefferson	Ebasco Services.	9-48	1250	950	1	425	CE	16.2	15.6	29.2	1.1	
				11-49	1250	950	1	425	CE	16.2	15.6	29.2	1.1	
New Orleans Pub Service, Inc	New Orleans, La.	Industrial Canal.	Ebasco Services.	7-47	1250	950	1	400	FW	13.5	16.0	28.1	2.1	
				8-48	1250	950	1	400	FW	13.5	16.0	28.1	2.1	
				2-49	1250	950	1	500	BW	25.6	16.6	41.7	0.2	
Oklahoma Gas & Elec Co	Hartsh, Oklahoma	Horseshoe Lake	Pioneer Serv & Engrg Co	7-47	1250	950	1	290	BW	13.7	9.5	22.0	0.2	
Rochester Gas & Electric Corp	Nr. Charlotte, N. Y.	Lakeside	Gilbert Associates	10-48	1250	950	1	400	CE		15.1	27.1	2.1	
Narragansett Electric Co	Providence, R. I.	Manchester St.	United Engrs & Constr	10-47	1200	950	1	450	CE	14.9	15.3	24.0	2.1	
				4-49	1200	950	1	450	CE	14.9	15.3	24.0	2.1	
900 PSI TO 1199 PSI														
Arkansas Power & Light Co	Lake Catherine, Ark	Lake Catherine.	Ebasco Serv.	11-47	1050	900	2	450	CE	23.3	30.9	21.0	2.1	
Los Angeles Dept of Water & Pwr	Whittier, Calif	Harbor		11-48	987	900	1	570	RS	29.0	32.4	28.0	2.1	
				12-48	987	900	1	650	RS	29.0	32.4	28.0	2.1	
				4-49	987	900	1	650	RS	29.0	32.4	28.0	2.1	
	Lake Charles, La	Riverside	Stone & Webster.	8-47	925	825	1	420	FW	7.7	26.2	20.5	2.1	
				7-50	900	910	1	400	CE	7.7	26.2	20.5	2.1	
Gulf States Utilities Co.	Baton Rouge, La	Louisiana.	Stone & Webster.	5-50	900	900	1	400	CE	7.7	26.2	20.5	2.1	
				2-51	900	900	1	400	CE	7.7	26.2	20.5	2.1	
	Beaumont, Texas.	Neches.	Stone & Webster.	5-49	875	910	1	400	CE	8.5	13.6	18.0	1.8	
				10-51	875	910	1	400	CE	8.5	13.6	18.0	1.8	
Florida Power & Light Co	Miami, Florida	Miami	Ebasco Services	6-48	920	905	2	215	BW	5.6	18.0	9.5	2.1	
Louisiana Power & Light Co	Sterling, La	Sterling	Ebasco Services.	5-51	900	905	1	675	CE					
Columbus & So. Ohio Elec Co	Nr. Columbus, Ohio	Pieway		7-48	900	900	1	375	FW	9.8	14.4	18.8	2.1	
Dumaine Light Co	So. Heights, La	Phillips.		12-49	900	900	1	600	FW	17.8			2.1	

A	— Air cooled	CA	— Coal, anthracite	GE	— General Electric Co	PAD	— Phosphorized adobe
AHR	— Air-cooled horizontal brass	CB	— Coke breeze	GT	— Gas tar	PI	— Plate
AH	— Air-cooled horizontal	CE	— Combustion Engineering Co	H	— Hydrogen cooled	R	— Regulator
MB	— Air-cooled motor	CAV	— Carbide-mesh	H ₂	— Hydraulic coupling	RB	— Red brass
MBR	— Air-cooled motor	C	— Coal	L	— Lignite	R ₂	— Regenerative
MT	— Air-cooled motor	DL	— Delavan Steam Turbine Co	M	— Motor drive	RS	— Riley stoker Corp
MT	— Air-cooled motor	D	— Diesel	M ₂	— Magnetic coupling	S	— Speed control
MT	— Air-cooled motor	DB	— Dry Bottom	MI	— Murray Iron Works Co	SHGG	— Smith, Hinchman
