

1949 MODERN PLANT SURV

PLAINTIFF'S EXHIBIT

GE-104



Tables list engineering features of over 450 new utility and industrial steam plants, more than 175 hydroelectric units. Summaries spot design trends of recent recordbreaking years

THE GREATEST PERIOD of construction activity the power field has ever experienced continues unabated. The year 1948 saw almost 6 million kw added to our national power plant; 1949 and 1950 look to be about 10% higher. Figures now available show about 4.7 kw on order for 1951.

Such a period of activity presents an unparalleled opportunity to see where we are headed in power-plant practice. In this vast program virtually all types of construction are involved: new plants, extensions, and "tops"; indoor, semi-outdoor and outdoor designs; large plants and small; a wide variety of heat-balance arrangements, plant layouts and equipment selections.

From such a large body of data, relatively reliable conclusions can be drawn. We can see the wide adoption of practices that have proved successful, the gradual abandoning of those not so well received.

The only drawback lies in the fact that the very volume of activity means that most of us are too busy to take the "long look" needed

to spot trends and arrive at answers to guide our planning.

It is to meet this need that POWER makes its survey of new-plant construction. Here we do two things to serve the interests of power engineers: (1) We gather, and compile in convenient tabular form, technical details on units currently on order, under construction, or beginning operation. (2) We analyze the survey returns, and other data available to us, to show at a glance what design and equipment-selection patterns are emerging.

To broaden the basis for these trend-spotting summaries, this year we have included data on the past two years, each a record-breaker in its own right. This means that the comparisons and conclusions grow out of the largest volume of plant data ever available for analysis.

Here are facts and figures you can sink your teeth into, facts and figures on which to base the decisions you will have to make when you build a new plant, extend or modernize an older one.

