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WHERE THE BOILERS ARE

A SURVEY OF ELECTRIC UTILITY BOILERS WITH POTENTIAL
CAPACITY FOR BURNING SOLID WASTE AS FUEL

GORDIAN ASSOCIATES, INCORPORATED

PREPARED FOR
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The use of prepared solid waste as a supplementary fuel is being investigated by communities all over the country as a method for recovering energy from commercial and residential solid wastes. This document presents survey results that are intended to help local decision-makers in assessing the availability of electric utility boilers with potential for using prepared solid waste as supplementary fuel. For the major coal-burning States and the major urban centers, details are given for investor-owned and municipally-owned plants on the following items: (1) boiler characteristics; (2) energy requirements for electricity generation; (3) potential energy available from combustion of solid waste derived from specified areas around each plant; (4) typical transportation distances from the centers of waste generation to the plants, and (5) the potential waste-burning capacity per day of each boiler if solid waste replaced 10 percent of its fossil fuel.

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IN BLACK AND WHITE

b. Identifiers/Open-Ended Terms

Energy recovery from solid waste
Resource Recovery
Waste-based energy
Waste as supplementary fuel

c. COSATI Field/Group

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FOREWORD

Growing concern for the environment, combined with awareness that supplies of material and energy are limited, has resulted in an expanding effort to conserve resources and to develop new resources without damaging the environment. One of the most practical approaches to sensible resource management is the recovery and reuse of materials heretofore discarded as waste.

Over the past several years, communities all over the country have begun to investigate resource recovery as a waste management option. Among the various methods being considered for recovering energy from the waste stream is the use of prepared solid waste as a supplementary fuel in utility power plant boilers. As described in the background section of this report, this approach is being demonstrated by the City of St. Louis and the Union Electric Company with support to the city from the U.S. Environmental Protection Agency.

The purpose of this report, prepared for EPA by Gordian Associates, Inc., New York City, is to provide the basic data that a State or local decision-maker needs to begin considering the opportunities (potential markets) for using solid waste as a fuel in electric utility power plant boilers. With the survey data provided in this report, the decision-maker can focus on specific boilers in discussions with utility officials.

The reader should be aware, however, that this data by itself does not say whether a utility will or even can burn solid waste in its boilers. There are important technical and economic factors--different for each utility--that determine a utility's ability or willingness to use waste

as a fuel. These factors are outside the scope of this study but nevertheless must be considered. Some of them are listed in Appendix I.

In developing a resource recovery system, information about potential markets is essential in selecting and implementing a resource recovery technology. Although the electric utility is only one of several possible markets for waste-based energy, this study is intended to provide some of the necessary information about the electric utility as a potential market for solid waste as a fuel.

Arsen J. Darnay
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WHERE THE BOILERS ARE

SUMMARY

This document presents survey results that are intended to help local decision-makers in assessing the availability of utility boilers with potential for using prepared solid waste as a supplementary fuel.

Power plants originally designed to fire coal, even if they have subsequently been modified to burn oil, normally have the bottom ash handling and air pollution control equipment necessary for burning solid waste. Consequently, this study covers not only the major coal-burning States, but also the major urban centers, many of which may have oil-fired boilers originally designed to fire coal.

Details are given for investor-owned and municipally-owned plants on the following items, based on 1971 data and projections for 1975: (1) boiler characteristics; (2) energy requirements for electricity generation; (3) potential energy available from combustion of solid waste derived from specified areas around each plant or group of plants; (4) typical transportation distances from the centers of waste generation to the plants, and (5) the potential waste-burning capacity per day of each boiler if it replaced 10 percent of its fossil fuel with solid waste fuel. The study does not investigate the potential economic, technical, administrative, or legal problems which may be involved in solid waste combustion.

To verify or update any of the data in this report, the reader can determine for himself the potential waste-burning capacity of nearby boilers by using the nomograph (See "How To Use The Data") and boiler data obtained from the utility.

BACKGROUND

Recovering energy from solid waste is a practice that is being increasingly recognized as both environmentally sound and economically attractive.

Energy recovery from solid waste has been practiced in Europe for several decades. There, solid waste is burned on grates in boilers specifically designed to handle the waste as either supplementary or primary fuel.

In the United States, however, there are no investor-owned utility boilers designed specifically to burn solid waste. Most of these boilers burn fossil fuels in suspension. Consequently, in order to burn solid waste in existing boilers while avoiding costly boiler modifications such as the installation of firing grates, the technique of preparing solid waste for suspension firing was developed.

Use of solid waste as supplementary fuel in existing power plant boilers was initially studied in 1968 by the Union Electric Company and the City of St. Louis, with financial support from the Federal solid waste management program. The results of the study were encouraging, and in 1970 a demonstration project was initiated. The U.S. Environmental Protection Agency's Office of Solid Waste Management Programs and Office of Air Programs jointly awarded a grant to the City of St. Louis for two-thirds of the cost of the project. The Union Electric Company provided its technical expertise, two 125-megawatt tangentially fired boilers, and nearly a million dollars for the demonstration.

Operations began in April 1972 and continued intermittently until May 1973. At that time an air classifier was installed in the system in order to reduce pneumatic feeder jamming and pipeline erosion that prevented continuous operation of the facility. Operations ceased while the air classifier was being installed and resumed in November 1973 with initiation of a comprehensive testing program.

The process itself is relatively simple (Figure 1). Domestic solid waste, collected from residential areas of the city of St. Louis, is ground up in a large hammermill. The shredded waste is air-classified, and the light combustible waste fraction is fired pneumatically into existing boilers in the Union Electric Company system. Magnetic metals are recovered from the heavier, mostly noncombustible, fraction and are sold for recycling to the Granite City (Illinois) Steel Company. The remaining glass, ceramics, and other nonmagnetic materials are landfilled. All of this has been achieved by applying existing technology and using equipment that is already commercially available.

The system was designed so that the solid waste initially would replace 10 percent of the boiler's coal requirement. Experience has shown that 15 to 20 percent fuel replacement rates can now be considered realistic. It also appears that solid waste can be used economically in almost any boiler that has bottom ash handling and air pollution control facilities. This includes tangentially-fired, front-fired, opposed-fired, cyclone-fired, and stoker-fired boilers. It also includes boilers currently burning gas or oil, although boiler manufacturers conservatively recommended an initial fuel replacement ratio no greater than 10 percent with oil.

PROCESSING PLANT FOR SOLID WASTE, ST. LOUIS PROJECT

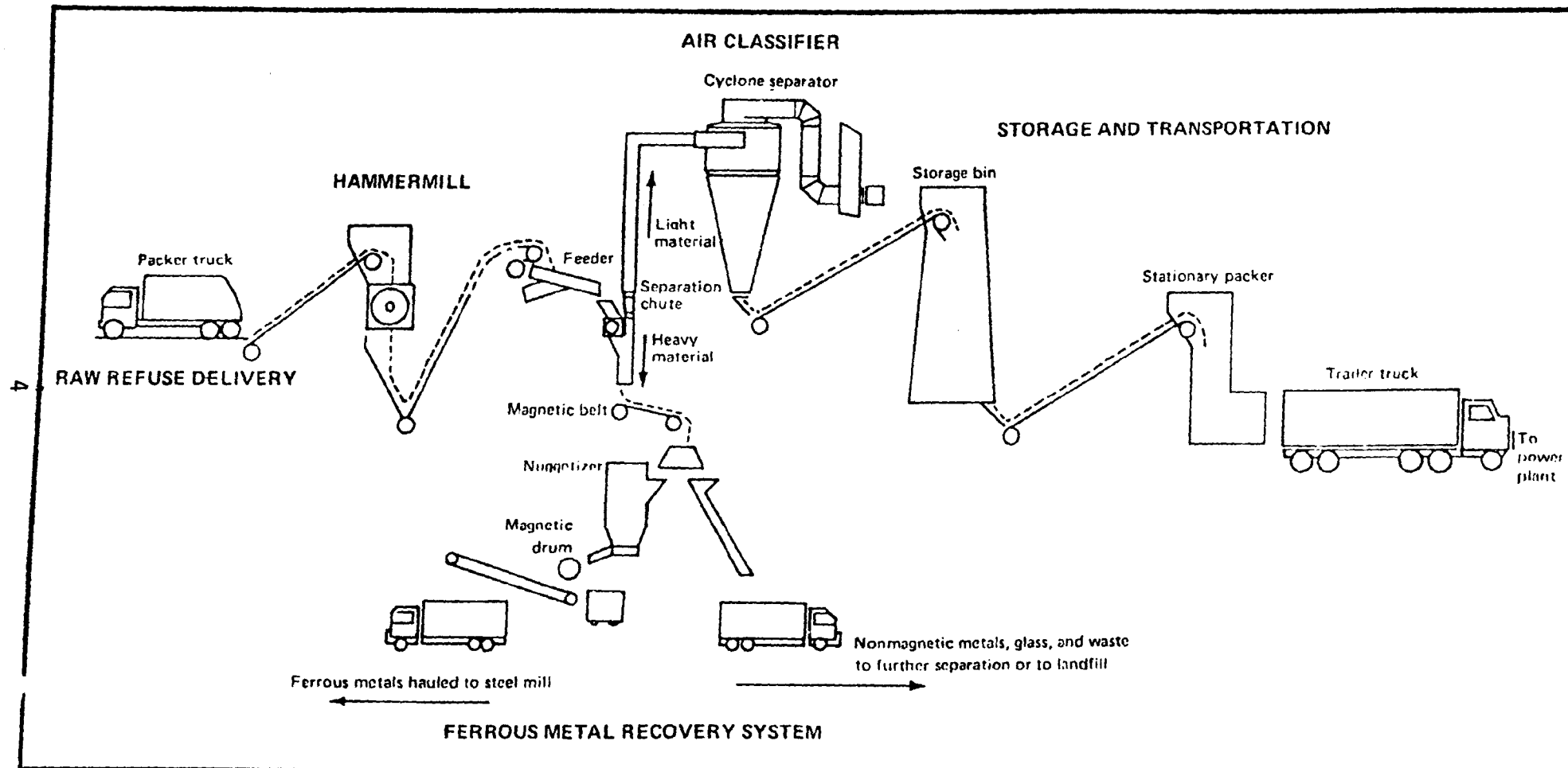


Figure 1. In the system being demonstrated by Union Electric Company in St. Louis, fuel and ferrous metal are recovered from municipal solid waste that has been shredded and air classified.

Although technical problems have been encountered (especially in transporting the material), the project has demonstrated successfully the generation of electricity from burning solid waste as a supplementary fuel in coal-fired power plant boilers, with the simultaneous reduction in solid waste disposal problems.

For more information on the St. Louis project, see Energy Recovery from Waste by Robert A. Lowe (Environmental Protection Publication SW-36d11, U.S. Government Printing Office, 1973, 24 p.).

For information about the first series of air pollution tests conducted as part of the St. Louis project, see St. Louis/Union Electric Refuse Firing Demonstration Air Pollution Test Report by Midwest Research Institute (to be published by the National Technical Information Service, U.S. Department of Commerce).

THE STUDY

The objective of this study is to provide a data base for assessing the potential for using solid waste from residential and commercial sources as supplementary fuel in existing steam-electric power plant boilers that are investor-owned or municipally-owned.

General Scope

The study presents design information about electric utility boilers in selected States and relates the energy requirements of those boilers to waste generation in the surrounding areas for the years 1971 and 1975.

It is generally assumed that a boiler must have both bottom ash handling and air pollution control capabilities if it is to be modified economically to burn solid waste. Accordingly, it was decided to limit the study primarily to those plants designed to burn coal. In certain areas, however, such as Florida and California, where there are large population centers, boilers were included in the study even though they were not designed to burn coal.

The States included in the study are the most heavily populated ones (the Northeast, California, and Florida); they contain about 75 percent of the U.S. population. They include all of the major coal-burning areas and account for over 90 percent of the coal and 80 percent of the oil consumed for power generation.

Boilers Not Included

As mentioned above, this study provides data on investor- and municipally-owned steam-electric boilers. The study does not deal with boilers that generate steam for industrial processes or for heating and cooling buildings (space or district heating and cooling), including those on Federal facilities; also excluded are industrial steam-electric boilers. It should be noted that these other boilers do represent a potential market for solid waste fuel.

At the present time, there is little data available about the location and potential waste-burning capacity of these boilers. The U.S. Environmental Protection Agency is currently conducting two studies to provide these data. First, the Solid and Hazardous Waste Research Laboratory, in Cincinnati, Ohio, is studying the suitability of burning waste as fuel in industrial boilers. Secondly, the Office of Solid Waste Management Programs is surveying Federal facilities to evaluate the feasibility of requiring the Federal government to use waste as fuel.

How the Results Are Presented

Time Frame

The data presented are for two years:

1971, to approximate current conditions, and

1975, to represent a situation in the short-term future, at a time when a number of new plants, particularly nuclear ones, are expected to be in operation and the load factors on the older coal plants may be reduced.

The Areas Covered

For each of the following States, boiler and plant data has been assembled, together with the related statistics on waste generation and transportation distances:

Alabama	Minnesota (Minneapolis-St. Paul only)
California	Missouri
Connecticut	Nebraska (Omaha only)
Delaware (Wilmington only)	New Hampshire (Manchester-Portsmouth only)
Florida	New Jersey
Georgia	New York
Illinois	North Carolina
Indiana	Ohio
Kansas (Kansas City only)	Pennsylvania
Kentucky	Rhode Island
Maine (Portland only)	Tennessee
Maryland	Virginia
Massachusetts	West Virginia
Michigan	Wisconsin

The Data Format for Each State

Data is presented as follows:

- a. A map of the State, showing plants operating in 1971 and those expected to be commissioned by 1975. The corresponding solid waste generation areas are defined.
- b. A tabulation by "waste generation areas" of the energy requirements

of plants and the potential energy availability from combustion of prepared solid waste. Two tabulations are included, one for all fossil fuel plants and the other for "coal plants" only -- those either designed for coal or converted to burn coal. In each case, the potential energy from solid waste is expressed as a percentage of the area energy requirement for the power plants. Average transportation distances from the centers of waste generation to the plants are shown.

Tables of details of individual plants on a boiler-by-boiler basis (where possible). The following items are listed (see also Appendix II, Details of How the Work Was Done):

- Waste generation area (SMSA, county, etc.)