MT	— Air-cooled motor	EC	— Erie City Iron Works	M ₂	— Fan motors per tan	SS	— Spreader stoker
MT	— Air-cooled motor	EM	— Elliott Co	MT	— Motor and turbine drive	ST	— Slack tap
MT	— Air-cooled motor	FM	— Forge Moor Iron Works	M ₂	— Mount metal	SA	— Superloy
MT	— Air-cooled motor	FW	— Foster Wheeler Corp	O	— Oil	T	— Turbine drive
MT	— Air-cooled motor	G	— Natural gas	P	— Pulverized-fuel firing	TG	— Traveling-grate stoker

and Municipal Power-Plant Installations

Air-Heater Surface per Boiler, 1000 sq ft	F-D FANS			I-D FANS			FUEL		FEED PUMPS		TURBINES			CONDENSERS			Total Boiler Capacity Incl New Units, 1000 lb	Total Generator Capacity Incl New Units, 1000 kw				
	Drive	Air-Volume Control	Firing	Drive	Air-Volume Control	Firing	Type	Heating Value, 1000 Btu per lb	Ash-Fusion Temperature, F	Drive	Flow Control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Back pressure, psia	No. of Bleed Points			Generator Cooling Surface, 1000 sq ft	No. Water Passes	Tube Material	
281.4	Re	M	V	M	V	P	C	11.4	2300	3M	R	125	3600 ¹³	GE	0.5	6	11	65.0	1	As-Cu	930	125
281.4	Re	M	V	M	V	P	C	11.4	2300	3M	R	125	3600 ¹³	GE	0.5	6	11	65.0	1	As-Cu	1860	250
281.4	Re	M	V	M	V	P	C	10.9	2200	3M	R	125	3600 ¹³	GE	0.5	6	11	65.0	1	As-Cu	3460	366.5
94.0	Tu	M ¹⁴	V	M ¹⁴	Hy	P	C	13.0	2300	2M	Hy	44	3600	WE	0.25	4	11	27.5	1	Ad	1250	120
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T	Hy	50	3600	WE	200	16	11			2000		
260.0	Re	M	V	M ¹⁴	D	P	C	13.0 ⁴	2400 ⁵	3T												

- 1-Tubular
- 2-Underfeed stoker
- 3-Union Iron Works
- 4-Vane control
- 5-Heavy Vogt Machine Co
- 6-Washington Electric Corp
- 7-Wickes Boiler Co
- 8-Worthington Pump & Mach Corp
- 9-Stoker grate area, sq ft
- 10-Reheat to 1000 F
- 11-Reheater surface, 30,200 sq ft
- 12-Boiler per boiler
- 13-12,000 to 14,000 Btu per lb
- 14-2000 to 2400 F
- 15-Bleed at 400 psia
- 16-1 motor, 1 turbine, 2 fans, 1 shaft
- 17-One bleed point for induction steam
- 18-12,000 to 15,000 Btu per lb
- 19-Coke, 1015 Btu per cu ft
- 20-Reheater surface, 9500 sq ft
- 21-60,000-kw rating, 75,000-kw max
- 22-Btu per cu ft
- 23-2 turbines being installed
- 24-Extraction at 200 psig for industrial sales
- 25-600,000 lb per hr with 12,640-Btu subnormal coal
- 26-Floating power plant
- 27-Bought in 1940, built in 1943
- 28-2 units of 1 motor driving one i-d, one f-d fan
- 29-Cupro-nickel in top rows of condenser
- 30-Gas-fired, 30,350 Btu on oil
- 31-At i-d and i-d fan driven by one motor
- 32-Gas-fired, 29,800 Btu on oil
- 33-Reheat to 855 F
- 34-Radiant reheater, 2964 sq ft