1949 Listing of Typical Central-Station

For notes on uses and limitations
of this tabulation • See page 96

Continued on B G A Skrotzki, Associate Editor

For notes on uses and limitations of this tabulation • See page 96				BOILERS											
Company	Location	Plant Name	Consulting Engineers	First Operation, New Units	Nominal Pressure, psi	Nominal Steam Temperature, F	Number	Capacity, each 1000 lb. per hr.	Manufacturer	Boiler, Waterwall Surface, 1000 sq ft	Superheater Surface, 1000 sq ft	Furnace Volume, 1000 cu ft	Heat Release, 1000 Btu per cu ft per hr	Water Surface per 1000 cu ft	
1500 PSIG AND ABOVE															
Indiana & Michigan Elec Co.	Lawrenceburg, Ind.	Tanners Creek	Amer Gas & Elec Serv	12-30 2000	1050 ¹	1	1	930	BW	29.6	60.5	79.8	164		
Appalachian Electric Power Co	Granite Sta., W. Va.	Pauls Spring	Amer Gas & Elec Serv	7-31 2000	1050 ¹	1	1	930	BW	29.6	60.5	79.8	164		
Commonwealth Edison Co	Stickney, Ill.	Ridgeland	Sargent & Lundy	9-30 1800	1050	2	2	770	BW	19.3	44.9	35.4	24.1		
Central Hudson Gas & El Corp.	Dincklafter Pt., N. Y.		Burns & Roe, Inc.	1-32 1650	1000 ¹	1	1	500							
Consolidated Edison Co of N. Y.	Brooklyn, N. Y.	Hudson Ave.		9-31 1500	1050	1	1	1300	BW	21.6	50.2	76.7	20.6		
1000 TO 1199 PSIG															
Pennsylvania Power Co	West Pittsburgh, Pa.	New Castle	Commonw & Southern	10-31 1450	1000 ¹	1	1	690	BW	14.8	12.0	32.3	18.0		
Boston Edison Co	Weymouth, Mass.	Edgar	Jackson & Moreland	8-49 1450	1000 ¹	1	1	585	CE	14.8	33.0	42.0	17.3		
Rochester Gas & Electric Corp	Rochester, N. Y.	Russell	Gilbert Associates, Inc.	10-31 1450	1000 ¹	1	1	430	CE	20.7			19.4		
Chesapeake & Potomac Elec Power Co, Balt	Turner, Md.	Riverside		10-31 1450	1050	1	1	625	BW	11.7	24.1	43.0	18.1		
Dayton Power & Light Co	near Miamisburg, Ohio	O H Hutchings	Ebasco Services, Inc.	1950	1450	1000 ¹	1	430	CE	20.7		30.4	19.5		
Central New York Power Corp	Oswego, N. Y.	Oswego		1951	1450	1000 ¹	1	656	BW	12.4	34.0	40.3	22.2		
N. Y. State Elec & Gas Corp	Johnson City, N. Y.	Goulden	Gilbert Associates	1951	1450	1000 ¹	1	560	CE	29.1	34.7	44.6	17.0		
Potomac Electric Power Co	Washington, D. C.	Benning		1951	1450	1000	1	975	CE	30.7		55.4	14.4		
Wisconsin Electric Power Co	Port Washington, Wis	Port Washington		1951	1450	950 ¹⁸	1	640	CE		16.0	61.0	12.8		
	Bakersfield, Calif	Kern	Stone & Webster		1350	925	2	450	BW	9.2	15.2	8.4	30.3 ²		
Pacific Gas & Electric Co	Moss Landing, Calif	Moss Landing	Stone & Webster		1200	950	6	475	BW	9.9	20.4	32.0	19.3 ²		
	Antioch, Calif	Contra Costa	Bechtel Corp	1951	1300	950	6	475	CE	25.8	26.2	34.7	16.9		
Florida Power Corp	Booth Point, Fla	Higgins	The Kuflian Corp	2-31 1315	950	1	1	450	BW	5.8	16.1	26.0			