- Plant name and number according to the State map

- Utility company operating the plant

- Boiler capacities in megawatts

- Plant load factor

- Plant energy requirement in Btu per year

- Type of firing for each boiler

- Plant fuel distribution, by the percentage of Btu from coal, oil, or gas

- Plant design fuels

- Type of bottom ash handling facilities

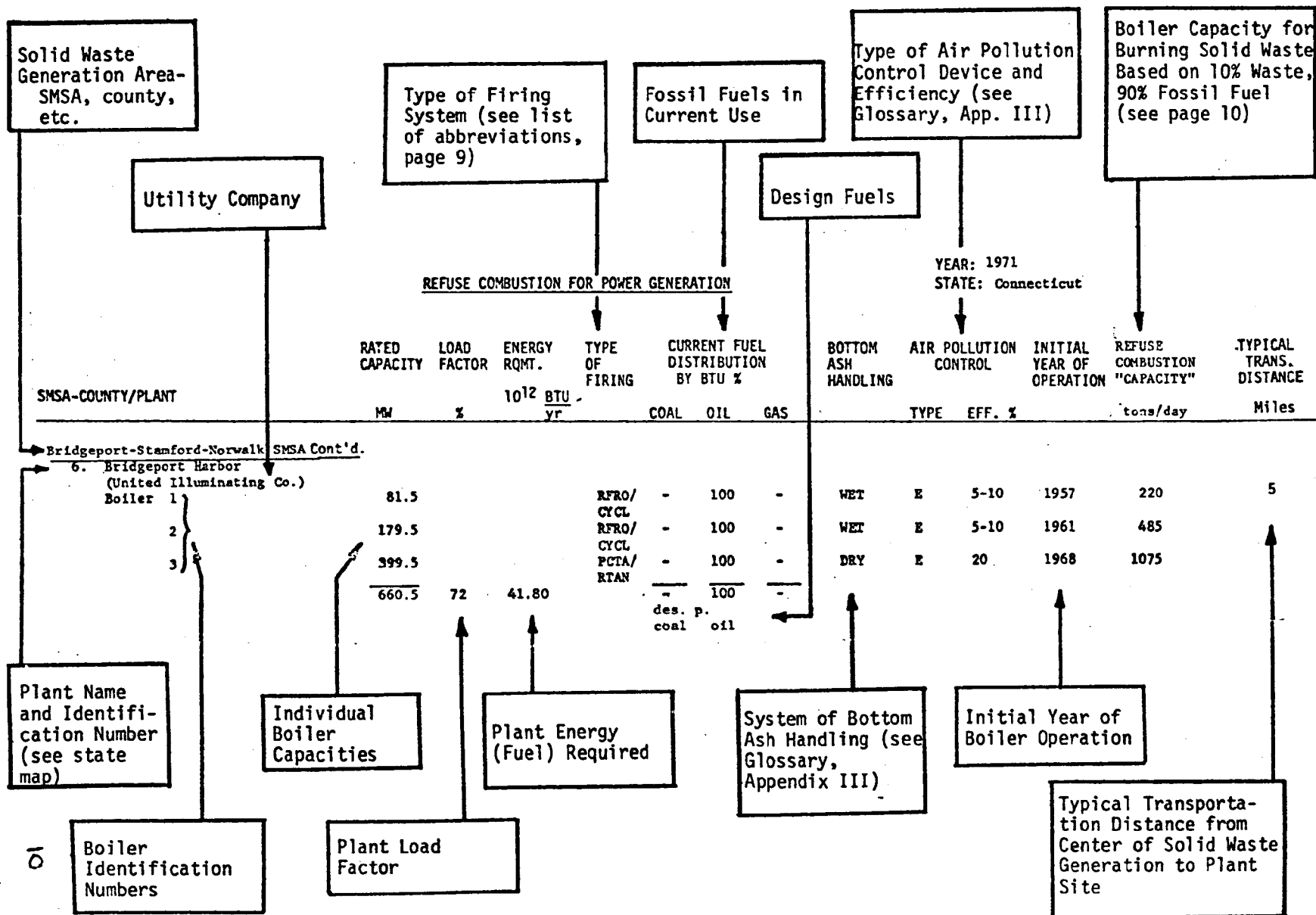
- Type and efficiency of air pollution control facilities

- Year of initial operation of each boiler

- Solid waste burning capacity of each boiler

- Typical waste transportation distances

A typical table is shown on page 10 with the location of key information marked. Many definitions of terms used in the tables are found in the Glossary, Appendix IV.



Abbreviations

The following abbreviations appear in the plant data tables:

a. The type of firing is specified as follows:

PCFR, pulverized coal: front firing
PCOP, pulverized coal: opposed firing
PCTA, pulverized coal: tangential firing
CYCL, cyclone
SPRE, spreader stoker
OSTO, other stoker
FLUI, fluidized bed
RFRO, residual oil: front firing
ROPP, residual oil: opposed firing
RTAN, residual oil: tangential firing
GFRO, gas: front firing
GOPP, gas: opposed firing
GTAN, gas: tangential firing

b. The type of air pollution control equipment is specified as follows:

E, electrostatic precipitator
C, combination mechanical-electrostatic precipitator
GRAV, gravitational or baffled chamber
SCTA, single cyclone-conventional reverse flow, tangential inlet
SCAX, single cyclone-conventional reverse flow, axial inlet
MCTA, multiple cyclones-conventional reverse flow; tangential inlet
MCAX, multiple cyclones-conventional reverse flow; axial inlet
CYCL, straight-through-flow cyclones
IMPE, impeller collector
VENT, wet collector: venturi
BAGH, fabric collector: baghouse

These abbreviations are consistent with standard Federal Power Commission (FPC) forms.

Efficiency of Air Pollution Control Equipment

The figures shown in the tables refer to average operating data unless marked (t), for data obtained under special test conditions, or (d), for design figures. "NR" indicates data was not reported in the FPC 67 forms nor supplied by the utilities themselves.

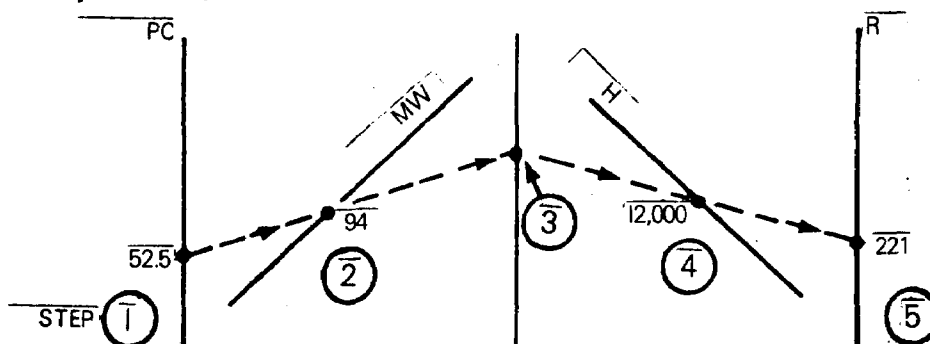
How to Calculate Waste-Burning Capacities

As an aid for rapid calculations concerning boiler capacities and their potential for burning solid waste, a nomograph (Figure 2) was developed.

The nomograph shows the relationship among four variables: (1) the capacity of the boiler, in megawatts (MW). (2) The load factor of the boiler, as a percent of time. (3) The heat rate (or efficiency) of the boiler, in terms of Btu per kilowatt hour (KWH). (4) The tons of solid waste that can be burned in the boiler each working day, assuming that waste-fuel replaces 10 percent of the fossil fuel input and assuming a 5-day work week for waste collection and handling. For any problem, three of the variables must be defined to calculate the fourth. When more than one of the variables are unknown, typical values for some of these can be used to make rough estimates of the remaining unknowns. For example, given only the boiler capacity and load factor to determine the waste burning capacity, one could use a typical plant heat rate of, say, 11,000 or 12,000 Btu/KWH.

An example calculation is given on the nomograph itself:

- Q. How much refuse could be burned each day of the week in a 94 MW boiler with a load factor of 52.5 percent and a heat rate of 12,000 Btu/KWH?



A. 221 tons/day

SOLID WASTE COMBUSTION AND GENERATING PLANT PARAMETERS

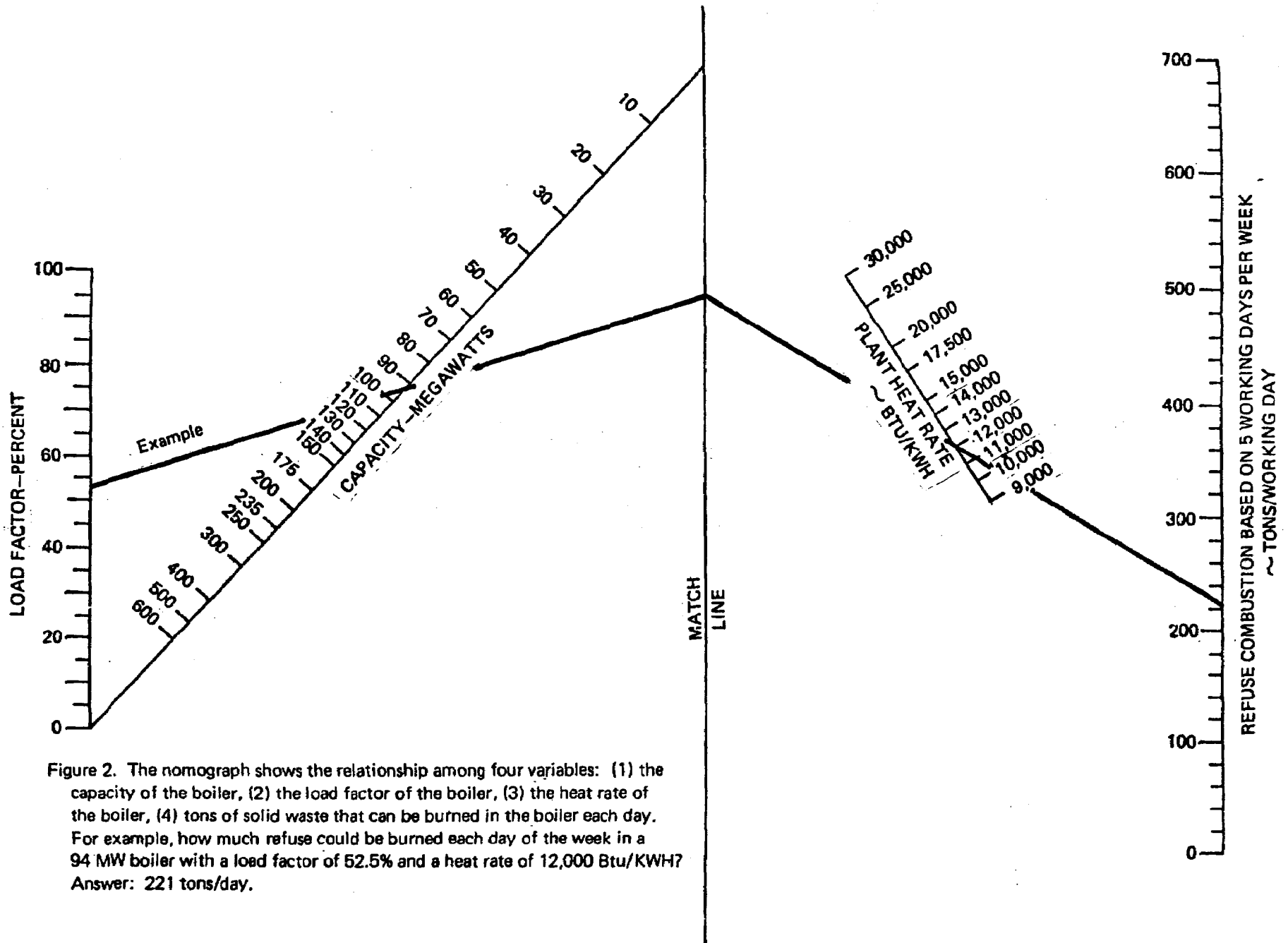
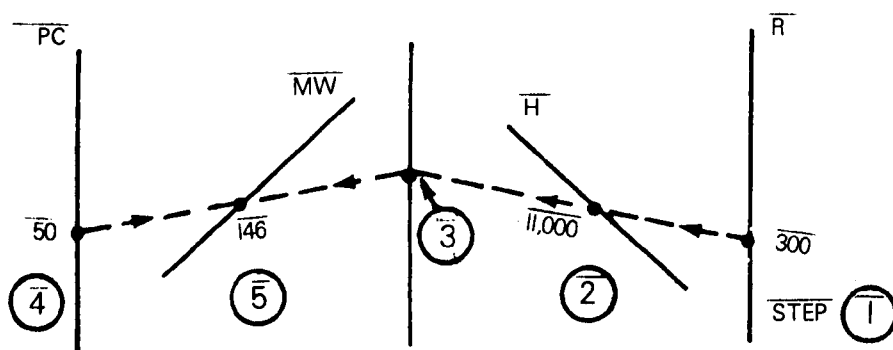


Figure 2. The nomograph shows the relationship among four variables: (1) the capacity of the boiler, (2) the load factor of the boiler, (3) the heat rate of the boiler, (4) tons of solid waste that can be burned in the boiler each day. For example, how much refuse could be burned each day of the week in a 94 MW boiler with a load factor of 52.5% and a heat rate of 12,000 Btu/KWH? Answer: 221 tons/day.

The nomograph was in fact used to calculate the boiler capacities for refuse combustion shown in the data tables in exactly the manner indicated above.

The advantage of a nomograph is its complete flexibility to allow quick calculations to be made for any boiler or plant combinations. In addition, although the calculation would no doubt usually be done to determine the amount of refuse a boiler could burn, given its capacity, load factor and heat rate, the "reverse" calculation may be useful to a municipality. For example, what is the size of generating plant that could be expected to process all the refuse generated in the municipality, given the quantity as 300 tons of refuse per day, a typical plant heat rate of say 11,000 Btu/lb, and a typical load factor of say 50 percent? The answer is 146 MW.



An explanation of how the nomograph was developed is presented in Appendix III.

DATA FOR 1971

Note: Columns may not add exactly due to truncation of numbers.

SUMMARY OF RESULTS
REFUSE COMBUSTION FOR POWER GENERATION
ALL FOSSIL FUEL PLANTS 1971

	RATED CAPACITY	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. Millions	(a) REFUSE GENERATION 10 ⁶ tons yr 10 ¹² BTU yr		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)
	MW					
ALABAMA	7861.5	376.8	1.743	1.14	10.29	2.7
CALIFORNIA	19326.6	789.6	15.570	10.20	91.61	11.6
CONNECTICUT	3036.3	164.8	2.434	1.59	14.39	8.7
DELAWARE (Wilmington)	827.5	53.5	0.512	0.33	3.03	5.6
FLORIDA	12323.6	530.8	5.727	3.74	33.41	6.3
GEORGIA	6507.0	334.0	2.166	1.40	12.63	3.8
ILLINOIS	12318.3	665.7	8.940	5.83	52.51	7.9
INDIANA	9269.7	477.6	3.412	2.20	19.90	4.2
KANSAS (Kansas City)	2395.8	91.3	1.283	0.84	7.60	8.3
KENTUCKY	9652.2	481.5	1.342	0.86	7.82	1.6
MAINE (Portland)	213.6	14.5	0.197	0.12	1.16	8.0
MARYLAND	5541.3	369.4	5.290	3.47	31.19	8.4
MASSACHUSETTS	5005.7	269.4	5.920	3.88	34.92	12.9
MICHIGAN	9322.0	527.9	6.436	4.19	37.82	7.2
MINNESOTA (Mpls./St.Paul)	2048.8	106.8	1.856	1.21	10.97	10.3
MISSOURI	9493.7	437.9	4.338	2.84	25.53	5.8
NEBRASKA (Omaha)	794.2	39.2	0.552	0.36	3.26	8.3
NEW HAMPSHIRE (Manchester)	638.0	36.3	0.371	0.24	2.19	6.0
NEW JERSEY	5714.3	289.6	4.501	2.96	26.62	9.2
NEW YORK	14976.2	710.0	16.424	10.77	96.94	13.6
NORTH CAROLINA	7464.0	457.8	1.606	1.01	9.15	2.0
OHIO	21896.9	1080.7	9.332	6.04	554.36	5.0
PENNSYLVANIA	18661.3	948.5	11.002	7.36	64.78	6.8
RHODE ISLAND (Providence, Pawtucket, Warwick)	145.9	10.6	0.781	0.51	4.61	43.4
TENNESSEE	7443.7	340.5	2.010	1.31	12.52	3.7
VIRGINIA	4174.3	217.7	1.766	1.15	10.36	4.8
WEST VIRGINIA	5595.4	316.8	0.516	0.32	2.89	0.9
WISCONSIN	5428.6	248.7	3.269	2.12	19.14	7.7
TOTALS:	205680.6	10297.6	118.012	77.25	693.55	6.7