- 35-Reheat to 900 F
- 36-Radiant reheater, 3414 sq ft
- 37-12,330 to 14,400 Btu per lb
- 38-2045 to 2800 F
- 39-12,416 to 14,066 Btu per lb
- 40-Coke breeze; gas tar

1948 Listing of Typical Central-Station

For Notes on Uses and Limitations
of this Tabulation • See page 122

Compiled by B G A Skrotzki, Associate Editor

Company	Location	Plant Name	Consulting Engineers	First Operation, New Units	Nominal Pressure, psi	Nominal Steam Temperature, F	BOILERS						Furnace Volume, 1000 cu ft
							Number	Capacity, Each 1000 lb per hr	Manufacturer	Superheater Surface, 1000 sq ft	Boiler, Waterwall Surface, 1000 sq ft		
Consolidated Edison Co of N Y	Bronx, N. Y.	Hunts Point		9-48	650	750	2	150	CE	4.0	17.9	13.1	16.0
Gulf States Utilities Co	Baton Rouge, La.	Louisiana	Stone & Webster	5-49	650	750	1	500	CE	4.7	35.0	37.3	22.2
New York State Elec & Gas Corp.	Bainbridge, N. Y.	Jennison	Gilbert Assoc.	10-50	650	910	2	200	CE	8.1	22.9	9.7	27.2
Oklahoma Gas & Electric Co.	Ponca City, Okla.	Beerbower	Pioneer Serv & Eng Co.	7-48	650	900	1	250	FW	9.9	17.4	17.0	18.9
Eastern Shore Pub Serv of Md.	Vienna, Md.	Vienna	United Eng & Const.	2-48	650	825	1	160	BW			9.6	21.3
Kansas Gas & Electric Co.	Wichita, Kan.	Ripley	Ebasco Services	1-49	650	825	1	160	BW			9.6	21.3
Missouri Utilities Company	Oran, Mo.	Harry Newman	J F Pritchard	8-49	650	825	1	90	CE		12.1		21.7
Northwestern Public Service Co.	Mitchell, S. D.	Mitchell	Sargent & Lundy	10-48	650	825	2	50	RS	2.3	7.7	2.4	21.7
Public Service Co of Oklahoma	Wetzel, Okla.	Wetzel	Sargent & Lundy	7-50	650	825	2	80					21.7
Southwestern Public Serv Co.	Abernathy, Texas	Tuco		9-49	650	825	1	275	BW	5.3	18.7	11.2	21.8
Southwestern Public Serv Co.	Amarillo, Texas	East		5-51	650	825	1	380	BW		33.2	17.6	21.8
Southwestern Public Serv Co.	Carlsbad, N. M.	Carlsbad		9-48	650	825	2	30	BW		7.7	3.3	21.8
Texas Electric Service Co.	Monahans, Texas	Permian Basin	Ebasco Services	1948	650	800	2	150	CE	3.2	12.0		21.8
Texas Electric Service Co.	Wichita Falls, Texas	Wichita Falls	Ebasco Services	1949	650	800	2	150	CE	3.2	12.0		21.8
Kansas City Power & Light Co.	Kansas City, Mo.	Grand Avenue	United Lt & Rwy Serv.	9-48	636	950	1	375	CE	9.9	21.4	21.2	21.8
Iowa Public Service Co.	Eagle Grove, Iowa		J F Pritchard	4-49	635	835	1	100	BW			4.8	21.8
Iowa Public Service Co.	Storm Lake, Iowa	Hawkeye	J F Pritchard	4-49	635	835	1	100	BW			4.8	21.8
Central Louisiana Electric Co.	St Landry, La.	Coughlin	Sargent & Lundy	6-48	625	825	2	90	BW	2.1	18.4	4.3	21.8