The Detroit Edison Co	St. Petersburg, Fla	Bayboro	The Kuflian Corp	12-49	860	910	1	340	BW						
Cambridge Electric Light Co	Detroit, Mich	Connors Creek		4-31 1300	950	4	4	600	BW	12.0	26.7	40.0	18.3		
Kansas City Power & Light Co	Cambridge, Mass	Kendall St	Gilbert Associates, Inc.	12-30 1300	900										
	Kansas City, Mo	Northeast		11-49 1275	825 ¹⁷	1	1	375	FW	16.0	13.8	26.4	18.1		
		Hawthorn	Ebasco Services, Inc.	1950	1250	950	2	625	CE	28.4	21.5	45.5	16.9		
New Jersey Power & Light Co	Holland, N. J.	Gilbert	Gilbert Associates, Inc.	10-49 1250	950	1	1	650	CE	27.8	25.5	49.5	16.0		
Chicago River Co	near Antion, Ill.	Wood River	Sargent & Lundy	12-49 1250	1000	2	2	450	CE	22.1	28.4	30.6	17.8		
				12-50 1250	1000	1	1	450	CE	22.1	28.4	30.6	17.8		
Union Electric Co of Missouri	St. Louis County, Mo	Meramec		1932	1250	950 ¹⁸	1								
Duke Power Co	Palmer, S. C.	Lee		12-50 ¹⁸	1250	950 ¹⁸	2	750	CE	38.5	32.5 ¹⁸	43.0	15.6		
Pennsylvania Power & Light Co	near Sunbury, Pa.	Sunbury	Ebasco Services, Inc.	5-31 1250	950	1	1	800	FW	26.1	50.4	82.4	12.1		
Carolina Power & Light Co	Lumberton, N. C.	Lumberton	Ebasco Services, Inc.	9-49 ¹⁹	1250	950	2	425	BW	9.2	15.7	30.0	19.0		
Louisiana Power & Light Co	near Westwego, La.	Ninemile Point	Ebasco Services, Inc.	4-31 1250	950	1	1	650	CE	22.1	16.8	34.3	27.1		
Montana Electric Co	Somerset, Mass	Somerset	Stone & Webster	9-31 1250	950	1	1	625	CE	28.2	22.3	45.2	16.0		
Virginia Electric & Power Co	Bremo Bluff, Va.	Bremo	Stone & Webster	1950	1250	950	1	625	BW	12.0	26.8	40.0	19.4		
Delaware Power & Light Co	Wilmington, Del.	Edge Moor	United Eng & Const	1951	1250	950	2	600	CE	37.9	21.7		16.8		
Georgia Power Co	Yates, Ga.	Yates	Commonw & Southern	1950	1250	950	2	975	CE	40.9	36.2	74.0	15.4		
Alabama Power Co	Gorgas, Ala.	Gorgas	Commonw & Southern	1951	1250	950	1	975	BW	17.0	22.7	58.9	19.4		
Utah Power & Light Co	near Lake City, Utah	Salt Lake City	Bechtel Corp	1951	1250	950	1	620	RS	38.5	35.5	49.0	15.1		
Philadelphia Electric Co	Philadelphia, Pa.	Richmond		1950	1250	950	2	800	CE	36.5	22.4	60.0	15.5		
Dallas Power & Light Co	Dallas, Texas	Parkdale	Ebasco Services, Inc.	5-52 1250	950	1	1	625							
Omaha Public Power District	Omaha, Neb.	Jones Street		7-49 1250	950	1	1	380	BW	11.2	14.0	24.0	17.3		
Northern Indiana Public Serv Co	Michigan City, Ind.	Michigan City	Sargent & Lundy	10-30 ²⁰	1250	950	3	375	RW	9.8	17.0	16.7	28.0		
Cincinnati Gas & Electric Co	Cincinnati, Ohio	Miami Fort	Sargent & Lundy	11-49 1250	950	2	2	400	BW						
Mississippi Power & Light Co	Jackson, Miss	Rex Brown	Ebasco Services, Inc.	12-49 850	900	1	1	450	CE	23.7	7.3	21.0	29.6		