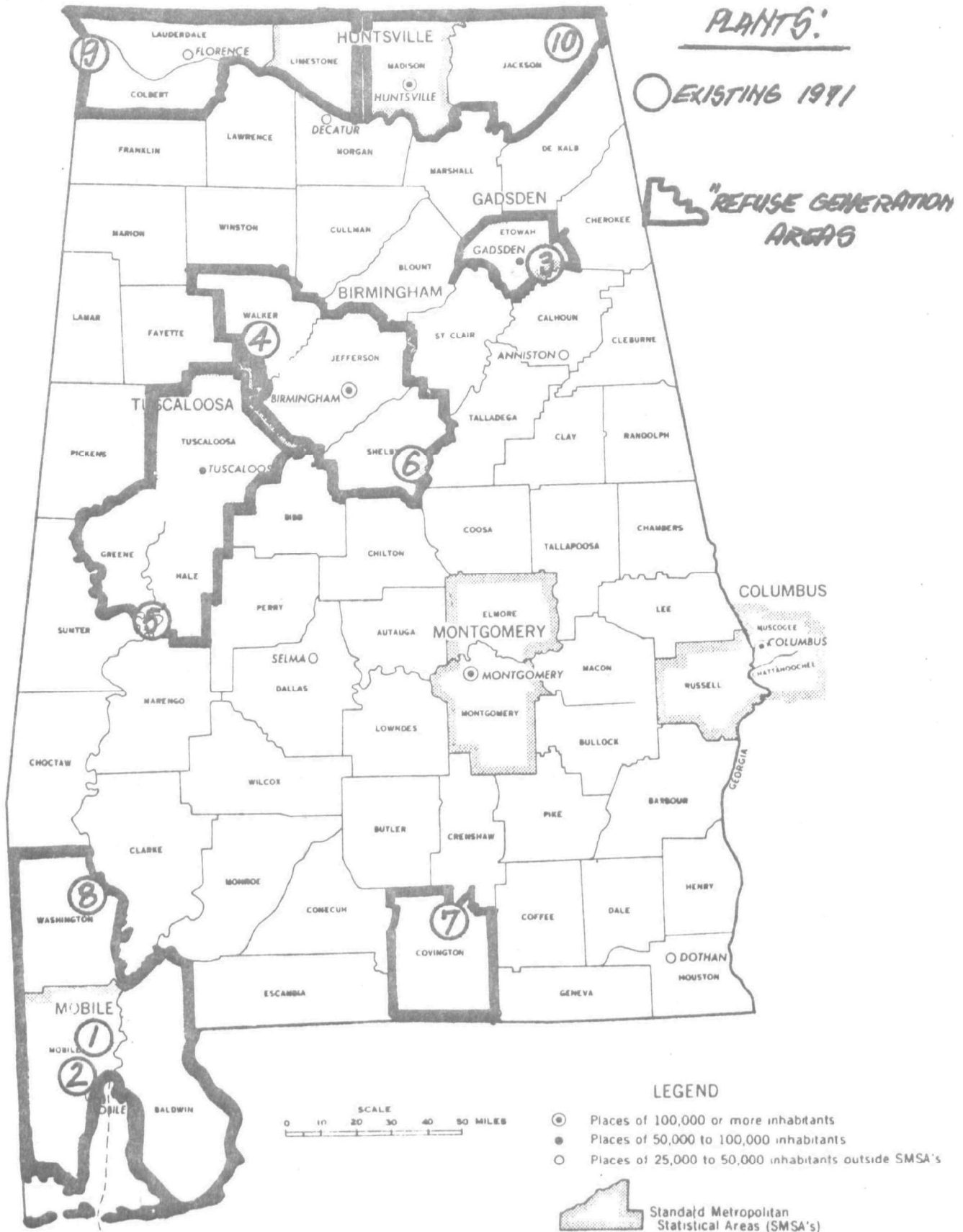
(also included in
Mo. total)

SUMMARY OF RESULTS
REFUSE COMBUSTION FOR POWER GENERATION
COAL-BURNING PLANTS ONLY* 1971

	RATED CAPACITY	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. Millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)
ALABAMA	7861.5	376.8	1.743	1.14	10.29	2.7
CALIFORNIA	--	--	--	--	--	--
CONNECTICUT	3002.0	164.5	2.434	1.59	14.39	8.7
DELAWARE (Wilmington)	827.5	53.5	0.512	0.33	3.03	5.6
FLORIDA	4073.7	139.7	5.727	3.74	33.41	23.9✓
GEORGIA	6396.0	329.2	2.166	1.40	12.63	3.8
ILLINOIS	12318.3	665.7	8.940	5.83	52.51	7.9
INDIANA	9269.7	477.6	3.412	2.20	19.90	4.2
KANSAS (Kansas City)	2262.8	89.3	1.283	0.84	7.59	8.5 (also included in
KENTUCKY	9652.2	481.5	1.342	0.86	7.82	1.6 Mo. total)
MAINE (Portland)	--	--	--	--	--	--
MARYLAND	5541.3	369.4	5.290	3.47	31.19	8.4
MASSACHUSETTS	3533.3	188.2	5.920	3.88	34.92	18.6✓
MICHIGAN	9145.5	520.6	6.436	4.19	37.82	7.3
MINNESOTA (Mpls./St. Paul)	2018.8	106.1	1.856	1.21	10.97	10.3✓
MISSOURI	8986.5	421.1	4.338	2.84	25.53	6.1
NEBRASKA (Omaha)	774.2	38.9	0.552	0.36	3.26	8.4
NEW HAMPSHIRE (Manchester)	638.0	36.3	0.371	0.24	2.19	6.0
NEW JERSEY	5194.9	263.8	4.501	2.96	26.62	10.1✓
NEW YORK	10134.5	503.9	16.424	10.77	96.94	19.2✓
NORTH CAROLINA	7464.0	457.8	1.606	1.01	9.15	2.0
OHIO	21677.6	973.2	9.332	6.04	54.36	5.6
PENNSYLVANIA	18335.9	930.3	11.002	7.19	64.78	7.0
RHODE ISLAND (Providence, Pawtucket, Warwick)	145.9	10.6	0.781	0.51	4.61	43.4
TENNESSEE	7443.7	340.5	2.010	1.31	12.52	3.7
VIRGINIA	4174.3	217.7	1.766	1.15	10.36	4.8
WEST VIRGINIA	5595.4	316.8	0.516	0.32	2.89	0.9
WISCONSIN	5082.8	237.9	3.269	2.12	19.14	7.7
TOTALS:	169288.1	8622.7	102.246	66.74	601.27	7.0

* All plants capable of burning coal (design or converted).

EXISTING 1971



REFUSE COMBUSTION FOR POWER GENERATION
Alabama, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Birmingham SMSA	1756.9	115.1	.745	.48	4.41	3.8	28
Gadsden SMSA	138.0	8.5	.096	.06	0.56	6.7	<5
Huntsville SMSA East (Madison County and Jackson County)	1977.9	90.8	.082	.05	0.48	0.5	40
Huntsville SMSA West (Colbert, Lauderdale and Limestone Counties)	1396.6	64.0	.240	.15	1.42	2.2	40
Mobile SMSA (incl. Washington Co.)	1983.6	65.0	.399	.26	2.36	3.6	20
Tuscaloosa SMSA (incl. Greene Co. and Hale Co)	568.5	30.6	.146	.09	0.86	2.8	50
Covington County	40.0	2.5	.035	.02	0.18	7.4	5
ALABAMA STATE TOTALS	7861.5	376.8	1.743	1.14	10.29	2.7	

Includes all plants detailed in attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Alabama, 1971 - "Coal Plants" Only

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8

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² $\frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ $\frac{\text{tons}}{\text{yr}}$		10 ¹² $\frac{\text{BTU}}{\text{yr}}$			
Birmingham SMSA	1756.9	115.1	0.745	0.48	4.41	3.8	28
Gadsden SMSA	138.0	8.5	0.096	0.06	0.56	6.7	<5
Huntsville SMSA East (Madison and Jackson Counties)	1977.9	90.8	0.082	0.05	0.48	0.5	40
Huntsville SMSA West (Colbert, Lauderdale and Limestone Counties)	1396.6	64.0	0.240	0.15	1.42	2.2	40
Mobile SMSA (incl. Washington County)	1983.6	65.0	0.399	0.26	2.36	3.6	20
Tuscaloosa SMSA (incl. Greene and Hale Counties)	568.5	30.6	0.146	0.09	0.86	2.8	50
Covington County	40.0	2.5	0.035	0.02	0.18	7.4	5
ALABAMA STATE TOTALS	7861.5	376.8	1.743	1.14	10.29	2.7	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Alabama

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Mobile SMSA inc. Washington Co.													
1. Barry													
Alabama Power Company													
Boiler 1	153			PCTA	100	-	-	Dry	MCAX	80	1954	345	20
2	153			PCTA	100	-	-	Dry	MCAX	80	1954	345	
3	272			PCTA	100	-	-	Wet	MCAX	80	1959	615	
4	403.8			PCTA	100	-	-	Wet	E	85	1969	910	
5	788.8			PCTA	100	-	-	Wet	E	95	1971	1780	
	1770.6	59**	51.95		100	-	-						
					des.p.coal								
2. Chickasaw													
Alabama Power Company													
Boiler 1	46			PCTA/ GTAN				Dry	IMPE	85	1941	120	<5
2	46			PCTA/ GTAN				Dry	IMPE	85	1943	120	
3	46			PCTA/ GTAN				Dry	IMPE	85	1951	120	
	138	51	8.73		34	-	66						
					des.p.coal gas								
8. Tombigbee													
(Alabama Electric Cooperative)	75.0	61	4.34	*	100	-	-	*	*	*	1969	185	50
					des.p. coal								
AREA TOTAL	1983.6		65.02										

* No FPC-67 filed for boiler breakdowns and air pollution control equipment.

** Based on 1970 factor since boiler 5 started up in 1971.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Alabama

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Birmingham SMSA</u>													
4. Gorgas Alabama Power Company Boiler 4AB	60			PCFR	100	-	-	Dry	-	-	1929	160	25
5	69			PCTA	100	-	-	Dry	-	-	1944	285	
6	125			PCFR	100	-	-	Wet	MCTA	84	1951	315	
7	125			PCFR	100	-	-	Wet	MCTA	84	1952	315	
8	187.5			PCTA	100	-	-	Wet	MCTA	85	1956	485	
9	190.4			PCTA	100	-	-	Wet	MCTA/E	85/95	1958	495	
	756.9	65	47.13		100	-	-						
					des.p.coal								
6. Gaston Southern Electric Generating Co. Boiler 1	250			PCOP	100	-	-	Wet	E	88	1960	665	30
2	250			PCOP	100	-	-	Wet	C	83	1960	665	
3	250			PCOP	100	-	-	Wet	E	87	1961	665	
4	250			PCOP	100	-	-	Wet	E	41	1962	665	
	1000	78	69.03		100	-	-						
					des.p.coal								
<u>AREA TOTAL</u>													
	1756.9		115.16										
<u>Gadsden SMSA</u>													
3. Gadsden Alabama Power Company Boiler 1	69			PCTA/ GTAN	-	-	-	Dry	E	85	1949	180	25
2	69			PCTA/ GTAN	-	-	-	Dry	E	75	1949	180	
	138	58	8.54		72	-	28						
					des.p.coal gas								
<u>AREA TOTAL</u>													
	138		8.54										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Alabama

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Covington County</u>													
7. McWilliams													
Alabama Electric Cooperative													
Boiler 1	7.5			*				*	*	*	1954	20	5
2	7.5										1954	20	
3	25.0										1954	65	Montgomery 60
	40.0	54	2.53		12	-	88						Mobile 94
					des.s.coal		gas						Columbus, Ga. 110
AREA TOTAL	40.0		2.53										
<u>Tuscaloosa SMSA; Greene County</u>													
5. Greene													
Alabama Power Company													
Boiler 1	299.2			PCOP	100	-	-	Wet	E	85	1965	690	50
2	269.3			PCOP	100	-	-	Wet	E	85	1966	620	
	568.5	65	30.68		100	-	-						
					des.p.coal								
AREA TOTAL	568.5		30.68										

* No FPC-67 filed for boiler breakdowns and air pollution control equipment.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Alabama

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORTA- TION DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Huntsville SMSA-West</u> <u>Colbert and Lauderdale County</u>													
9. Colbert A & B Tennessee Valley Authority													
Colbert A Boiler 1	211.65			*	100	-	-	Dry	MCTA/ E	NR/NR	1955	430	40
2	211.65			*	100	-	-	Dry	MCTA/ E	50/88	1955	430	
3	211.65			*	100	-	-	Dry	MCTA/ E	50/97	1955	430	
4	211.65			*	100	-	-	Dry	MCTA/ E	50/88	1955	430	
	<u>846.6</u>	55	<u>40.38</u>		<u>100</u>	<u>-</u>	<u>-</u>						
					des.p.coal								
Colbert B Boiler 5	550			**	100	-	-	Dry	E	50	1965	1010	40
	<u>550</u>	51	<u>23.71</u>		<u>100</u>	<u>-</u>	<u>-</u>						
					des.p.coal								
AREA TOTAL	<u>1396.6</u>		<u>64.09</u>										

* P. coal circular firing

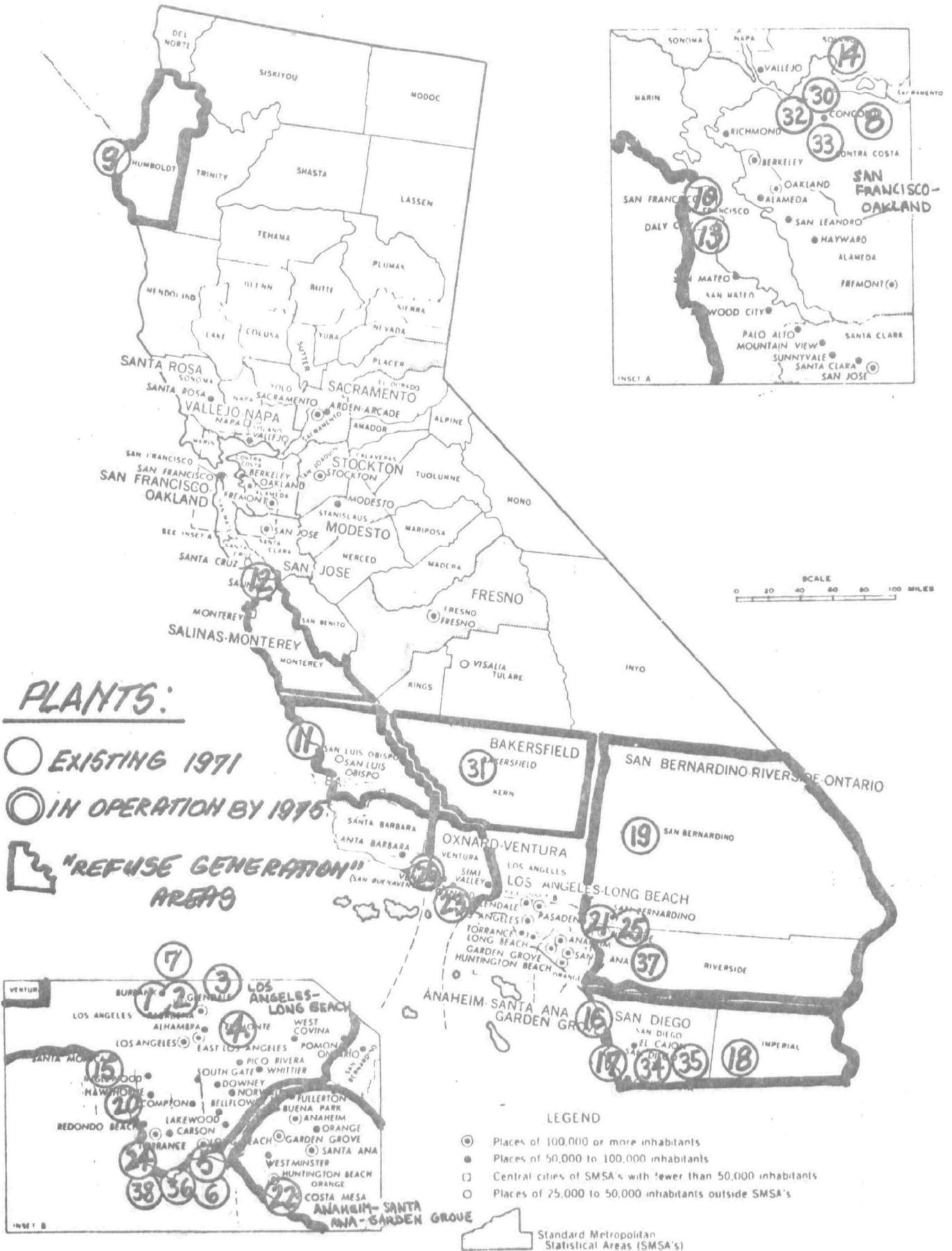
** P. coal forced draft circular horizontal firing