Glendale Public Service Dept.	Glendale, Calif.	Glendale	Carl Heinze	10-47	625	825	1	200	CE	2.5	15.0	7.8	21.8
Public Service Co of New Mexico	Albuquerque, N. M.	Albuquerque	Stearns, Roger	11-48	600	825	1	125	BW	2.2	11.7	5.0	21.8
City of Lubbock	Lubbock, Texas	Lubbock	Truman Green	8-47	400	750	2	35	BW	0.8	4.9	0.5	21.8
Missouri Power & Light Co.	Mexico, Mo.	Mexico	Black & Veatch	7-49	600	825	1	100	UI		11.0	3.9	21.8
West Texas Utilities Co.	Abilene, Texas	Abilene	Sargent & Lundy	1949	600	825	1	90	CE		12.0		21.8
Menasha Elec & Water Util.	Menasha, Wis.		Laramore & Douglass	7-48	600	825	1	100	BW	2.1	8.3	4.3	21.8
				2-49	600	750	2	60	Wi		8.2	2.9	21.8
599 PSI AND BELOW													
El Paso Electric Co	El Paso, Texas	Rio Grande	Stone & Webster	5-49	450	750	1	185	BW	4.2	12.0	8.5	21.8
Provo City	Provo, Utah	Provo City	Burns & McDonnell	12-48	450	750	1	125	RS	2.0	11.2	3.3	21.8
City of Crawfordsville	Crawfordsville, Ind.	Crawfordsville	Comm Testing & Engrg Co	12-48	450	750	1	90	BW		9.6		21.8
Montana-Dakota Utilities Co.	Acme, Wyo	Acme		2-48	450	750	1	45	BW	1.5	5.6	5.4	21.8
Public Utilities Commission	New Ulm, Minn.		J T Rynda, Jr	5-48	450	750	1	80		2.5	10.7	3.6	21.8
Village of Winnetka	Winnetka, Ill.	Winnetka	Sargent & Lundy	12-48	450	750	1	80		2.5	10.6	3.0	21.8
Florida Power & Light Co	Lake Monroe, Fla.	Sanford	Ebasco Services	10-48	435	750	1	60	BW	3.3	14.0	2.3	21.8
Dept of Utilities	Fremont, Nebr.		Black & Veatch	12-47	425	750	1	125	CE	2.5	12.5	5.8	21.8
Southwestern Public Service Co.	Denver City, Texas	Denver City	Lutz & May	1949	460	825	1	75					21.8
City of Rocky Mount	Rocky Mount, N. C.		W C Olsen	3-48	450	750	2	150	CE	2.1	12.9	6.5	21.8
Board of Public Works	Poplar Bluff, Mo.		Rogers Schmidt	1948	450	750	1	150	BW		17.0		21.8
Southwestern Electric Service Co	Jacksonville, Texas	Jacksonville	D C Pfeiffer	4-48	450	750	1	40	Vo		5.7	1.8	21.8
Water & Electric Dept	McPherson, Kan.	McPherson		7-48	450	750	1	60	BW		6.2	5.0	21.8
City of Fairbury	Fairbury, Nebr.		Black & Veatch	6-48	450	750	1	100	RS	1.5	10.6	5.2	21.8
Greenwood Elec Lt & Water	Greenwood, Miss.			12-48	450	750	1	60	EM	1.5	7.6		21.8
Town of Wilson	Wilson, N. C.		W C Olsen	9-48	450	750	1	110	BW		11.3		21.8
City of Thomasville	Thomasville, Ga.	Thomasville		4-48	450	725	1	100	BW	1.4	9.8		21.8
City of Hagerstown	Hagerstown, Md.		A C Wood & Assoc.	6-47	450	725	1	50	BW		6.4	2.4	21.8
City of Hastings	Hastings, Nebr.		Black & Veatch	7-49	450	715	2	70	EC		6.0	2.8	21.8
Greenwood County Elec Pwr Comm.	Chappells, S. C.	Buzzards Roost	G Hill	1948	425	825	1	70	BW	2.7	6.6	5.0	21.8