	Natchez, Miss	Natchez	Ebasco Services, Inc.	12-49 1250	950	1	1	650	BW	16.3		36.3	25.0		
				2-51 1250	950	1	1	625	BW	16.3		36.3	24.1		
800 PSIG TO 999 PSIG															
Illinois Power Co	near Havana, Ill.	Havana	Sargent & Lundy	12-48 850	900	1	1	285	CE	19.2	11.6	20.2	18.0		
				4-50 850	900	2	2	285	CE	19.2	11.6	20.2	18.0		
				9-50 850	900	2	2	285	CE	19.2	11.6	20.2	18.0		
El Paso Electric Co	El Paso, Texas	Rio Grande	Stone & Webster	3-51 850	900	1	1	335	BW	23.5		14.4	32.3		
The Cleveland Electric Light Co	Cleveland, Ohio	Lake Shore A		11-50 850	950	2	2	950	BW	17.5	19.9	34.7	23.5		
Wisconsin Public Service Corp	Avon, Wis.	Avon		8-49 871	950	2	2	850	CE	27.3	27.6	64.0	16.2		
	Green Bay, Wis	Pulliam	Pioneer Serv & Engng	7-49 850	900	1	1	460	BW	32.2	18.2	26.6	23.5		
				1951	871	950	1	585	BW	14.6	29.4	29.5	19.0		
San Antonio Electric Light Co	San Antonio, Tex	San Antonio	Ebasco Services, Inc.	2-50 851	900	1	1	235	CE	23.0		4.8	25.1		
Fort Worth Electric	Pensacola, Fla	Pensacola	Commonw & Southern	8-49 851	900	1	1	230	RS	14.6	6.9	13.4	22.3		
Chicago Electric	Chicago, Ill.	Mitchell	Commonw & Southern	11-48 850	900	1	1	230	BW	21.7	6.6	16.3	17.3		
				1-49 850	900	1	1	230	BW	21.7	6.6	16.3	17.3		
Atkinson	Atkinson, Ark	Atkinson	Commonw & Southern	11-48 850	900	1	1	900	CE	28.4	13.7	25.0	23.5		
Arkansas Electric	Arkwright	Arkwright	Commonw & Southern	11-48 850	900	1	1	900	BW	1.8	6.1	22.2	36.0		
Fort Worth Electric	Fort Worth, Texas	Handley	Ebasco Services, Inc.	10-49 850	900	1	1	825	CE	17.2	7.6	6.1	35.7		
Guadalupe Electric	Guadalupe City, Texas	Morgan Creek	Ebasco Services, Inc.	11-50 850	900	2	2	220	FW	21.0	7.7	8.9	31.1		
Dallas Power & Light Co	Dallas, Texas	Mountain Creek	Ebasco Services, Inc.	11-50 850	900	1	1	450	BW	26.9	8.5	19.9	29.0		
					850	900	1	250	BW	17.8	7.2	11.7	26.0		
					850	900	1	975	CE	31.0	22.1	7.3			
Houston Electric & Power Co	Houston, Texas	West Junction	Ebasco Services, Inc.	1-50 850	900	1	1	350	RS	18.8	17.0	14.6	33.1		
				9-50 850	900	1	1	825	RS	18.8	17.0	14.6	31.0		
				11-48 850	900	1	1	825	RS	18.8	17.0	14.6	31.0		
				11-48 850	900	1	1	825	BW	21.9	7.1	10.1	32.3		
				11-49 850	900	1	1	750	CE	12.0	7.1	7.1	25.1		
				1950	850	900	1	750	CE	17.5	7.1	7.1	21.8		
Texas Power & Light Co	Elmendorf, Alaska	Elmendorf	Ebasco Services, Inc.	12-49 850	900	2	2	550	BW	21.8	11.1	22.2	18.8		
Alaska Electric	N. Y.	N. Y.	Sargent & Lundy	7-49 850	900	1	1	25	BW	28.4		24.4	31.2		
Alaska Electric	Alaska	Alaska	Sargent & Lundy	11-49 850	900	1	1	25	BW	28.4		24.4	31.2		
Alaska Electric	Alaska	Alaska	Sargent & Lundy	12-50 850	900	1	1	25	BW	28.4		24.4	31.2		
Alaska Electric	Alaska	Alaska	Sargent & Lundy	12-50 850	900	1	1	25	BW	28.4		24.4	31.2		