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Alabama

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Huntsville SMSA-East with Jackson County</u>													
10. Widows Creek A & B Tennessee Valley Authority													
Widows Creek A													
Boiler 1	140.6			*	100	-	-	Dry	MCTA	60	1952	235	40
2	140.6			*	100	-	-	Dry	MCTA	60	1952	235	
3	149.9			*	100	-	-	Dry	MCTA	60	1952	250	
4	140.6			*	100	-	-	Dry	MCTA	60	1953	235	
5	140.6			*	100	-	-	Dry	MCTA	60	1954	235	
6	140.6			*	100	-	-	Dry	MCTA	60	1954	235	
	852.9	46	37.05		100	-	-						
					des.p.coal								
Widows Creek B													
Boiler 7	575			PCTA	100	-	-	Dry	E	95	1960	115	40
8	550			PCTA	100	-	-	Dry	E	50	1964	115	
	1125.0	57	53.78		100	-	-						
					des.p.coal								
AREA TOTAL	1977.9		90.83										

* P-coal horizontal firing circular burners



California Plants

All existing fossil fuel plants in California are currently burning oil or gas as designed. All proposed plants will also burn oil or gas. The following table is included to indicate the magnitude of the quantities of refuse and associated energy that are available at present.

REFUSE COMBUSTION FOR POWER GENERATION
California, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)
Anaheim-Santa Ana-Garden Grove SMSA	870.4	43.8	1.452	0.95	8.59	19.6
Bakersfield SMSA	165.5	0.0	0.330	0.21	1.95	9750.0
Los Angeles-Long Beach SMSA	8327.6	339.5	7.196	4.72	42.55	12.5
Oxnard-Simi Valley-Ventura SMSA	435.2	26.5	0.387	0.25	2.03	7.6
Salinas-Monterey SMSA	2174.7	80.7	0.257	0.16	1.52	1.9
San Bernardino-Riverside- Ontario SMSA	1188.5	64.0	1.170	0.76	6.92	10.8
San Diego SMSA	1576.8	65.9	1.380	0.90	8.16	12.4
San Francisco-Oakland SMSA	3429.2	126.0	3.174	2.08	18.77	14.9
San Luis Obispo County	1056.3	39.9	0.108	0.06	0.57	1.4
Humboldt County	102.4	2.9	0.102	0.06	0.54	18.3
CALIFORNIA STATE TOTALS	19326.6	789.6	15.570	10.20	91.61	11.6

NOTES

Typical Transportation Distances: All plants located within SMSA regions except

11. Morro Bay, San Luis Obispo County Santa Barbara 85 miles

9. Humboldt Bay, Humboldt County Sacramento, San Francisco 200 miles

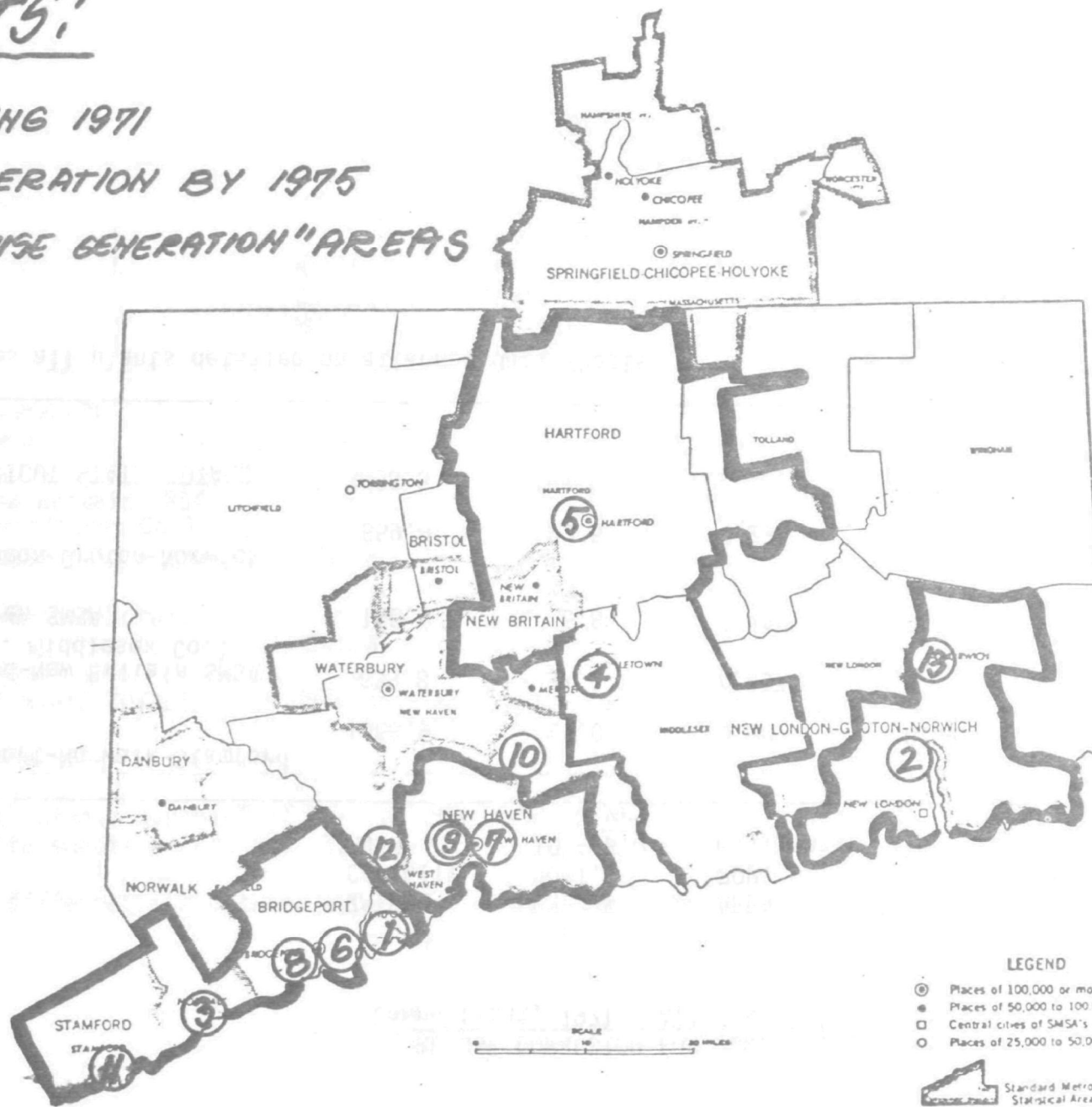
Energy Requirement calculations based on data derived from: 1) Steam-Electric Plant Capacity, Net Generation, Fuel Consumption and Unit Costs, 1971, and 2) Steam-Electric Plant Air and Water Quality Control Data, Federal Power Commission, 1970.

PLANTS:

○ EXISTING 1971

⊙ IN OPERATION BY 1975

⬢ "REFUSE GENERATION" AREAS



REFUSE COMBUSTION FOR POWER GENERATION
Connecticut, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. 10 ¹²	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	TYPICAL TRANS. DISTANCE
		BTU yr		10 ⁶ tons yr	10 ¹² BTU yr		Miles
Bridgeport-Norwalk-Stamford SMSA	1668.9	97.0	0.807	0.53	4.77	4.9	6
Hartford-New Britain SMSA (incl. Middlesex Co.)	638.8	37.4	0.957	0.62	5.66	15.1	<5
New Haven SMSA	168.8	6.8	0.435	0.28	2.57	37.7	<5
New London-Groton-Norwich SMSA	559.8	23.5	0.235	0.15	1.39	5.9	<5
CONNECTICUT STATE TOTALS	3036.3	164.8	2.434	1.59	14.39	8.7	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Connecticut, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. $10^{12} \frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		$10^6 \frac{\text{tons}}{\text{yr}}$		$10^{12} \frac{\text{BTU}}{\text{yr}}$	Miles		
Bridgeport-Norwalk- Stamford SMSA	1648.9	96.8	0.807	0.53	4.7	4.9	6
Hartford-New Britain SMSA (incl. Middlesex Co.)	638.8	37.4	0.957	0.62	5.6	15.1	<5
New Haven SMSA	168.8	6.8	0.435	0.28	2.5	37.7	<5
New London-Groton-Norwich SMSA	545.5	23.4	0.235	0.15	1.3	5.9	<5
CONNECTICUT STATE TOTALS	3002.0	164.5	2.434	1.59	14.3	8.7	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except Nos. 12 and 13.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Connecticut

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Bridgeport-Stamford-Norwalk SMSA													
8. Steel Point					des p-coal/oil								
(United Illuminating Co.)													
Boiler 1				RFRO	-	100	-	None	None	-	1923		5
2				RFRO	-	100	-	"	"	-	1923		
3				RFRO	-	100	-	"	"	-	1923		
4				RFRO	-	100	-	"	"	-	1923		
5				RFRO	-	100	-	"	"	-	1923		
6				RFRO	-	100	-	"	"	-	1923		
13				RFRO	-	100	-	"	"	-	1923	485	
14				RFRO	-	100	-	"	"	-	1923		
15				RFRO	-	100	-	"	"	-	1923		
16				RFRO	-	100	-	"	"	-	1923		
17				RFRO	-	100	-	"	"	-	1923		
18				RFRO	-	100	-	"	"	-	1923		
7				RFRO	-	100	-	"	"	-	1926		
8				RFRO	-	100	-	"	"	-	1926		
9				RFRO	-	100	-	"	"	-	1926		
10				RFRO	-	100	-	"	"	-	1926		
19				RFRO	-	100	-	"	"	-	1927		
20				RFRO	-	100	-	"	"	-	1927		
21				RFRO	-	100	-	"	"	-	1927		
22				RFRO	-	100	-	"	"	-	1927		
11				PCFR/ RFRO	-	100	-	DRY	E	5-10 *	1937		
12				PCFR/ RFRO	-	100	-	DRY	E	5-10	1937		
23				PCFR/ RFRO	-	100	-	DRY	E	5-10	1941		
24				PCFR/ RFRO	-	100	-	DRY	E	5-10	1941		
25				PCFR/ RFRO	-	100	-	DRY	E	5-10	1943		
27				PCFR/ RFRO	-	100	-	DRY	E	5-10	1943		
26				TOP FIRED	-	100	-	DRY	E	60	1950		
	155.5	46	11.55		-	100	-						

All boilers in range
5 to 36 MW

* Approximate efficiency
on "oil operation",
(non-energised)
When energised,
efficiencies around
75% reported.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Connecticut

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Bridgeport-Stamford-Norwalk SMSA Cont'd.													
6. Bridgeport Harbor (United Illuminating Co.)													
Boiler 1	81.5			RFRO/ CYCL	-	100	-	WET	E	5-10	1957	220	5
2	179.5			RFRO/ CYCL	-	100	-	WET	E	5-10	1961	485	
3	399.5			PCTA/ RTAN	-	100	-	DRY	E	20	1968	1075	
	660.5	72	41.80		des. p. coal	oil							
12. Derby (United Illuminating Co.)	20	8	0.168	*	-	100	-	*	*	*		5	15
					des.	oil							
11. Stamford (Hartford Electric Co.)													10
Boiler 9				PCFR/ RFRO				DRY	E	90	1927		
10				PCFR/ RFRO				DRY	E	90	1927		
11				TOP FIRED				DRY	C	95	1941		
12				RFRO/ GFRO				NR	None	-	1948		
13				RFRO/ GFRO				NR	None	-	1948		
	52.5	31	2.59		3	95	2						
					des.p. coal	oil	gas						

*No FPC-67 filed.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Connecticut

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Bridgeport-Stamford-Norwalk SMSA</u> Cont'd.													
3. Norwalk Harbor (Conn. Light and Power)													
Boiler 1	163.2			PCTA				DRY	C	98	1960	355	10
2	163.2			PCTA				DRY	C	98.5	1963	355	
	326.4	58	16.82		93	7	-						
					des. p. coal								
1. Devon (Conn. Light and Power)	*												
Boiler 3				RFRO				DRY	E	96	1951		5
4a				PCFR/				DRY	C	94	1942		
4b				RFRO				DRY	C	94	1942		
5a				PCFR/				DRY	C	93	1947		
5b				RFRO/				DRY	C	93	1947		
6				PCFR				DRY	E	95	1947		
7	103.5			RFRO				DRY	E	98	1956	235	
8	103.5			PCTA				DRY	E	98	1958	235	
9				PCTA				DRY	E	98	1958		
	454	52	24.07		46	54	-						
					des. p. coal oil								
AREA TOTAL	1668.9		96.83										

* All boilers except 7, 8 under 70 MW

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Connecticut

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Hartford-New Britain SMSA & Middlesex Co.</u>													
5. South Meadow Hartford Electric Light Co.													
Boiler 5	40			RFRO	-	100	-	Dry	None	-	1929	95	5
6	40			RFRO	-	100	-	Dry	SCAX	35	1938	95	
7	45			RFRO	-	100	-	Dry	SCAX	35	1942	105	
8	51.8			Top Fired	-	100	-	Dry	SCAX	35	1950	120	
9	20			RFRO	-	100	-	Dry	None	-	1960	45	
10	20			RFRO	-	100	-	Dry	None	-	1960	45	
	<u>216.8</u>	45	<u>12.20</u>			<u>100</u>	-						
					des.p.coal oil								
4. Middletown Hartford Electric Light Co.													
Boiler 1	69			PCFR				Wet	C	67	1954	175	
2	113.6			PCFR				Wet	C	67	1958	285	
3	<u>239.4</u>			*				Wet	E	67	1964	610	
	<u>422</u>	69	<u>25.29</u>			<u>12</u>	<u>88</u>						
					des.p.coal/oil								
AREA TOTAL	<u>638.8</u>		<u>37.49</u>										