Manitowoc Public Utilities	Manitowoc, Wis.		Laramore & Douglass	8-48	425	725	1	130	BW		10.4		21.8
Water & Light Dept	Virginia, Minn.		H A Kuhn	4-48	425	700	1	120	Wi	14.2	17.0	5.6	21.8
Borough of Vineland	Vineland, N. J.		Helmick, Edeskuty, Lutz	11-48	425	700	2	60	EM	1.1	8.5	2.7	21.8
Public Service Dept.	Moorehead, Minn.		Burns & McDonnell	1948	420	750	1	105	BW	3.0	9.3	4.2	21.8
City of Kansas City	Kansas City, Kan.	Quindaro	Burns & McDonnell	8-47	420	750	1	55	BW		6.7	2.8	21.8
Municipal Light & Water	Clay Center, Kan.			4-48	410	750	1	200	RS		19.8	16.2	21.8
City of Willmar	Willmar, Minn.	Willmar	A C Kirkwood	12-48	400	750	1	40					21.8
Municipal Utilities	Steep Eye, Minn.		Pfeiffer & Shultz	11-48	400	750	1	55	BW				21.8
Mt. Carmel Public Utility	Mt. Carmel, Ill.	Mt. Carmel	Pfeiffer & Shultz	3-48	400	750	1	40	BW	2.5	6.6	2.4	21.8
City of Gainesville	Gainesville, Fla.		Robert & Co	10-47	400	750	1	60	Vo		1.1		21.8
City of Carlyle	Carlyle, Ill.			10-47	400	750	1	65	BW		7.3	3.5	21.8
Austin, Minn.	Austin, Minn.		Edeskuty	1949	400	750	1	37	EC		7.1	1.9	21.8
Atlantic, Iowa	Atlantic, Iowa		Stanley Eng Co.	3-48	400	750	1	55	MI	1.0	5.9		21.8
City of Public Works	Alexandria, Minn.		Pfeiffer & Shultz	6-49	400	750	1	50	BW				21.8
City Light & Water Utilities	Kalamazoo, Mich		Hubbard Eng Co	5-48	400	750	1	50	BW				21.8
Missouri Public Service Corp	Clinton, Mo.	Clinton	Burns & McDonnell	12-49	400	750	132	40	Wi		4.5	2.0	21.8
Missouri Public Service Corp	Sequia, Mo.	Sequia	Burns & McDonnell	5-48	400	750	1	110	BW		12.4	4.8	21.8
Otter Tail Power Co	Devils Lake, N. D.	Devils Lake		5-49	400	750	1	100					21.8
The Western Colorado Power Co	Durango, Colo.	Durango		11-47	400	750	1	75	RS		10.0	3.4	21.8
City of Frankfort	Frankfort, Ind.		Emery, Marker & Emery	10-48	400	750	1	57	UI		5.3	4.3	21.8
City Water & Light	Jonesboro, Ark.		N B Thayer	4-49	400	700	2	55	BW				21.8
Siox City Gas & Elec Co	Siox City, Iowa	Big Sioux	J F Pritchard	10-48	360	750							21.8
Consolidated Edison Co of N Y	Long Island City, N. Y.	Ravenswood	J G White Eng Corp	1-47	325	Sat	3	275	BW	0	35.7	17.1	21.8
Consolidated Edison Co of N Y	Manhattan, N. Y.	50th Street	Baker & Spencer	2-48	325	Sat	1	275	BW	0	3.1	17.1	21.8
Southwestern Gas & Elec Co	Karnack, Texas	Karnack	Sargent & Lundy	6-48	200	385	4	100	CE				21.8
Pacific Power & Light Co	Portland, Ore	Portland	Ebasco Services	1-48	185	525	1	150	BW	0.6	13.5	6.4	21.8
City of Escanaba	Escanaba, Mich	Steam Heating	Laramore & Douglass	12-47	175	Sat	1	55	Wi	0.5	9.0	1.9	21.8