1 - Plant owned and operated by the utility.
2 - Plant owned and operated by a subsidiary of the utility.
3 - Plant owned and operated by a third party.
4 - Plant owned and operated by a joint venture.
5 - Plant owned and operated by a partnership.
6 - Plant owned and operated by a corporation.
7 - Plant owned and operated by a trust.
8 - Plant owned and operated by a partnership.
9 - Plant owned and operated by a corporation.
10 - Plant owned and operated by a trust.
11 - Plant owned and operated by a partnership.
12 - Plant owned and operated by a corporation.
13 - Plant owned and operated by a trust.
14 - Plant owned and operated by a partnership.
15 - Plant owned and operated by a corporation.
16 - Plant owned and operated by a trust.
17 - Plant owned and operated by a partnership.
18 - Plant owned and operated by a corporation.
19 - Plant owned and operated by a trust.
20 - Plant owned and operated by a partnership.

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Compiled by B. G. A. Searles, Accounts Editor

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Compiled by B. G. A. Sargent, Associate Editor				First Operation, New Units	Nominal Pressure, psi	Nominal Steam Temperature, F	Number	Capacity, each 1000 lb per hr	Manufacturer	Boiler, Waterwall Surface, 1000 sq ft	Superheater Surface, 1000 sq ft	Furnace Volume, 1000 cu ft	Heat release, 1000 Btu per cu ft per hr	Pressure Rating
Public Service Co of Indiana	Edwardsport, Ind.	Edwardsport	Sargent & Lundy	1-49	850	900	2	400	RS	34.4	14.1	29.0	17.6	DB
Savannah Electric & Power Co	Savannah, Ga.	Riverside	Stone & Webster	1-50	550	900	1	200	CE	7.1	7.4	9.3	23.2	DB
Tampa Electric Co	Tampa, Fla.	Hookers Point	Stone & Webster	7-48	850	900	2	200	BW	14.5	5.0	8.7	32.0	DB
Central Illinois Electric & Gas Co	Rockford, Ill.	Sabrooke	Stone & Webster	11-49	850	900	1	205	FW	22.3	4.4	10.5	26.2	DB
Western Massachusetts Electric Co	West Springfield, Mass.	West Springfield	Stone & Webster	9-49	550	900	1	400	CE	15.6	1.9	29.2	17.3	DB
Virginia Electric Power Co	Warrenton, Va.	Passum Point	Stone & Webster	1951	570	900	1	650	CE	43.0		45.5	16.9	DB
West Virginia Electric Co	Wheeling, W. Va.	Wheeling	Sanderson & Porter	7-50	850	900	2	210	RS	22.6		15.5	17.9	DB
The United Illuminating Co	New Haven, Conn.	English	Wentworth & Mapes	11-49	850	900	1	320	BW	15.2		22.7	16.9	DB
Indianapolis Power & Light Co	Martinsville, Ind.	White River	Gibbs & Hill	12-51	850	900	1	400	CE	25.5	13.8	23.2	22.5	ST
South Carolina Power Co	Charleston, S. C.	Harbor	Gilbert Associates	5-50	850	900	1	230	RS	19.6	7.4	13.4	21.6	DB
				9-51	850	900	1	710	RS	24.9	10.0		21.6	DB
Philadelphia Electric Co	W. Norriton Town, Pa.	Barbadoes		2-49	850	900	2	600	FW	30.5	29.8	47.1	15.4	DB
Duquesne Light Co	South Heights, Pa.	Frank R. Phillips		1949	850	900	1	600	FW	23.9	17.1	35.0	20.9	DB
				1950	850	900	2	600	FW	23.9	17.1	35.0	20.9	DB
West Texas Utilities Co	Trinity, Texas	Trinity Pipeline Plant "X"	Sargent & Lundy	3-51	850	900	1	250	BW	15.5	5.3	10.6	30.8	DB