*opposed cyclones, not pulverized

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Connecticut

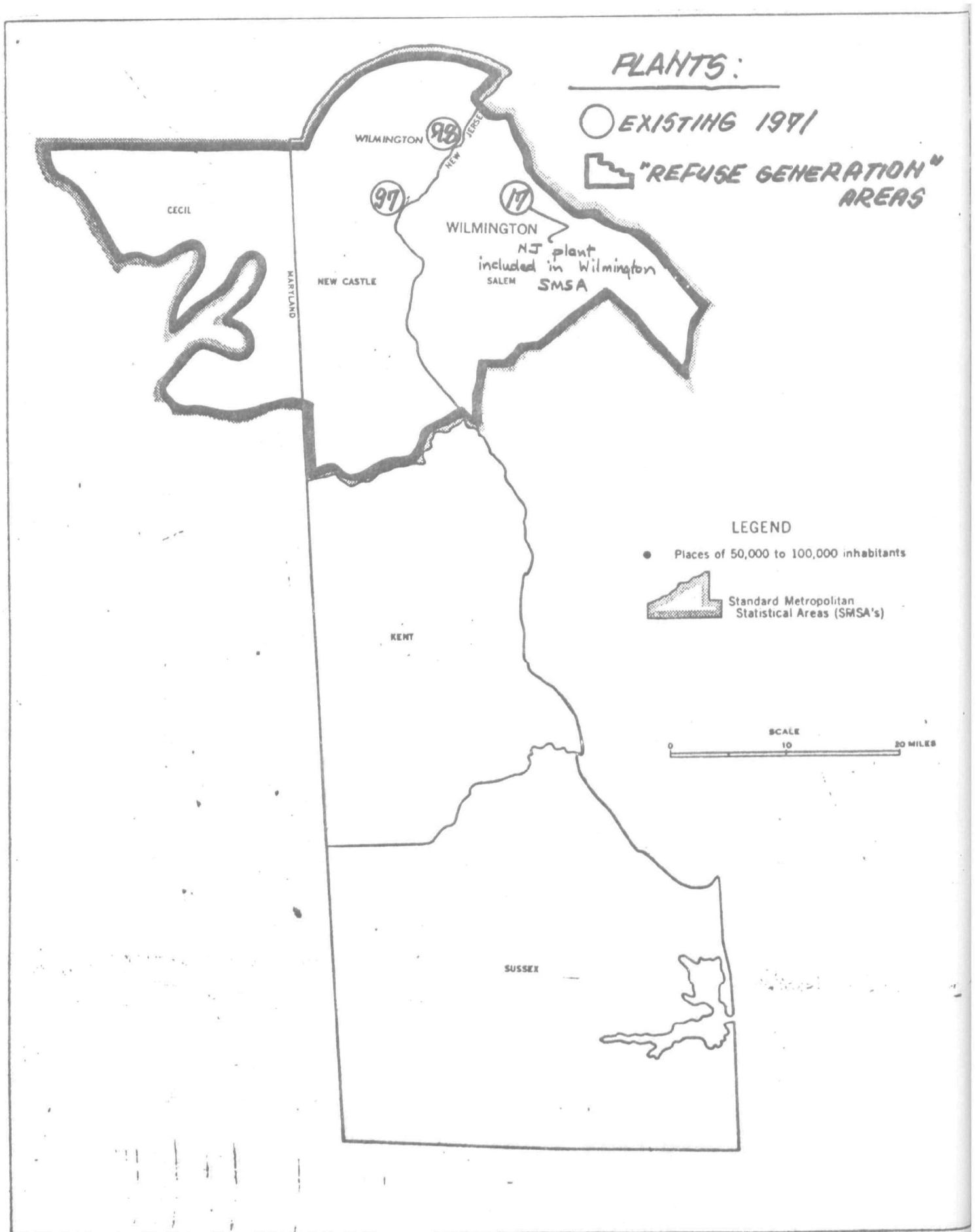
SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>New London-Groton-Norwich SMSA</u>													
2. Montville**													
(Conn. Light and Power Co.)													
Boiler 1	31.25			RFRO				DRY	E	94(t)	1948	55	45
2	31.25			RFRO				DRY	E	94(t)	1948	55	
4(a&b)	25			RFRO				DRY	SCTA	NR	1937	45	
5	75			RTAN				DRY	E	99.4(t)	1954	135	
6	383			RTAN				DRY	NR	NR	1971	705	
	545.5	40	23.43		17	83	-						
					des.s.p.coal								
13. Greenville	14.3	6	0.09	*	-	100	-	*	*	*		-	45
(Norwich Dept. Public Utilities)					des. oil gas								
AREA TOTAL	559.8		23.52										

** Boiler No. 3 Retired in 1971 . * No FPC-67 filed.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Connecticut

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles	
New Haven SMSA													
7. English													
(United Illuminating Co.)													
Boiler 1	6.25			RFRO	-	100	-	none	none	-	1929	10	<5
2	6.25			RFRO	-	100	-	"	"	-	1929	10	
3	6.25			RFRO	-	100	-	"	"	-	1929	10	
4	6.25			RFRO	-	100	-	"	"	-	1929	10	
5	6.25			RFRO	-	100	-	"	"	-	1929	10	
6	6.25			RFRO	-	100	-	"	"	-	1929	10	
7	6.25			RFRO	-	100	-	"	"	-	1937	10	
9	6.25			RFRO	-	100	-	"	"	-	1939	10	
11	6.25			RFRO	-	100	-	"	"	-	1941	10	
8	6.25			RFRO	-	100	-	"	"	-	1930	10	
10	6.25			RFRO	-	100	-	"	"	-	1930	10	
12	6.25			RFRO	-	100	-	"	"	-	1930	10	
13	34.5			TOP FIRED	-	100	-	DRY	E	47	1948	65	
14	36.75			TOP FIRED	-	100	-	DRY	E	47	1953	70	
	146.3	30	6.54		-	100	-						
					des.p. coal oil								
10. Pierce													
(Wallingford Dept. Public Util.)													
	22.5	10	0.28	*	100 des s. coal	-	-	*	*	*	10	<5	
AREA TOTAL													
	168.8		6.82										



REFUSE COMBUSTION FOR POWER GENERATION
Delaware, 1971 - All Fossil Fuel Plants, Wilmington SMSA

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10^{12} BTU yr	AREA POP. millions	10^6 tons yr	(a) REFUSE GENERATION 10^{12} BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE Miles
Wilmington SMSA	827.5	53.5	0.512	0.33	3.03	5.6	<5

Includes all plants detailed in attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Delaware, 1971 - "Coal Plants" Only, Wilmington SMSA

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10^{12} BTU yr	AREA POP. millions	10^6 tons yr	(a) REFUSE GENERATION 10^{12} BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE Miles
Wilmington SMSA	827.5	53.5	0.512	0.33	3.03	5.6	<5

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Delaware

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Wilmington SMSA													
98. Edgemoor Delaware Power & Light Boiler 1 *	72			PCTA				Dry	MCTA	72	1951	225	<5
2	72			PCTA				Dry	MCTA	72	1951	225	
3	82			PCTA				Dry	MCAX	83	1954	280	
4	164			PCTA				Dry	E	95	1966	555	
	390	65	30.90		60	32	8						
					des: p.coal oil gas								
97. Delaware City Delaware Power & Light Boiler 1	55			PCOP				Wet	MCTA	NR	1956	80	<5
				ROPP									
2	55			GOPP				Wet	MCTA	NR	1956	80	
				PCOP									
3	55			ROPP				Wet	MCTA	NR	1956	80	
				GOPP									
4	75			PCOP				Wet	MCTA/E	NR/ 97.5 (d)	1961	105	
				ROPP									
				GOPP									
	129.4	30	4.45		54	46							
					des: p.coal oil gas								

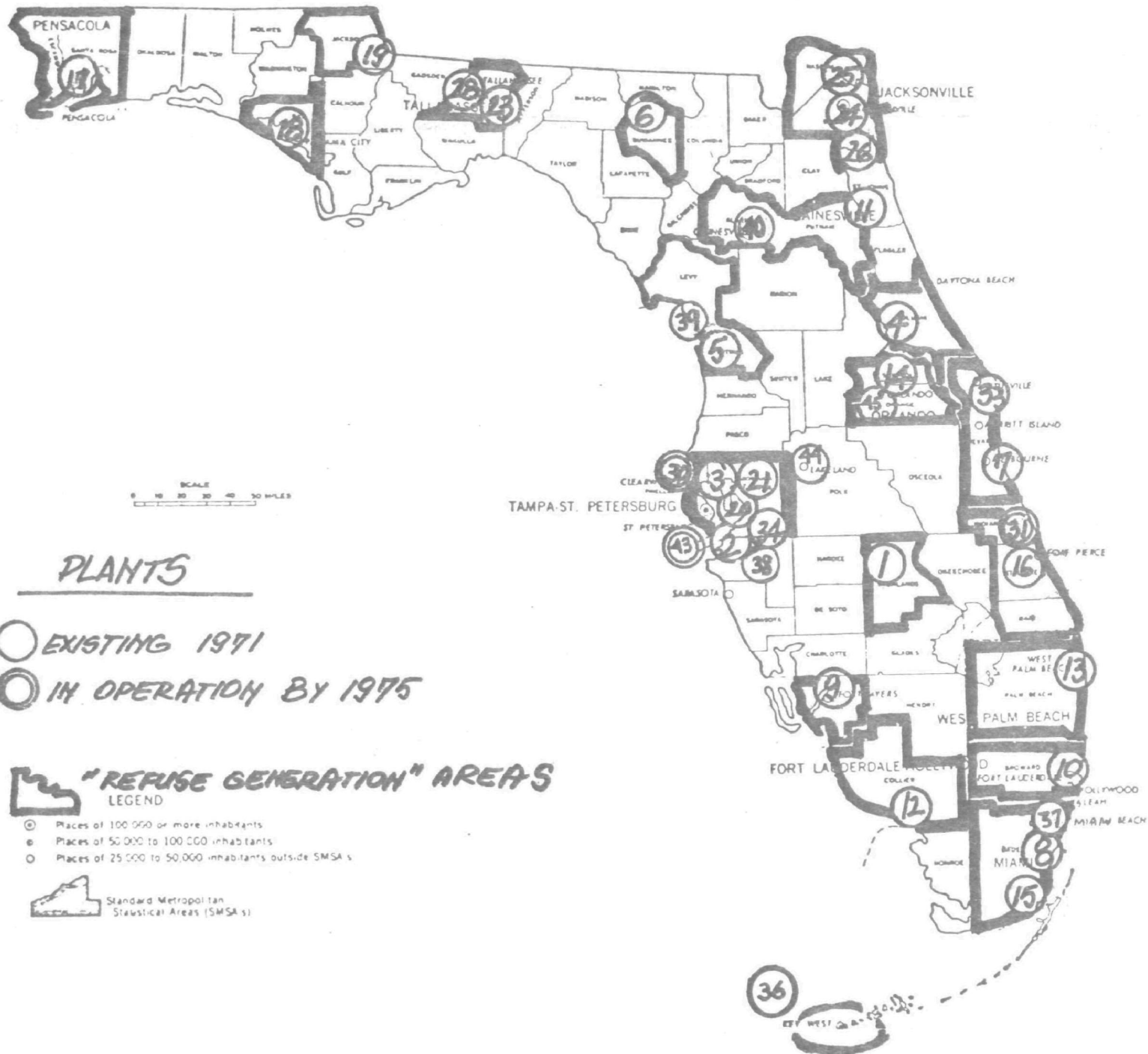
* Reported Boiler capacities prorated to give total plant capacity.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Delaware

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Wilmington SMSA													
17(NJ). Deepwater Atlantic City Electric Company Boiler 1	All boilers in range 23 to 82 MW			CYCL				Wet	E	90.7(t)	1958		<5
8				PCFR				Dry	MCAX	64.5(t)	1954		
7				RFRO				Dry	MCAX	84.1(t)	1942		
9				GRR0									
				top- fired									
3				RFRO				Dry	MCTA	80.8(t)	1952		
5				PCFR				Wet	MCAX	83.4(d)	1930		
4				RFRO									
6	RFRO												
	RFRO												
	308.3	56	18.17		0	83	17					770	
					des.								
					p. coal	oil	gas						
AREA TOTAL	827.5		53.52										

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REFUSE COMBUSTION FOR POWER GENERATION
Florida, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	TYPICAL TRANS. DISTANCE Miles
				10 ⁶ tons yr	10 ¹² BTU yr		
Daytona Beach SMSA	201.6	12.5	0.176	0.11	1.04	8.3	5
Fort Lauderdale SMSA	312.5	15.6	0.634	0.41	3.75	23.9	< 5
Fort Myers SMSA	558.3	22.8	0.108	0.07	0.64	2.8	< 5
Gainesville SMSA (incl. Putnam Co.)	208.5	11.6	0.145	0.09	0.80	6.9	10
Jacksonville SMSA (incl. Nassau Co.)	903.7	41.5	0.564	0.37	3.33	8.0	5
Melbourne-Titusville-Cocoa SMSA	1062.5	53.8	0.241	0.15	1.43	2.7	7
f Miami SMSA	1196.9	57.0	1.302	0.85	7.70	13.5	24
Orlando SMSA	252.3	12.0	0.437	0.28	2.58	21.5	15
Pensacola SMSA	651.3	34.5	0.246	0.16	1.45	4.2	< 5
Tallahassee SMSA	193.0	11.7	0.106	0.07	0.63	5.0	< 5
Tampa-St. Petersburg SMSA	2851.8	61.9	1.040	0.68	6.15	9.9	10
West Palm Beach SMSA	729.6	36.5	0.355	0.23	2.10	5.7	5
Bay County	340.0	17.8	0.077	0.04	0.41	5.3	< 5
Citrus County-Levy County	1018.1	43.2	0.033	0.02	0.19	0.5	5
Collier County	1254.6	73.8	0.038	0.02	0.02	-	30
Highlands County	61.0	2.7	0.030	0.01	0.16	5.9	10
Indian River Co.-St. Lucie Co.-Martin Co.	71.6	2.6	0.116	0.06	0.62	23.8	7
Jackson County	98.0	5.3	0.035	0.02	0.19	3.5	10
Suwannee County	147.0	9.4	0.016	0.00	0.09	1.0	< 5
Key West	68.8	3.9	0.028	0.01	0.17	4.3	
FLORIDA STATE TOTALS	12323.65	530.8	5.727	3.74	33.41	6.3	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Florida, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	TYPICAL TRANS. DISTANCE Miles
Daytona Beach SMSA	-	-	0.176	0.11	1.04	-	-
Fort Lauderdale SMSA	-	-	0.634	0.41	3.75	-	-
Fort Myers SMSA	-	-	0.108	0.07	0.64	-	-
Gainesville SMSA (incl. Putnam Co.)	-	-	0.145	0.09	.86	-	-
Jacksonville SMSA (incl. Nassau Co.)	-	-	0.564	.37	3.33	-	-
Melbourne-Titusville- Cocoa SMSA	-	-	0.241	.15	1.43	-	-
Miami SMSA	-	-	1.302	.85	7.70	-	-
Orlando SMSA	-	-	0.437	.28	2.58	-	-
Pensacola SMSA	651.3	34.5	0.246	.16	1.45	4.2	5
Tallahassee SMSA	-	-	0.106	.07	0.63	-	-
Tampa-St. Petersburg SMSA	1948.5	38.5	1.040	.68	6.15	16.0	10
West Palm Beach SMSA	-	-	0.355	.23	2.10	-	-
Bay County	340.0	17.8	0.077	.04	0.41	2.3	5
Citrus County-Levy County	964.3	40.9	0.020	.01	0.11	0.3	5
Collier County	-	-	0.038	.02	0.02	-	-
Highlands County	-	-	0.030	.01	0.16	-	-
Indian River Co.- St. Lucie Co.-Martin Co.	71.6	2.6	0.116	.06	0.62	23.8	7
Jackson County	98.0	5.3	0.035	.02	0.19	3.5	10
Suwannee County	-	-	0.016	.00	0.09	-	-
Key West	-	-	0.028	.01	0.17	-	-
FLORIDA STATE TOTALS	4073.7	139.7	5.727	3.74	33.41	23.9	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes plants 5, 16, 17, 18, 19, 20, 21 and 32.