A. J. Stanger Lighting Co	Belmont, Mass	Belmont		12-47	175	Sat	1	50	BW	0	7.1	1.9	21.8

A — Air cooled	CA — Coal, anthracite	GE — General Electric Co	Pd — Phosphorized admixt
AlBr — Aluminum-brass	CB — Coke breeze	GT — Gas tar	Pl — Plate
AlM — Aluminum-magnesium	CE — Consulting Engineering Co	H — Hydrogen cooled	R — Regulator
AlB — Aluminum-bronze	CEN — Cementation	Hy — Hydraulic coupling	RB — Red brass
AlBr — Aluminum-bronze	Ch — Choke	L — Lignite	Re — Regenerative
Al — Aluminum	DL — DeLaval Steam Turbine Co	M — Motor drive	RS — Riley Stoker Corp
Al — Aluminum	D — Damper	MI — Magnetic coupling	SC — Speed control
Al — Aluminum	DB — Dry bottom	MI — Murray Iron Works Co	SH — Smith, Hinchman and Gould
Al — Aluminum	EC — Erie City Iron Works	M — Two motors per fan	SS — Spreader stoker
Al — Aluminum	EL — Erie City Iron Works	MT — Motor and turbine drive	ST — Lag tap
Al — Aluminum	EL — Erie City Iron Works	M — Motor metal	S — Superior
Al — Aluminum	EL — Erie City Iron Works	O — Oil	T — Turbine drive
Al — Aluminum	EL — Erie City Iron Works	P — Phosphorized steel lining	TG — Travelling-grate stoker

d Municipal Power-Plant Installations cont'd

Air-Heater Surface, sq ft	F-D FANS		I-D FANS		Firing	FUEL		FEED PUMPS		TURBINES				CONDENSERS			Total Boiler Capacity Fuel New Units, 1000 lb	Total Generator Capacity Fuel New Units, 1000 kw			
	Drive	Air-Volume Control	Drive	Gas-Volume Control		Type	Heating Value, 1000 Btu per lb	Ash-Fusion Temperature, F	Drive	Flow Control	Capacity, 1000 kw	Speed, rpm	Manufacturer	Back pressure, psia	No. of Bleed Points	Generator Cooling	Surface, 1000 sq ft	No. Water Passes	Tube Material		
0	M	V	M	V	TG(561)	CB, GT	12,274 ³¹	2576	3T	R	7.5	3600	WE	200	0	A	604	7.5	604	7.5	
91.8	Re	T	M	S	O, G	1000 ¹³	11.4	2900	1M, 1T, 1MT	S, R	30	3600	GE	0.75	4	H	23.0	2	Ada	3550	108.5
120.0	Tu	M	M	Ma	TG(672)	CC, A	11.5	1950	3M	S	15	3600	WE	0.75	3	H	16.0	2	Ada	800	60
48.8	Re	M	M	Hy	P	CC, G	13.3	2100	3M	S, R	15	3600	WE	0.75	5	A	14.0	2	Ad	550	42
27.0	Re	M	M	Hy	P	CC, G	13.3	2100	3M	S, R	15	3600	WE	0.75	5	A	14.0	2	Ad	500	42
27.0	Re	M	M	Hy	P	CC, G	1013 ¹³	2230	2M	S	25	3600	WE	0.67	3	H	30	2	AsCu	660	57
16.0	Tu	M	M	Hy	O, G	CC, G	12.0	2230	1M, 1T	S	7.5	3600	WE	1.25	3	A	8.5	2	Ad	90	7.5
5.4	Tu	M	M	Hy	SS(244)	CC, G	7.0	2200	1M, 1T	S	7.5	3600	AC	1.0	3	A	7.5	2	Ad	225	15
4.5	Tu	M	M	Hy	TG(180)	CC, G	1000 ¹³	1000 ¹³	1M, 1T	S	11.5	3600	WE	1.0	4	A	10.0	2	Ad	325	26
53.0	Tu	M	M	Hy	O, G	CC, G	1000 ¹³	1000 ¹³	1M, 1T	S	30	3600	WE	1.25	4	H	32.5	2	Ad	900	80