	Vanarado, Texas	Plant "X"		2-52	850	900	1	500	CE	34.5		22.2	29.0	DB
Southwestern Power Corp.	Vanarado, Texas	Plant "X"		3-51	650	825	1	400	BW	32.2	9.8	17.8	29.7	DB
	Weslaco, Texas	Plant "X"		7-50	650	825	1	210	BW	15.8	3.6	9.0	29.7	DB
	Weslaco, Texas	Plant "X"		7-49	600	825	1	275	BW	18.3	5.3	11.2	32.0	DB
	Springfield, Ohio	Mat River	Commonwealth & Southern	1-49	850	900	1	250	RS	18.0	6.2	15.0	23.0	DB
Ohio Edison Co	Toronto, Ohio	Toronto	Commonwealth & Southern	9-49	800	875	1	600	BW	11.4	16.5	44.1	18.4	DB
	Ukron, Ohio	Gorge	Commonwealth & Southern	1-50	800	875	1	900	BW	11.4	10.5	44.1	18.4	DB
				12-48	800	875	1	450	BW	11.4	17.9	30.9	19.1	DB
Oklahoma Gas & Electric Co	W. of Okla. City, Okla.	Mustang	Pioneer Serv & Engrg.	3-50	850	900	1	475	BW	11.2	18.3	30.1	20.6	DB
				7-51	850	900	1	475	BW	11.2	18.3	30.1	20.6	DB
	Minneapolis, Minn.	Riverside	Pioneer Serv & Engrg.	7-49	850	900	1	370	BW	13.5	22.9	37.5	20.0	DB
Northern States Power Co	Sioux Falls, S. D.	J. L. Lawrence	Pioneer Serv & Engrg.	9-48	650	825	1	125	BW	15.5	5.3	7.9	22.0	DB
	Mankato, Minn.	G. H. Wilmarth	Pioneer Serv & Engrg.	10-48	650	825	1	125	BW	15.5	5.3	7.9	22.0	DB
	St. Cloud, Minn.	Whitney	Pioneer Serv & Engrg.	9-48	450	750	1	125	VO	10.8	2.4	5.5	33.0	DB
	La Crosse, Wis.	French Island	Pioneer Serv & Engrg.	4-48	450	750	1	125	EM	14.9	5.1	7.5	29.7	DB
	Grand Forks, N. D.	Grand Forks	Pioneer Serv & Engrg.	9-48	400	750	1	65	BM	9.3	2.9	4.2	33.0	DB
Madison Gas & Electric Co	Madison, Wis.	Blount	Mead & Hunt	11-48	825	825	1	200	BW	19.3			15.2	DB
600 PSIG TO 700 PSIG														
Pennsylvania Electric Co.	Indiana County, Pa.	Seward	Gilbert Associates	1950	650	825	2	300	BW	28.5		19.3	19.3	DB
Holyoke Water Power Co.	Holyoke, Mass.	No. 1	Jackson & Moreland	10-48	650	750	1	120	RS	14.3	0.9	9.9	17.5	DB
Central Louisiana Electric Co	St. Landry, La.	Conquin	Sargent & Lundy	1-50	600	900	2	120	CE				29.2	DB
Longview Gas & Elec Light Co	Fitchburg, Mass.	Sawyer Passway	Chas T Main, Inc.	12-49	600	825	1	150	CE	18.7		8.7	20.5	DB
Texas Electric Service Co.	Wichita Falls, Texas	Wichita Falls	Ebasco Services, Inc.	5-49	600	825	1	150	CE	12.0	3.2	6.1	33.1	DB
Dallas Power & Light Co.	Dallas, Texas	Mountain Creek	Ebasco Services, Inc.	1-50	600	825	2	150	CE				33.1	DB
Imperial Irrigation District	El Centro, Calif.	El Centro	Gibbs & Hill, Inc.	4-49	600	825	1	260	CE	17.0	4.0	9.3	32.8	DB
Minnesota Power Cooperative, Inc.	Grand Forks, N. D.	Grand Forks	Ellerbe & Co	11-49	600	825	2	72	RS	9.5	2.5	4.0	28.0	DB
Public Service Co of New Mexico	Albuquerque, N. M.	Prager	Stearns-Roger Mfg Co	12-48	615	825	1	125	BW	11.6	1.4	5.0	34.1	DB
The Tucson Gas, Elec & Pwr Co	Tucson, Arizona	No. 3	Sanderson & Porter	1949	615	825	1	150	BW	13.3	3.2	5.6		DB
					615	825	1	150	BW	13.3	3.3	5.6		DB
Grand River Dam Authority	Pryor, Oklahoma	Chouteau	W R Holway & Assoc	11-49	600	750								DB
New Hampshire Gas & Electric Co	Portsmouth, N. H.	Portsmouth	Gilbert Associates, Inc.	6-50	600	825	1	100	CE	12.1		6.0	23.7	DB
NDEP 600 PSIG														