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles
	MW	%			COAL	OIL	GAS		TYPE	EFF. %			
<u>Tampa-St. Petersburg SMSA</u>													
2. Bartow Florida Power Corporation													
Boiler 1	127.5			RFRO				None	none	-	1958	30	10
2	127.5			RTAN				"	"	-	1961	30	
3	239.4			RTAN				"	"	-	1963	60	
	494.4	7	2.94		-	89	11						
					des.	oil	gas						
3. Higgins Florida Power Corporation													
Boiler 1	46			GFRO				None	none	-	1951	120	10
2	46			GFRO				"	"	-	1953	120	
3	46			GTAN				"	"	-	1954	120	
	138	59	8.61		-	72	28						
					des.	oil	gas						
20. Gannon Tampa Electric													
Boiler 1	130			CYCL	100	-	-	Wet	E	86	1957	220	10
2	130			CYCL	100	-	-	Wet	E	91	1958	220	
3	179.5			CYCL	100	-	-	Wet	E	85	1960	305	
4	187.5			CYCL	100	-	-	Wet	E	80	1964	315	
5	239.4			PCOP	100	-	-	Wet	E	98	1965	405	
6	414			PCOP	100	-	-	Wet	E	86	1967	700	
	1270.4	43	9.47		100	-	-						
					des.p.coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: FLORIDA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Tampa-St. Petersburg SMSA cont'd</u>													
44. Lake Parker (Larsen Memorial, Polk Co.)													< 5
Plant 1 retired 1971.													
Plant 2													
Boiler 9	20			RFRO/ GFRO				None	None	-	1950	40	
10	25			RFRO/ GFRO				"	"	-	1956	55	
11	25			RFRO/ GFRO				"	"	-	1959	55	
12	50			RFRO/ GFRO				"	"	-	1966	110	
	120	49	6.23		- 51 49 des.oil/gas								
Plant 3													< 5
Boiler 1	100			ROPP/ GOPP				None	None	-	1970	110	
	100	25	2.60		- 86 14 des.oil/gas								
Plant Totals	219.6		8.83										
38. Bayboro Florida Power Corp.													15
Boiler 4	12.5			RFRO				None	None	-	1941	30	
5	10			RFRO				None	None	-	1941	25	
6	28.8			RFRO				None	None	-	1949	70	
	51.3	47	3.06		- 100 - des.oil								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU Yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Tampa-St. Petersburg SMSA Cont'd.</u>													
21. Hookers Point Tampa Electric Boiler 1 *	43.4 64.1 46.5 78.6 232.6	54	13.72	RFRO	-	100	.	None	None		1948	105 160 115 195	10
2				RFRO	.	100	.	"	"		1948		
3				RFRO	.	100	.	"	"		1950		
4				RFRO	.	100	.	"	"		1950		
5				RFRO	.	100	.	"	"		1953		
6				RTAN	.	100	.	"	"		1955		
					des.	oil	.						
34. Big Bend Tampa Electric Boiler 1	445.5	37	15.33	PCOP	100	-	-	Wet	E	98.7	1970	645	10
					des p. coal								
<u>AREA TOTAL</u>	<u>2851.8</u>		<u>61.96</u>										

* Boiler capacities prorated to give total plant capacity.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: FLORIDA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Miami SMSA													
15. Turkey Point Florida Power & Light													
Boiler 1	402.1			RFRO				None	MCAX	84	1967	945	25
2	402.5			RFRO				None	MCAX	84	1968	945	
	804.6	65	44.39			61	39						
					des.oil		gas						
8. Cutler Florida Power & Light													
Boiler 3	46			RFRO				None	MCAX	88(d)	1949	55	15
4	69			RTAN				None	MCAX	88(d)	1952	85	
5	75			RTAN				None	MCAX	88(d)	1954	90	
6	156.25			RTAN				None	MCAX	88(d)	1955	190	
	346.25	28	10.18			23	77						
					des.oil		gas						
37. Miami Florida Power & Light													
Boiler 11	46			RFRO				None	MCAX	88(d)	1948	} 105	
12	46	46	2.51	RFRO		2	98	None	MCAX	88(d)	1948		
					des.oil/gas								
AREA TOTAL	1196.9		57.08										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Orlando SMSA</u>													
14. Sanford Florida Power & Light Boiler 3	156.3	61	8.74	RFRO	- des.oil	84	16 gas	None	None	-	1959	370	15
45. Lake Highland Orlando Utilities Comm. Boiler 1	28			RFRO/ GFRO				None	None	-	1949	} 40	
2				RFRO/ GFRO				None	None	-	1949		
3	34			RFRO/ GFRO				None	None	-	1954		50
4	34			RFRO/ GFRO				None	None	-	1956		50
	96	28	3.27		-	9	91						
					des.oil/gas								
AREA TOTAL	252.3		12.01										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles
<u>Collier County</u>												
12. Pt. Everglades Florida Power & Light												
Boiler 1	225.2			RFRO				None	MCAX	85(d)	1960	
2	225.2			RFRO				None	MCAX	85(d)	1961	30
3	402.1			RFRO				None	MCAX	88(d)	1964	
4	402.1			RFRO				None	MCAX	88(d)	1965	
	1254.6	67	73.89		-	62	38				565	
					des.	oil	gas				565	
AREA TOTAL	1254.6		73.89								1005	
											1005	
												Miami 70
<u>Key West</u>												
36. Key West Key West Utility Board												
Boiler 1				*	-	100	-	*	*	*		<5
2					-	100	-					
3					-	100	-					
4					-	100	-					
5					-	100	-					
	68.8	54**	3.9		-	100	-			1963		
					-	100	-			1966		
					des.	oil					165	
AREA TOTAL	68.8		3.9									

* No FPC 67 filed
** State average used

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
<u>Melbourne-Titusville-Cocoa SMSA</u>										
<u>(7)</u> 7. Cape Kennedy Florida Power & Light Boiler 1	402			RFRO		None	MCAX	84	1965	1080
2	402			RFRO			MCAX	84	1969	1080
	804	74	41.17		- 62 38 des. oil gas					
33. Indian River Orlando Utility Commission Boiler 1	78.5			RTAN/ GTAN		None	None	-	1960	160
2	180			RTAN/ GTAN		"	"	-	1964	375
	258.5	54	12.65		- 36 64 des. oil gas					
AREA TOTAL -	1062.5		53.02							
<u>Highlands County</u>										
1. Avon Park Florida Power Corp. Boiler 1AB	15			RFRO		None	None	-	1928	25
2	46			GTAN		"	"	-	1952	85
	61	41	2.71		* 36 64 des. oil gas					
AREA TOTAL	61.0		2.71							

Tampa 63
Orlando 60

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: FLORIDA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Gainesville SMSA</u>													
11. Palatka Florida Power & Light Boiler 1	34.5			RFRO				None	None	-	1951	90	12
2	75.			RTAN				None	None	-	1956	195	
	109.5	60	6.83		-	88	12						
					des.	oil	gas						
40. Gainesville City of Gainesville	99	49	4.80	*	-	5	95	*	*	*		200	-
					des.	oil	gas						Jacksonville 63
AREA TOTAL	208.5		11.63										
<u>Daytona Beach SMSA</u>													
4. Turner Florida Power Corp. Boiler 1	12.5			RFRO				None	None	-	1926	30	
2	28.7			GFRO				None	None	-	1946	75	
3	78.8			GFRO				None	None	-	1955	205	
4	81.6			GOFF				None	None	-	1959	210	
	201.6	60	12.56		-	16	84						
					des.	oil	gas						
AREA TOTAL	201.6		12.56										

* No FPC 67 filed

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
<u>Jacksonville SMSA , Nassau County</u>										
24. Kennedy Jacksonville Electric Authority										
Boiler 8	50			RFR0	- 100 -	None	None	-	1955	<5
9	50			RFR0	- 100 -	" "	" "	-	1955	
10 }	149.6			RFR0	- 100 -	" "	" "	-	1961	
14 }	249.6	53	13.03		- 100 -				330	
					des. oil					
25. Northside Jacksonville Electric Authority										
Boiler 1	297.5	47	12.01	ROPP	- 100 -	None	None	-	1966	<5
					des. oil				505	
26. Southside Jacksonville Electric Authority										
Boiler 1	37.5			RFR0	- 100 -	None	None	-	1950	<5
2	37.5			RFR0	- 100 -	" "	" "	-	1951	
3	50			RFR0	- 100 -	" "	" "	-	1955	
4	75			RFR0	- 100 -	" "	" "	-	1958	
5	156.6			RFR0	- 100 -	" "	" "	-	1964	
	356.6	49	16.47		- 100 -				305	
					des. oil					
AREA TOTAL	903.7		41.51							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Fort Myers SMSA</u>													
9. Fort Myers Florida Power & Light Boiler 1	156.3			RFRO	-	100	-	None	None	-	1958	270	<5
2	402			RFRO	-	100	-	"	MCAX	84 (d)	1969	700	
	558.3	48	22.81		des.	oil							
AREA TOTAL	558.3		22.81										
<u>Tallahassee SMSA</u>													
23. Purdom City of Tallahassee Boiler 1	7.5			RFRO				None	None		1952	20	<5
2	7.5			RFRO				"	"		1952	20	
3	7.5			RFRO/ GFRO				"	"		1952	20	
4	7.5			RFRO/ GFRO				"	"		1954	20	
5	22			RTAN/ GTAN				"	"		1958	65	
6	22			RFRO/ GFRO				"	"		1961	65	
7	44			RFRO/ GFRO				"	"		1966	130	
	118	51	8.36		des.	oil	85 gas						

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Tallahassee SMSA Cont'd.</u>													
28. Hopkins City of Tallahassee	75	54	3.36	RFRO/ GFRO	- des.	- oil	100 gas	None	None	-	1971	140	< 5
AREA TOTAL	193.0		11.72										
<u>Suwannee County</u>													
6. Suwannee Florida Power Corp. Boiler 1	34.5			GTAN/ RTAN				None	None		1953	95	10
2	37.5			GFRO/ RFRO				"	"		1954	100	
3	75			GFRO				"	"		1956	205	
	147	65	9.47		- des.	61 oil	39 gas						
AREA TOTAL -	147		9.47										Jacksonville 85

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: FLORIDA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Citrus County-Levy County													
5. Crystal River Florida Power Corp.				RTAN PCTA				None Dry	None E	-	1966 1969	800 950	5
Boiler 1	440.5												
2	523.8 964.3	50	40.9		39	61	-						
					des.p.coal								
39. Inglis Florida Power Corp.				GFRO GFRO GFRO GFRO GFRO				None None None None None	None None None None None	-	1926 1926 1926 1926 1947	} 20 } 20 50	
Boiler 1	12.5												
3													
2	12.5												
4													
6	28.8 53.8	36	2.33		-	31	69						
					des.oil/gas								
AREA TOTAL	1018.1	43.23											

Gainesville 5

Gainesville 50

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MM	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Indian River, St. Lucie and Martin Counties</u>													
16. King													
City of Fort Pierce													
Boiler 1	0.5			*				*	*	*	1924	-	7
2	1.5										1937	-	
3	2.6										1937	-	
4	5.1										1948	5	
5	7.7										1953	10	
6	16.9										1958	25	
7	37.3										1964	55	
	71.6	32	2.61		des.	oil	gas						
AREA TOTAL	71.6		2.61										West Palm Beach 45
<u>West Palm Beach SMSA</u>													
13. Riviera													
Florida Power & Light													
Plant 1AB	43.8			RFRO				None	MCAX	78.5(d)	1946	90	5
2	75			RTAN				"	MCAX	88(d)	1953	160	
3	310.4			RFRO				"	MCAX	88(d)	1962	660	
4	310.4			RFRO				"	MCAX	88(d)	1963	660	
	729.6	56	36.53		des.	oil	gas						
AREA TOTAL	729.6		36.53										

* No FPC-67 filed.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE Miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %			
Fort Lauderdale SMSA													
10. Lauderdale Florida Power & Light Boiler 4	156.25			RFRO				None	None	-	1957	330	<5
5	156.25			RFRO				"	"	-	1958	330	
	312.50	54	15.69		des.	36 oil	64 gas						
AREA TOTAL	312.50		15.69										
Pensacola SMSA													
17. Crist Gulf Power Co. Boiler 1	28.2			RFRO/				None	None	-	1944	60	<5
2	28.2			GFRO				"	"	-	1949	60	
3	37.5			RFRO/				"	"	-	1952	85	
4	93.8			GFRO				Dry	E	99.1	1959	210	
5	93.8			PCTA/				Dry	E	99.1	1961	210	
6	369.8			GTAN				Dry	E	99.4	1970	840	
	651.3	55	34.59	GFRO/									
				PCFR									
					des.	37 coal	2 oil	61 gas					
AREA TOTAL	651.3		34.59										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Florida

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Jackson County</u>													
19. Scholz (River Junction)													
Gulf Power Co.													
Boiler 1	49			PCFR	100	-	-	Dry	MCAX	65	1953	110	10
2	49			PCFR	100	-	-	Dry	MCAX	65	1953	110	
	98	50	5.37		100	-	-						
					des.coal								Tallahassee 40
<u>AREA TOTAL</u>	98.0		5.37										
<u>Bay County</u>													
18. Lansing Smith													
Gulf Power Co.													
Boiler 1	149.6			PCTA	100	-	-	Dry	E	96.8	1965	330	<5
2	190.4			PCTA	100	-	-	Dry	E	98.7	1967	425	
	340	59	17.80		100	-	-						
					des.p.coal								
<u>AREA TOTAL</u>	340.0		17.80										Tallahassee 80

PLANTS:

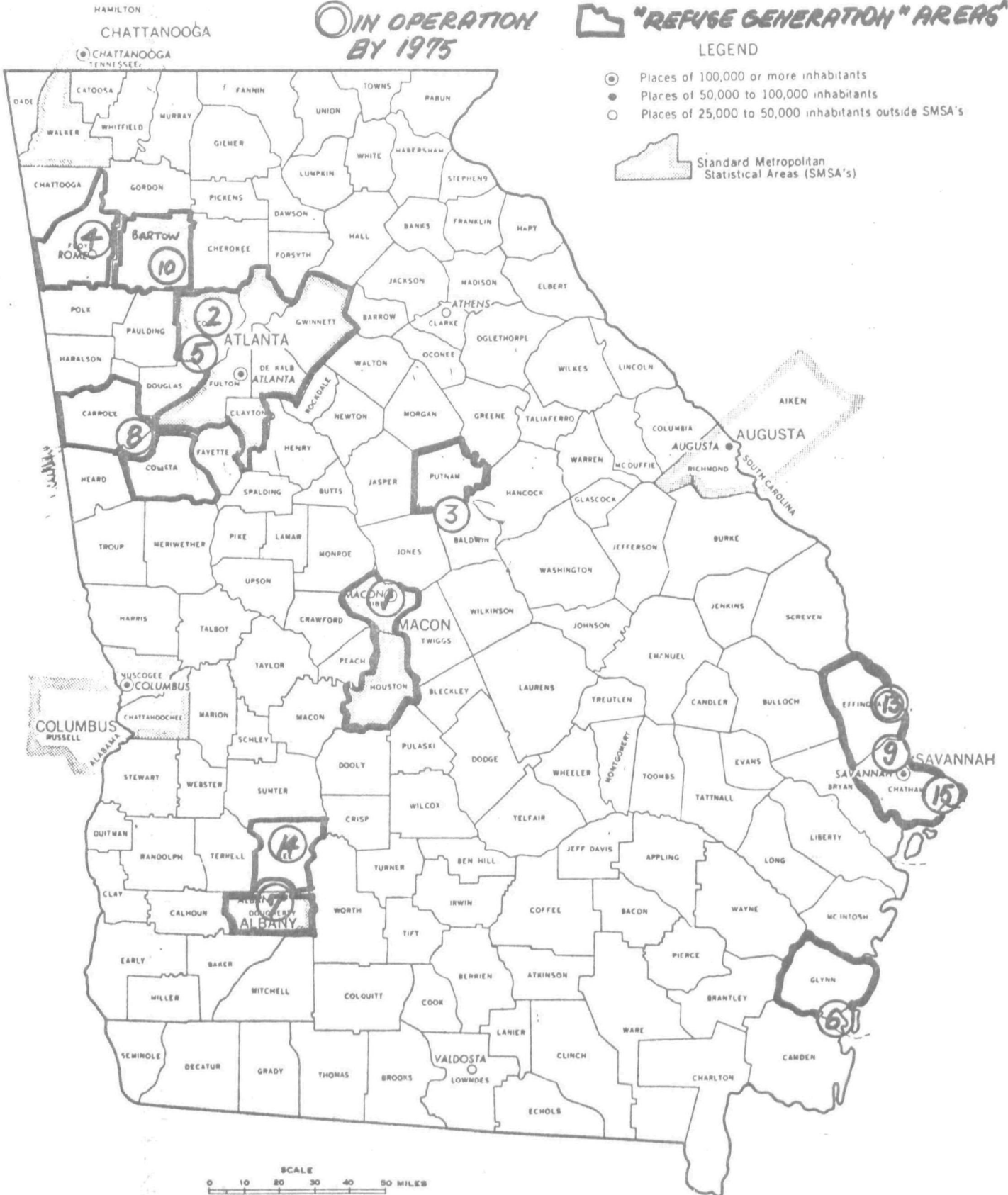
- EXISTING 1971
- IN OPERATION BY 1975

"REFUSE GENERATION" AREAS

LEGEND

- Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's

Standard Metropolitan Statistical Areas (SMSA's)



REFUSE COMBUSTION FOR POWER GENERATION
Georgia, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE Miles
Albany SMSA	218.3	12.0	0.090	0.05	0.53	4.4	<5
Atlanta SMSA	856.4	54.5	1.429	0.93	8.45	15.5	<5
Macon SMSA	181.3	13.5	0.210	0.13	1.24	9.2	<5
Savannah SMSA (incl. Effingham Co.)	318.0	19.8	0.204	0.34	1.21	6.1	9
Putnam County	1746.2	83.0	0.009	0.00	0.05	0.1	
Bartow County	1400.0	61.3	0.033	0.02	0.17	0.3	5
Carroll County	680.0	40.6	0.047	0.02	0.25	6.2	<5
Floyd County	953.0	39.8	0.076	0.04	0.40	1.0	<5
Glynn County	143.8	8.8	0.051	0.03	0.27	3.1	<5
Lee County	10.0	0.4	0.007	0.00	0.03	9.3	15
GEORGIA STATE TOTALS	6507.0	334.0	2.166	1.40	12.63	3.8	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Georgia, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. $10^{12}\frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		$10^6\frac{\text{tons}}{\text{yr}}$		$10^{12}\frac{\text{BTU}}{\text{yr}}$	Miles		
Albany SMSA	218.3	12.0	0.090	0.05	0.53	4.4	<5
Atlanta SMSA	856.4	54.5	1.429	0.93	8.45	15.5	<5
Macon SMSA	181.3	13.5	0.210	0.13	1.24	9.2	<5
Savannah SMSA (incl. Effingham County)	207.0	15.1	0.204	0.13	1.21	8.0	10
Putnam County	1746.2	83.0	0.009	0.00	0.05	0.1	
Bartow County	1400.0	61.3	0.033	0.02	0.17	0.3	5
Carroll County	680.0	40.6	0.047	0.02	0.25	6.2	<5
Floyd County	953.0	39.8	0.076	0.04	0.40	1.0	<5
Glynn County	143.8	8.8	0.051	0.03	0.27	3.1	<5
Lee County	10.0	0.4	0.007	0.00	0.03	9.3	15
GEORGIA STATE TOTALS	6396.0	329.2	2.166	1.40	12.63	3.8	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except No. 15 (Savannah SMSA).

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Georgia

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Atlanta SMSA</u>													
2. Atkinson (Georgia Power Co.)													
Boiler 1	61			PCFR				DRY	E	90	1930	220	<5
2	61			PCTA				DRY	E	90	1941	220	
3	61			PCTA				DRY	E	90	1945	220	
4	75			PCTA				DRY	E	90	1948	270	
	258	68	22.01		16	-	84						
					des. p. coal gas								
5. McDonough (Georgia Power Co.)													
Boiler 1	299.2			PCTA				WET	E	98	1963	695	<5
2	299.2			PCTA				WET	E	98	1964	695	
	598.4	65	32.56		84	-	16						
					des. p. coal gas								
AREA TOTAL	856.4		54.57										
<u>Floyd County</u>													
4. Hammond (Georgia Power Co.)													
Boiler 1	125							WET	Cycl/E	30/96	1954	220	<5
2	125							WET	E	95	1954	220	
3	125							WET	E	92	1955	220	
4	578							WET	E	90	1970	1035	
	953	43	39.81		100	-	-						
					des. p. coal								
AREA TOTAL	953		39.81										

Gadsden 40
Atlanta 80

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Georgia

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DIST.
	MW	%			COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Glynn County</u>													
6. McManus (Georgia Power Co.)													
Boiler 1	50			PCFR				WET	E	98	1952	130	<5
2	93.8			PCFR				WET	E	98	1959	245	Savannah 60
	143.8	64	8.88		84	16	-						
					des. p. coal								
AREA TOTAL	143.8		8.88										
<u>Macon SMSA</u>													
1. Arkwright (Georgia Power Co.)													
Boiler 1	46			PCTA				DRY	E	80	1942	145	<5
2	46			PCTA				DRY	E	83	1942	145	
3	43.3			RTAN				DRY	MECH	70	1943	135	
4	46			GTAN				DRY	E	93	1948	145	
	181.3	67	13.52		36	-	64						
					des. p. coal gas								
AREA TOTAL	181.3		13.52										
<u>Bartow County</u>													
10. Bowen (Georgia Power Co.)													
Boiler 1	700			PCTA	100	-	-	DRY	E	98.12	1971	1305	5
2	700			PCTA	100	-	-	DRY	E	98	1971	1305	
	1400	50	61.32*		100	-	-						Atlanta 20
					des p. coal								
AREA TOTAL	1400	-	61.32										

* Plant started up in 1971. This figure represents a load factor of 50% (average for Georgia). The actual factor in 1971 was only 6.5%

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Georgia

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles
Savannah SMSA												
Effingham County												
9. Port Wentworth												
(Savannah Electric Power Co.)												
Boiler 1	50			PCTA				WET	MCTA	92.5	1957	10
2	54			RTAN				WET	MCTA	92.5	1961	
3	103			GTAN				WET	MCTA	86.1	1965	
	207	77	15.11		6	61	33					
					des. coal	oil	gas					
15. Riverside												
(Savannah Electric Power Co.)												
Boiler 7	25			RFRO				None	None	-	1926	} 45
8				RFRO				"	"	-	1926	
9				RFRO				"	"	-	1940	} 45
10	25			GFRO				"	"	-	1949	
11	25			GFRO				"	"	-	1953	45
12	36			RTAN				"	"	-	1955	65
	111	35	4.77	GTAN								
				RTAN								
				GTAN								
					20	80						
					des -	oil	gas					
AREA TOTAL	318		19.88									

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Georgia

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Putnam County</u>													
3. Haylee Branch (Georgia Power Co.)													
Boiler 1	299.2			PCOP	100	-	-	WET	E	95	1965	610	<5
2	359			PCOP	100	-	-	WET	E	96	1967	730	
3	544			PCOP	100	-	-	WET	E	97	1968	1105	
4	544			PCOP	100	-	-	WET	E	98	1969	1105	Macon 35
	1746.2	54	83.04		100	-	-						
					des. p. coal								
AREA TOTAL	1746.2		83.04										
<u>Albany SMSA</u>													
7. Mitchell (Georgia Power Co.)													
Boiler 1 **	28.9			PCFR	100	-	-	DRY	E	85	1948	65	<5
2	28.9			PCFR	100	-	-	DRY	E	85	1948	65	
3	160.5			PCTA	100	-	-	DRY	E	92	1964	375	
	218.3	58	12.00		100	-	-						
					des. p. coal								
AREA TOTAL	218.3		12.0										
<u>Lee County</u>													
14. Warwick (Crisp County Power Co.)	10	44	0.40		100	-	-	*	*	*	-	15	15
					des. p. coal								Albany 10
AREA TOTAL	10		0.40										

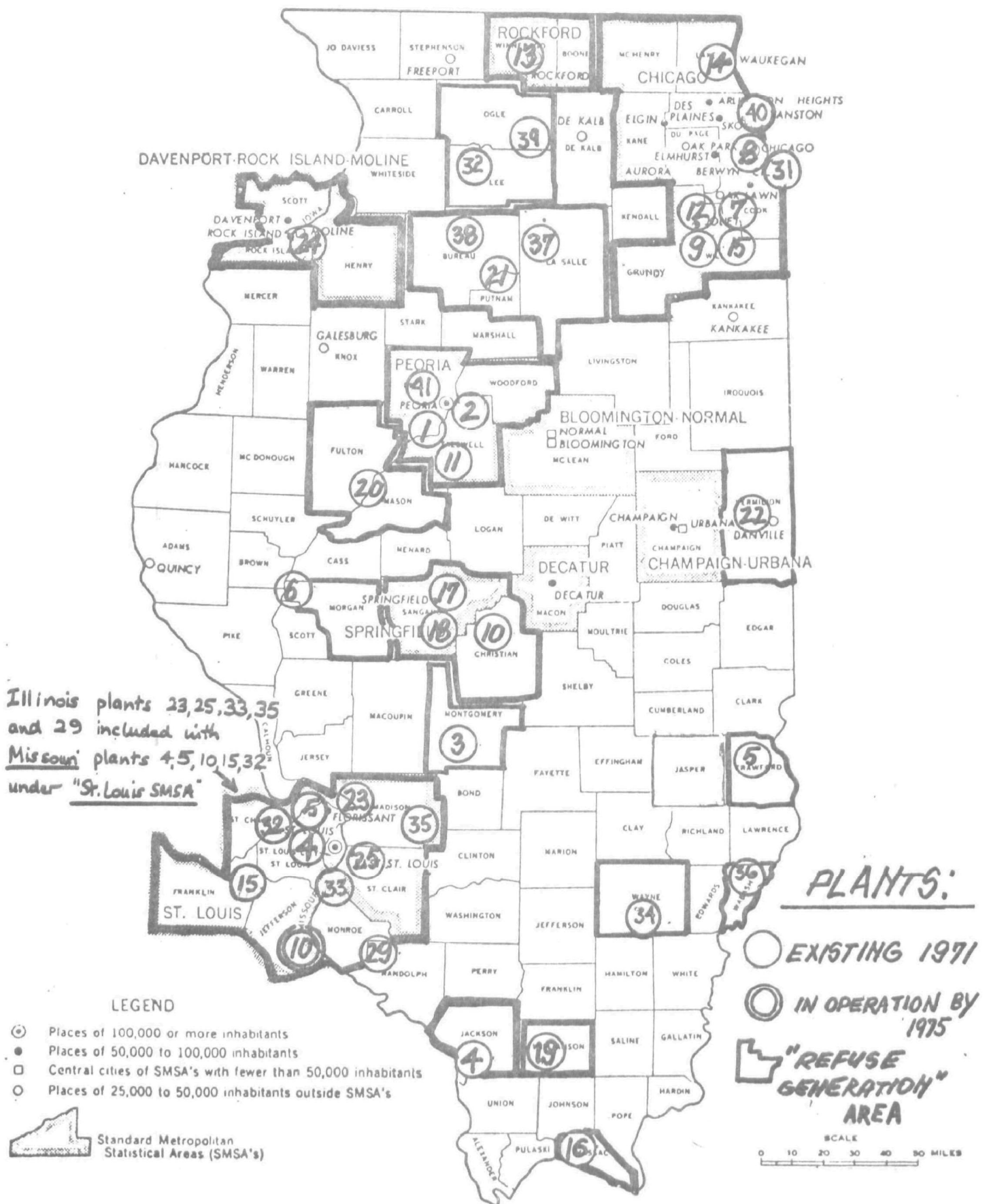
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** Boiler capacities prorated to give total plant capacity. * No FPC-67 filed.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Georgia

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Carroll County</u>													
8. Yates													
(Georgia Power Co.)													
Boiler 1 *	124			GTAN				WET	MCAX/E	98.2	1950	310	<5
2	124			GTAN				WET	E	97.8	1950	310	
3	124			PCTA				WET	E	97.8	1952	310	Atlanta 40
4	154			PCTA				WET	E/MCAX	98.6(t)	1957	385	
5	154			PCTA				WET	E	96.8(t)	1958	385	
	680	62	40.63		48	-	52						
					des. p. coal								
<u>AREA TOTAL</u>	680		40.63										

* Boiler capacities prorated to give total plant capacity



REFUSE COMBUSTION FOR POWER GENERATION
Illinois, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE Miles
Chicago SMSA (incl. Grundy Co.)	6169.7	293.3	7.116	4.67	42.08	14.3	21
Davenport-Rock Island-Moline SMSA	99.1	4.7	0.366	0.24	2.16	45.8	<5
Peoria SMSA	1139.8	54.0	0.347	0.22	2.05	3.8	5
Rockford SMSA	146.4	10.2	0.276	0.18	1.63	15.9	<5
Springfield SMSA (incl. Christian Co.)	1545.4	71.8	0.201	0.13	1.19	1.7	13
Bureau-LaSalle-Putnam Cos.	324.4	19.6	0.157	0.09	0.84	4.3	10
Crawford County	200.0	9.7	0.020	0.01	0.11	1.1	5
Fulton-Mason Counties	230.0	9.5	0.059	0.03	0.31	3.3	5
Jackson County	232.7	11.0	0.056	0.03	0.30	2.7	10
Lee-Ogle Counties	131.7	8.8	0.082	0.04	0.44	5.0	
Massac County	110.4	69.5	0.014	0.00	0.07	0.1	15
Montgomery County	330.0	18.8	0.031	0.01	0.17	0.9	5
Morgan County	354.4	17.6	0.037	0.02	0.20	1.1	15
Vermillion County	182.3	10.5	0.099	0.05	0.53	5.0	7
Williamson County	99.0	54.9	0.050	0.03	0.27	0.5	5
Wabash County	20.5	0.9	0.013	0.00	0.07	7.7	
Wayne County	12.5	0.5	0.017	0.01	0.09	18.1	
ILLINOIS STATE TOTALS	12318.3	665.7	8.940	5.83	52.51	7.9	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