13.6	Re	M	M	D, V	O, G	CC, G	1000 ¹³	1000 ¹³	2M	S	25	3600	GE	1.0	4	H	22.5	2	Ad	530	40
13.6	Re	M	M	D, V	O, G	CC, G	1000 ¹³	1000 ¹³	2M	S	37.5	3600	GE	1.0	4	H	37.5	2	Ad	955	72.5
20.3	Re	M	M	D	O, G	CC, G	1050 ¹³	1050 ¹³	2M, 1T	R	12.5 ¹⁴	3600	AC	1.0	4	H	20.0	2	Ad	280	25.0
20.3	Re	M	M	D	O, G	CC, G	1050 ¹³	1050 ¹³	2M, 1T	R	12.5 ¹⁴	3600	El	1.75	4	A	11.0	2	AsCu	300	25
20.3	Re	M	M	D	O, G	CC, G	1050 ¹³	1050 ¹³	2M, 1T	R	12.5 ¹⁴	3600	El	1.75	4	A	11.0	2	AsCu	600	50
115.0	Re	M	M	Hy	G	CC, G	1050 ¹³	1900	1M, 1T	R	12.5	3600	El	1.75	4	A	11.0	2	AsCu	376.4	23.4
9.0	Tu	M	M	Hy	SS(246)	CC, G	10.4	1990	1M, 1T	R	35	3600	WE	0.75	6	H	32.5	1	AsCu	1835	146.5
9.0	Tu	M	M	Hy	SS(246)	CC, G	10.4	1990	1M, 1T	R	7.5	3600	GE	1.0	3	A	9.5	2	Ad	100	7.5
10.1	Tu	M	M	Hy	G	CC, G	1100 ¹³	1100 ¹³	2M, 1T	R	7.5 ¹⁴	3600	GE	1.0	3	A	9.5	2	Ad	100	7.5
10.1	Re	M	M	Hy	G	CC, G	18.5	18.5	1M	R	20	3600	GE	1.0	4	H	16.0	2	Cu	180	15
16.2	Tu	M	M	Hy	O, G	CC, G	1000 ¹³	1000 ¹³	2M	R	11.5	3600	GE	0.75	2	A	12.0	2	Ad	600	40
2.5	Tu	M	M	Hy	O, G	CC, G	1000 ¹³	1000 ¹³	1	R	6	3600	GE	0.75	2	A	7.9	2	Ad	465	38
11.0	Pl	M	M	Hy	O, G	CC, G	1000 ¹³	1000 ¹³	2M	R	7.5	3600	DL	1.0	3	A	11.0	2	Ad	340	26
5.4	Tu	M	M	Hy	SS(244)	CC, G	9.5	1050 ¹³	1M, 1T	R	7.5	3600	AC	0.75	3	A	11.0	2	Ad	90	7.5
10.3	Tu	M	M	Hy	O, G	CC, G	1050 ¹³	1050 ¹³	1M, 1T	R	7.5	3600	El	1.0	3	A	8.0	2	Ad	260	12.5
3.6	Tu	M	M	Hy	SS(132)	CC, G	11.5	11.5	1M, 1T	R	4.4 ¹⁴	3600	Wo	1.0	3	A	4.0	2	Ad	120	10
34.0	Re	M	M	Hy	G, O	CC, G	1100 ¹³	12.0	2M, 1T	R	20.0	3600	GE	0.75	4	H	19.0	1	Ad	740	69
11.0	Tu	M	M	Hy	SS(272)	CC, G	11.3	2000	2M	R	9.4	3600	El	0.75	3	A	9.0	2	CuNi	205	14
11.0	Tu	M	M	Hy	TG(224)	CC, G	11.3	2100	2M, 1T	S, R	7.5	3600	WE	1.0	3	A	10.0	2	Ad	205	18
5.2	Tu	M	M	Hy	SS(160)	CC, G	8.9	2100	1M, 1T	S, R	7.5	3600	WE	0.6	2	A	3.5	2	Ad	121	7.0
5.2	Tu	M	M	Hy	SS(195)	CC, G	11.5	2400	1M, 1T	R	5	3600	WE	0.5	3	A	6.0	2	AsCu	140	10.5
11.0	Tu	M	M	Hy	SS(150)	CC, G	12.0	2200	1M, 1T	R	15	3600	WE	1.12	3	H	15.0	1	Ad	325	27
5.0	Tu	M	M	Hy	TG(207)	CC, G	18.3	2200	3M, 1T	S	10	3600	WE	1.0	4	A	10.0	3	Ad	295	21
19.2	Tu	M	M	Hy	O	CC, G	12.5	2100	1M, 1T	R	20	3600	GE	1.0	3	H	20.0	2	Ad	600	37.5
10.6	Tu	M	M	Hy	G, O	CC, G	13.5	2158	1M, 1T	R	15	3600	AC	1.0	1	A	17.0	1	Mu	330	30
9.7	Tu	M	M	Hy	SS(122)	CC, G	11.7	1000 ¹³	1M, 1T	R	3	3600	WE	1.0	2	A	4.5	2	Ad	100	6
13.4	Tu	M	M	Hy	G, O	CC, G	1000 ¹³	1020 ¹³	1M, 1T	R	7.5	3600	El	1.0	3	A	11.0	2	Pad	170	11
13.4	Tu	M	M	Hy	P, G, O	CC, G	1000 ¹³	1000 ¹³	1M, 1T	R	4	3600	El	1.0	2	A	6.0	2	Mu	145	8.5
13.4	Re	M	M	Hy	P, G, O	CC, G	11.0	2400	2M, 1T	R	12.5	3600	WE	1.0	3	A	8.0	2	Cu	210	15.5
13.4	Tu	M	M	Hy	SS(138)	CC, G	12.5	2350	1M, 1T	R	5	3600	WE	1.25	3	A	5.5	2	Ad	440	25