Omaha Public Power District	Omaha, Neb.	South Omaha		6-48	450	750	1	200	CE	14.5		7.9		DB
Central Ohio Gas & Power Co	Wilmetton, Ohio	Wendover	Sargent & Lundy	12-47	425	825	1	120	RS	14.0	3.1	8.0	20.0	DB
				6-50	425	825	1	120	RS	14.0	3.1	8.0	20.0	DB
Iowa-Illinois Gas & Electric Co	Coralville, Iowa	Coralville	United Lt. & Rwy Serv	8-49	425	740	1	60	RS	8.9	0.7	3.2	26.8	DB
Public Service Co of New Mexico	Santa Fe, N. M.	Santa Fe	Stearns-Roger Mfg Co	11-49	415	750	2	50	CE	2.4	0.3	0.3		DB
Western Power & Light Co	Waycross, Ga.	Waycross	Gibbs & Hill	11-48	410	725	1	44.5	CE	2.4	0.3	0.3		DB
Albion Public Service Corp.	Scranton, Mo.	Scranton	Burns & McDonnell	11-49	400	750	1	90	BW	12.0		5.0	29.0	DB
Home Service Co of Colorado	Grand Junction, Colo.	Grand Junction		4-48	400	750	1	60	BW	9.8	1.5	6.2	13.6	ST
Washington Electric Co	Wellshorn, Pa.	Wellshorn	Stone & Webster	1-50	400	750	1	85	RS	10.3	0.8	4.6	25.0	DB
Montana-Delaware Electric Co	Bozeman, N. D.	Bozeman	Zook C. Hinds	7-47	400	650	2	36	BW	4.0		1.3	39.6	DB
	Bozeman, N. D.	Bozeman	Stearns-Roger Mfg Co	11-49	400	750	2	36	BW	4.0		1.3	39.6	DB
	Winnipeg, N. D.	Winnipeg	C M Garland & Co	6-48	375	450	1	60	RS	8.1	1.3	2.6	37.0	DB
	Winnipeg, N. D.	Winnipeg	Stearns-Roger Mfg Co	12-48	390	720	1	60	BW	8.2		3.3	37.0	DB
	New York, N. Y.	South Street	Baker & Spencer Inc.	7-48	300	600	1	200	BW	18.4		9.0	30.5	DB
	New York, Conn.	Stamford	Stone & Webster	1-49	300	600	2	30	BW	35.7	0	17.1	21.9	DB
	Evansville, W. Va.	Evansville	Dravo Corp	2-48	275	500						5.3	28.9	DB
MUNICIPAL PLANTS														
Board of Public Utilities	Waco, Texas	Waco	Burns & McDonnell	1951	850	900	1	300	BW	18.1		20.9	21.4	ST
Electric Department	Austin, Texas	Austin	Burns & McDonnell	6-50	850	900	1	200	CE	21.2	6.2	11.4	21.3	DB
				6-51	850	900	1	200	CE	21.2	6.2	11.4	21.3	DB
City of Cleveland	Cleveland, Ohio	Twinsburg	Burns & McDonnell	7-49	700	875	1	250	SP	12.1	7.7	11.0	24.2	DB
City Electric Dept.	Rootenator, Minn.	Rootenator	Burns & McDonnell	1951	650	825	2	200	FW	24.0		11.5	31.0	ST
Tyngsboro Water & Electric Board	Fitchburg, Mass.	Fitchburg	Sargent & Lundy	6-49	600	825	1	90	RS	13.2	2.2			DB
City of Ames	Ames, Iowa	Ames	Burns & McDonnell	10-49	600	825	1	175	RS	28.7	7.6	12.0	17.0	DB
City of Thompson	Thompson, W. Va.	Thompson	Burns & McDonnell	7-50	600	825	1	65	RS	13.9		7.4	24.3	DB
City of Columbus	Columbus, Ind.	Columbus	Burns & McDonnell	7-51	600	825	2	60	BW	12.7		3.4	21.4	DB
Columbus City	Columbus, Ind.	Columbus	Albert C. Wood	9-49	600	750	1	70	EC	8.3		2.6	35.0	DB
					750	750	1	60	EM					DB
Aluminum Power & Light	Trinidad, Colo.	Trinidad	Rocky Mountain Co	1-50	450	750	2	35	CE				25.0	DB
City of Coleman	Coleman, Texas	Coleman	Barrett Bartholomew	6-49	450	750	1	28	BW					DB
City of Brown	Brown, Iowa	Brown	Brown Engineering Co	6-48	450	750	1	25	BW	4.3	1.1	1.4	25.4	DB
Municipal Utilities	Greenboro, Ky.	Greenboro	Black & Veatch	1-50	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB
	Greenboro, Ky.	Greenboro	Black & Veatch	7-49	425	750	2	60	BW					DB

FIDELITY				FUEL		FUEL PUMPS		TURBINES		GENERATORS		TOTAL								
Index	Age	Boiler	Drive	Capacity, 1000 kw	Speed, rpm	Manufacturer	Back pressure, psia	No. of Bleed Points	Generator Cooling	Surface, 1000 sq ft	No. Water Pases	Tube Material	Total Boiler Capacity, 1000 Units, 1000	Total Generator Capacity, 1000 Units, 1000						
10.8	Re	M	D	Hy	P	C	11.0	2100	3M	37.5	3600	GE	0.75	4	H	32.5	12	Ad	1720	117.5
11.7	Re	M	D	Hy	P	C	11.4	1950	2M	30	3600	WE	1.0	4	H	16	12	Ad	680	56
13.6	Re	M	D	Hy	P	C	10.6	2000	2M	30	3600	WE	0.75	4	H	30	12	Ad	400	30
14.3	Re	M	D	Hy	P	C	10.6	2000	2M	30	3600	AC	0.75	4	H	16.5	12	Ad	205	20
15.6	Re	M	D	Hy	P	C	12.5	2000	2M	40	3600	GE	0.75	4	H	33.0	12	Ad	400	45
16.0	Re	M	D	Hy	P	C	12.0	2000	3M	60	3600	GE	0.75	5	H	50	12	Ad	1300	120
17.0	Re	M	D	Hy	P	C	13.0	2000	3M	20	3600	WE	1.0	4	H	12	12	Ad	420	40
18.0	Re	M	D	Hy	P	C	13.7	1950	2M	30	3600	GE	0.75	4	H	27.5	12	Ad	1280	105
19.0	Re	M	D	Hy	P	C	11.0	2000	2M	40	3600	GE	0.75	4	H	30	12	Ad	1200	120
20.0	Re	M	D	Hy	P	C	11.0	2000	2M	22.5	3600	WE	1.0	4	H	20.4	12	Ad	460	45
21.0	Re	M	D	Hy	P	C	11.0	2000	2M	30	3600	WE	1.0	4	H	12	12	Ad	770	75
22.0	Re	M	D	Hy	P	C	11.4	2000	2M	60	3600	WE	0.75	4	H	32.5	12	Ad	1760	180
23.0	Re	M	D	Hy	P	C	12.0	2100	1M	65	3600	WE	0.75	5	H	50	12	Ad	1600	125
24.0	Re	M	D	Hy	P	C	12.0	2100	1M	20	3600	GE	0.75	4	H	18.0	12	Ad	2600	190
25.0	Re	M	D	Hy	P	C	10.9	2000	1M	40	3600	GE	0.75	4	H	42.5	12	Ad	550	35
26.0	Re	M	D	Hy	P	C	9.5	2000	3M	30	3600	GE	1.75	4	H	37.5	12	Ad	975	65
27.0	Re	M	D	Hy	P	C	10.0	2000	2M	15	3600	GE	1.75	4	H	20.0	12	Ad	500	26
28.0	Re	M	D	Hy	P	C	10.0	2000	2M	20	3600	GE	1.75	4	H	18.2	12	Ad	370	35
29.0	Re	M	D	Hy	P	C	11.0	2200	2M	60	3600	GE	0.75	4	H	43.0	12	Ad	780	60
30.0	Re	M	D	Hy	P	C	11.0	2200	2M	60	3600	WE	0.75	4	H	43.0	12	Ad	3150	245
31.0	Re	M	D	Hy	P	C	11.0	2200	2M	60	3600	WE	0.75	4	H	43.0	12	Ad	3750	295
32.0	Re	M	D	Hy	P	C	11.0	2200	2M	35	3600	WE	0.5	4	H	32.5	12	Ad	1740	135
33.0	Re	M	D	Hy	P	C	11.4	2000	2M	50	3600	WE	1.25	5	H	45	12	Ad	1750	150
34.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
35.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
36.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
37.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
38.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
39.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
40.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
41.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
42.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
43.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
44.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
45.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
46.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
47.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
48.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
49.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
50.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
51.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
52.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
53.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
54.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
55.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
56.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
57.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
58.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
59.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
60.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
61.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
62.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
63.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
64.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
65.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
66.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
67.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
68.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
69.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
70.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
71.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
72.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
73.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
74.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
75.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
76.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
77.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
78.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
79.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
80.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
81.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
82.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
83.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
84.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
85.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
86.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
87.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
88.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
89.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
90.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
91.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600	WE	1.25	5	H	45	12	Ad	1550	100
92.0	Re	M	D	Hy	P	C	10.4	1900	2M	50	3600									