10.0	Tu	M	M	Hy	G, O	CC, G	13.4	2200	1M, 1T	R	5	3600	Wo	0.5	2	A	6.2	2	Ad	125	10.5
10.0	Tu	M	M	Hy	UF(310)	CC, G	14.6	2200	2M	R	10	3600	GE	1.0	3	A	9.0	2	RB	310	18
3.6	Tu	M	M	Hy	SS(140)	CC, G	12.8	2400	1M, 1T	R	5	3600	AC	0.5	1	A	13.0	2	Ad	137.5	12.5
7.6	Tu	M	M	Hy	UF(236)	CC, G	14.0	2700	1M, 1T	S	5	3600	El	1.5	1	A	7.6	2	Ad	210	16
7.6	Tu	M	M	Hy	SS(132)	CC, G	7.0	2220	1M, 1T	R	5	3600	El	1.0	1	A	7.6	2	Ad	370	10
7.6	Tu	M	M	Hy	P	CC, G	11.4	1950	2M, 1T	S	3	3600	GE	1.0	2	A	3.8	2	Ad	249	17
2.5	Tu	M	M	Hy	G, O	CC, G	1000 ¹³	1000 ¹³	1M, 1T	R	3	3600	GE	1.0	2	A	3.8	2	Ad	80	7
2.5	Tu	M	M	Hy	SS(107)	CC, G	11.8	1870	1M, 1T	S, R	4	3600	GE	0.5	2	A	6.0	2	Ad	800	99
2.5	Tu	M	M	Hy	TG(127)	CC, G	12.1	2200	1M, 1T	R	4	3600	El	1.0	1	A	3.0	2	Ad	100	6
2.5	Tu	M	M	Hy	G, O	CC, G	11.0	2200	1M, 1T	R	2	3600	El	1.0	4	A	6.8	2	Ad	110	8
2.5	Tu	M	M	Hy	G, O	CC, G	18.5	1000 ¹³	1M, 1T	R	5	3600	WE	1.0	3	A	8.0	2	Ad	70	3.7
2.5	Tu	M	M	Hy	TG(127)	CC, G	10.5	1000 ¹³	1M, 1T	R	5	3600	WE	1.0	3	A	8.0	2	Ad	130	6
2.5	Tu	M	M	Hy	G, O	CC, G	1000 ¹³	1000 ¹³	1T	S	7.5	3600	WE	0.75	2	A	4.5	2	Ad	145	9
2.5	Tu	M	M	Hy	P	CC, G	11.8	2200	1M, 1T	R	3.5	3600	GE	0.5	2	A	9.5	2	Mu	57	4.5
2.5	Tu	M	M	Hy	SS(104)	CC, G	11.0	2000	1M, 1T	R	3.5	3600	AC	0.75	2	A	5.0	1	Ad	265	16
2.5	Tu	M	M	Hy	SS(252)	CC, G	11.0	2000	1M, 1T	S, R	7.5	3600	GE	1.0	3	A	3.8	1	Ad	105	6.25
2.5	Tu	M	M	Hy	G, O	CC, G	1000 ¹³	1000 ¹³	1M, 1T	S, R	7.5	3600	GE	1.0	3	A	12.0	2	AsCu	117	5.25
2.5	Tu	M	M	Hy	G, O	CC, G	1000 ¹³	1000 ¹³	1M, 1T	S, R	7.5	3600	GE	1.0	3	A	10.0	2	AsCu	280	155
2.5	Tu	M	M	Hy	TG(248)	CC, G	6.5	2300	2M, 1T	R	5	3600	GE	0.75	3	A	7.0	2	AnAd	110	11
16.3	Re	M	M	Hy	SS(252)	CC, G	13.0	2700	1M, 1T	R	3.5	3600	GE	0.75	2	A	4.0	2	Ad	75	5
16.3	Re	M	M	Hy	G, O	CC, G	11.1	2000	1M, 1T	R	10	3600	El	1.0	4	A	10.0	2	Ad	117	5.5
16.3	Re	M	M	Hy	G, O	CC, G	18.4	18.4	3T	R	7.5	3600	WE	1.25	3	A	13.0	2	Pad	335	19.5
16.3	Re	M	M	Hy	G, O	CC, G	1000 ¹³	1000 ¹³	3T	R	10	3600	GE	0.75	3	A	13.0	2	Pad	170	15
16.3	Re	M	M	Hy	G, O	CC, G	18.0	18.0	3T	R	10	1800	WE	1.0	0	A	20.0	2	Ad	580	40
16.3	Re	M	M	Hy	G, O	CC, G	14.0	2200	2F	R	6.25	1800	GE	1.0	0	A	9.35	2	Ad	825	0
16.3	Re	M	M	Hy	G, O	CC, G	18.0	18.0	3T	R	10	1800	WE	1.0	0	A	20.0	2	Ad	59	0
16.3	Re	M	M	Hy	G, O	CC, G	14.0	2200	2F	R	6.25	1800	GE	1.0	0	A	9.35	2	Ad	400	10
16.3	Re	M	M	Hy	G, O	CC, G	14.0	2200	2F	R	6.25	1800	GE	1.0	0	A	9.35	2	Ad	400	16
16.3	Re	M	M	Hy	G, O	CC, G	14.0	2200	2F	R	6.25	1800	GE	1.0	0	A	9.35	2	Ad	275	0
16.3	Re	M	M	Hy	G, O	CC, G	14.0	2200	2F	R	6.25	1800	GE	1.0	0	A	9.35	2	Ad	70	0
16.3	Re	M																			