Illinois, 1971 - All Fossil Fuel Plants - identical to table above

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Chicago SMSA</u>													
14. Waukegan													
Commonwealth Edison													
Boiler 10	240			PCFR				DRY	E	95(d)	1956	530	35
12				PCFR				WET	E	95(d)	1930		
13				CYCL				WET	E	95(d)	1930		
14				PCFR/									
15	121.8			GFRO				WET	E	95(d)	1931	270	
16				PCFR/				WET	E	95(d)	1931		
17				GFRO				WET	E	95(d)	1931		
18				CYCL/				WET	-	-	1952		
7	326	57	59.54	GFRO	83	-	17					730	
8	355			PCTA/				DRY	E	98(d)	1958		
				GTAN				DRY	E	98(d)	1962		
	1042.8			PCTA/								795	
				GTAN									
					des.p.coal		gas						
<u>8. Fisk</u>													
Commonwealth Edison													
Boiler 17-1	189.2			PCFR				WET	E	98(d)	1942	325	45
17-2				PCFR				WET	E	98(d)	1942		
18-1				CYCL				WET	C	98(d)	1943		
18-2	357.4			CYCL				WET	C	98(d)	1949	620	
19				PCTA/									
				GTAN				DRY	E	98(d)	1959		
	546.6	45	22.53		50	-	50						
					des.p.coal		gas						

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles
					COAL	OIL	GAS		TYPE	EFF. %			
Chicago SMSA cont'd													
31. Calumet													
Comm. Edison													
Boiler 1	*			GTAN/ PCTA				Wet	E	95(d)	1947		< 5
2				GTAN/ PCTA				Wet	E	95(d)	1947		
	107	65	7.72		31	-	69					325	
					des p-coal/gas								
40. Winnetka													
Village of Winnetka													
Boiler 4	7.5			OSTO				Dry	None	-	1958	15	20
8	10			SPRE				Dry	IMPE	91.8(d)	1964	20	
7	5			OSTO				Dry	None	-	1948	10	
6	3			OSTO				Dry	None	-	1938	5	
5				OSTO				Dry	None	-	1938		
	25.5	33	1.30		27	-	73						
					des s-coal								

* No boiler breakdown available

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Chicago SMSA Cont'd.													
12. Ridgeland Commonwealth Edison Boiler 1	172			CYCL/ GFRO				WET	E	98(d)	1951	410	20
2				CYCL/ GFRO				WET	E	98(d)	1951		
3	172			CYCL/ GFRO				WET	E	98(d)	1950	410	
4				CYCL/ GFRO				WET	E	98(d)	1950		
5	173			CYCL/ GFRO				WET	E	90(d)	1953	410	
6	173			CYCL/ GFRO				WET	E	90(d)	1955	410	
	690	60	38.56			99	-						
					des.	oil	gas						
7. Crawford Commonwealth Edison Boiler 61				GFRO				-	-	-	1968		20
62				GFRO				-	-	-	1968		
63				GFRO				-	-	-	1968		
64				GFRO				-	-	-	1968		
65	104			GFRO				-	-	-	1968	205	
66				GFRO				-	-	-	1968		
7	239.5			PCTA/ GTAN				DRY	E	98(d)	1958	470	
8	358			PCTA/ GTAN				DRY	E	98(d)	1961	700	
	701.5	51	32.41			36	-						
					des. p. coal		gas						

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YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY MW	LOAD FACTOR %	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU % COAL OIL GAS	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL TYPE EFF. %	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles
Chicago SMSA Cont'd.										
15. Will County										
Commonwealth Edison										
Boiler 1	188			CYCL	100 - -	WET	E 91(d)	1955	385	20
2	184			CYCL	100 - -	WET	E 91(d)	1955	375	
3	298.9			PCTA	100 - -	DRY	E 98(d)	1957	610	
4	598			PCTA	100 - -	DRY	E 98(d)	1963	1230	
	1268.9	56	60.83		100 - - des.p.coal					
9. Joliet										
Commonwealth Edison										
Boiler 1	72			PCFR		WET	None -	1941		20
2				PCFR		WET	"E -	1950	} 125	
3				CYCL/ GFRO		WET	E 95.7	1950		
4	102.8			CYCL/ GFRO		WET	E 95.7	1950	} 180	
5	345.6			CYCL/ GFRO		WET	E 98(d)	1959	610	
71	633.5			PCTA		DRY	E 99(d)	1965	} 1125	
72				PCTA		DRY	E 99(d)	1965		
81	633.5			PCTA		DRY	E 99(d)	1965	} 1125	
82				PCTA		DRY	E 99(d)	1966		
	1787.4	47	75.02		89 - 16 des.p.coal gas					
AREA TOTAL	6169.7		293.31							

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	1012 BTU/yr		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
<u>Rockford SMSA</u>										
13. Sabrooke										
Commonwealth Edison										
Boiler 1	19.4			SPRE/ GOPP		DRY	MCAX 92(d)	1949	55	<5
2	35			SPRE/ GOPP		DRY	MCAX 92(d)	1952	100	
3	38			SPRE/ GOPP		DRY	MCAX 92(d)	1955	110	
4	54			PCTA/ GTAN		DRY	E 96(d)	1961	160	
	146.4	69	10.23		55 - 45 des.p.coal gas					
AREA TOTAL	146.4		10.23							
<u>Davenport-RockIsland-Moline SMSA</u>										
24. Moline										
Iowa-Illinois Gas & Elec. Co.										
Boiler 16	8			SPRE/ GOPP		DRY	none	1942	15	<5
17	8			SPRE/ GOPP		DRY	none	1942	15	
18	8			SPRE/ GOPP		DRY	none	1942	15	
19	5			SPRE		DRY	none	1918	10	
20	5			SPRE		DRY	none	1918	10	
21	5			SPRE		DRY	none	1918	10	
22	10.1			RFRO/ GFRO		DRY	none	1952	20	
23	25			RFRO/ GFRO		DRY	none	1953	50	
24	25			RFRO/ GFRO		DRY	none	1954	50	
	99.1	41	4.72		8 1 91 des.p.coal gas					
AREA TOTAL	99.1		4.72							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Bureau-LaSalle-Putnam Counties</u>													
21. Hennepin Illinois Power Company Boiler 1	75			PCTA/ GTAK				DRY	MCAX	83.5	1953	195	10
2	231.3 306.3	70	19.07	PCTA/ GTAK	42 des.p.coal	- -	58 gas	DRY	MCAX	85	1959	610	
37. Peru Mount Carmel Public Utility*	15.3	33	0.53		100 des.p.coal	- -	- -	*	*	*	-	20	10
38. Princeton Princeton Municipal Utilities*	2.8	14	0.04		- des.p.coal	- -	- gas	*	*	*	-		10
AREA TOTAL	324.4		19.64										Moline 60

* No FPC-67 filed.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles
Peoria SMSA												
1. Edwards Central Illinois Light Co.												
Boiler 1	136			PCFR				Wet	E	98	1960	310
2	280			PCFR				Wet	E	99	1968	645
	416	65	22.48		99	1	-					
					des. p. coal							
41. Keystone Central Illinois Light Co.												
Boiler 1	7.5			SPRE				Dry	Cycl	80	1967	10
2	18.8			SPRE				Dry	Cycl	80	1957	25
3	12.5			SPRE				Dry	Cycl	80	1955	15
4	15.6			SPRE				Dry	Cycl	80	1947	20
	54.4	25	1.76		34	-	66					
					des. s. coal/gas							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU Yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>PEORIA SMSA Cont'd.</u>													
2. Wallace Central Illinois Light Co.													
Boiler 1	22.2			GFRO				DRY	None	-	1925	40	5
2				GFRO				DRY	"	-	1925		
3				GFRO				DRY	"	-	1925	40	
4	22.2			GFRO				DRY	"	-	1925		
5	25			GFRO/ PCFR				DRY	CYCL	85	1939	50	
6	40.2			GFRO/ PCFR				DRY	CYCL	85	1947	80	
7	40.2			PCFR				DRY	E	95 (d)	1949	80	
8	85.9			PCFR				DRY	E	95 (d)	1949	170	
9				PCFR				DRY	E	96 (d)	1952		
10	113.6			PCFR				DRY	E	97 (d)	1958	230	
	349.4	45	16.74		71	-	29						
					des.p.coal		gas						
11. Powerton Commonwealth Edison													
Boiler 1	55			PCFR	100	-	-	DRY	None	-	1928	95	5
2	55			PCFR	100	-	-	WET	"	-	1929	95	
3	105			PCFR	100	-	-	WET	"	-	1930	180	
4	105			PCFR	100	-	-	WET	"	-	1940	180	
	320	31	13.05		100	-	-						
					des.p.coal								
AREA TOTAL	1139.8		54.03										

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RCMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE Miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	
Fulton-Mason Counties												
20. Havana												
Illinois Power Company												
Boiler 1				PCTA			-	DRY	GRAV	15	50	5
2				PCTA			-	DRY	GRAV	15	50	
3				PCTA			-	DRY	GRAV	15	50	
4				PCTA			-	DRY	GRAV	15	50	
5				PCTA			-	DRY	GRAV	15	50	
6				PCTA			-	DRY	GRAV	15	50	
7				PCTA			-	DRY	GRAV	15	50	
8				PCTA			-	DRY	GRAV	15	50	
	230	37	9.53		100	-	-					
AREA TOTAL	230		9.53		des.p.coal							Peoria 25
Springfield SMSA												
17. Lakeside												
Springfield Water Light & Power Dept.												
Boiler 1				N.R.				N.R.	N.R.	-		<5
2				RFRO			-	-	SCTA	70	1938	
3				RFRO			-	-	SCTA	70	1939	
4				RFRO			-	-	SCTA	80	1945	
5				PCFR				DRY	C	96.8	1947	
6				PCFR				DRY	C	96.8	1951	
7				CYCL				WET	E	84.4	1961	
8				CYCL				WET	E	84.4	1965	
	146	32	5.25		100	-	-				225	
					des.p.coal							

* Boilers 2, 3, 4 were converted to oil during 1971 and can no longer burn coal. Bottom handling was "dry"

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Springfield SMSA Cont'd.</u>													
18. <u>Dallman</u> Springfield Water Light & Power Dept. Boiler 31	80 80	74	6.03	CYCL	100 100	- -	- -	WET	MCAX/E	85/99	1968	255	<5
					des.p.coal								
10. <u>Kincaid</u> Commonwealth Edison Boiler 1	659.7			CYCL	100	-	-	WET	E	98(d)	1967	945	15
2	659.7			CYCL	100	-	-	WET	E	98(d)	1968	945	
	1319.4	34	60.60		100	-	-						
					des.p.coal								Springfield 45
AREA TOTAL	1545.4		71.88										
<u>Morgan County</u>													
6. <u>Meredosia</u> Central Illinois Public Service Company													
Boiler 1	28.75			PCTA				DRY	E	99.6(t)	1948	65	15
2	28.75			PCTA				DRY	E	98.8(t)	1948	65	
3	28.75			PCTA				DRY	E	99.4(t)	1949	65	
4	28.75			PCTA				DRY	E	99.4(t)	1949	65	
5	239.4			PCTA				DRY	E	90	1960	550	
	354.4	61	17.61		99	1	-						Champaign-Urbana 25
					des.p.coal								
AREA TOTAL	354.4		17.61										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SNSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Lee County - Ogle County</u>													
39 Rochelle (Ogle Co.) Rochelle Municp. Utilities.	12.7	51	0.67	*	72	-	28	*	*	*	-	- 25	<5
					des. coal/gas								
32. Dixon (Lee Co.) Comm. Edison													<5
Boiler 4	50			PCFR/GFRO				Wet	E	92(d)	1945	140	
5	69			PCFR/GFRO				Wet	E	95(d)	1953	200	
	119	66	8.15		74	-	26						
					des. p. coal/gas								
AREA TOTAL	131.7		8.82										
													Rockford 25 Chicago 80

* No FPC-67 filed.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Jackson County													
4. Grand Tower Central Illinois Public Service Co.													
Boiler 1 *				OSTO	100	-	-	DRY	None	-	1924	15	10
2				OSTO	100	-	-	DRY	"	-	1924	15	
3				OSTO	100	-	-	DRY	"	-	1924	15	
4			Each 8.6	OSTO	100	-	-	DRY	"	-	1924	15	
5				OSTO	100	-	-	DRY	"	-	1924	15	
6				OSTO	100	-	-	DRY	"	-	1924	15	
7	36.3			PCFR	100	-	-	DRY	E	98.5	1950	75	
8	36.3			PCFR	100	-	-	DRY	E	98.5	1950	75	
9	108.5			PCFR	100	-	-	DRY	E	97.1	1958	235	
	232.7	55	11.02		100	-	-						
AREA TOTAL	232.7		11.02		des.p.coal								St Louis 80
Massac County													
16. Joppa Electric Energy Inc.													
Boiler 1	183.4			PCTA				DRY	MCTA/ E	80/98.5	1953	495	15
2	183.4			PCTA				DRY	MCTA/ E	80/98.5	1953	495	
3	183.4			PCTA				DRY	MCTA/ E	80/98.5	1954	495	
4	183.4			PCTA				DRY	MCTA/ E	80/98.5	1954	495	
5	183.4			PCTA				DRY	MCTA/ E	80/98.5	1955	495	
6	183.4			PCTA				DRY	MCTA/ E	80/98.5	1955	495	
	1100.4	72	69.53		100	-	-						
AREA TOTAL	1100.4		69.53		des.p.coal								Marion 30

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* Prorated to give plant total capacity.

* Prorated to give plant total capacity.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE EFF. %		tons/day	Miles	
Montgomery County													
3. Coffeen													
Central Illinois Public Service Co.													
Boiler 1	330			CYCL	100	-	-	WET	E	99 (d)	1965	800	5
	330	63	18.80		100	-	-						
					des.p.coal								Springfield 40 St Louis 50
AREA TOTAL	330		18.80										
Crawford County													
5. Hutsonville													
Central Illinois Public Service Co.													
Boiler 1 *				PCFR	100	-	-	DRY	None	-	1940	30	5
2				PCFR	100	-	-	DRY	"	-	1940	30	
3				PCFR	100	-	-	DRY	"	-	1941	30	
4				PCFR	100	-	-	DRY	"	-	1941	30	
5	70.6			PCFR	100	-	-	DRY	E	99.2(t)	1953	145	
6	70.6			PCFR	100	-	-	DRY	E	99.5(t)	1954	145	
	200	51	9.76		100	-	-						
					des.p.coal								Terre Haute, Ind. 30
AREA TOTAL	200		9.76										

* Prorated to give total plant capacity

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Vermillion County</u>													
22. Vermillion													
Illinois Power Company													
Boiler 1	73.5			PCTA	100	-	-	DRY	MCAX	86	1955	175	7
2	108.8			PCTA	100	-	-	DRY	MCAX	87	1956	265	
	182.3	61	10.53		100	-	-						
				des.p.coal									
AREA TOTAL	182.3		10.53										
<u>Williamson County</u>													
19. Marion													
Southern Illinois Power Co.													
								*	*	*	1963	290	5
	99	63	54.94		100	-	-						
				des.p.coal									
AREA TOTAL	99		54.94										

NOTE: Plants 23 Wood River, Madison Co., Ill; 25 Venice, Ill; and 29 Baldwin, Ill. are included in St. Louis SMSA, Missouri

* No FPC-67 filed.

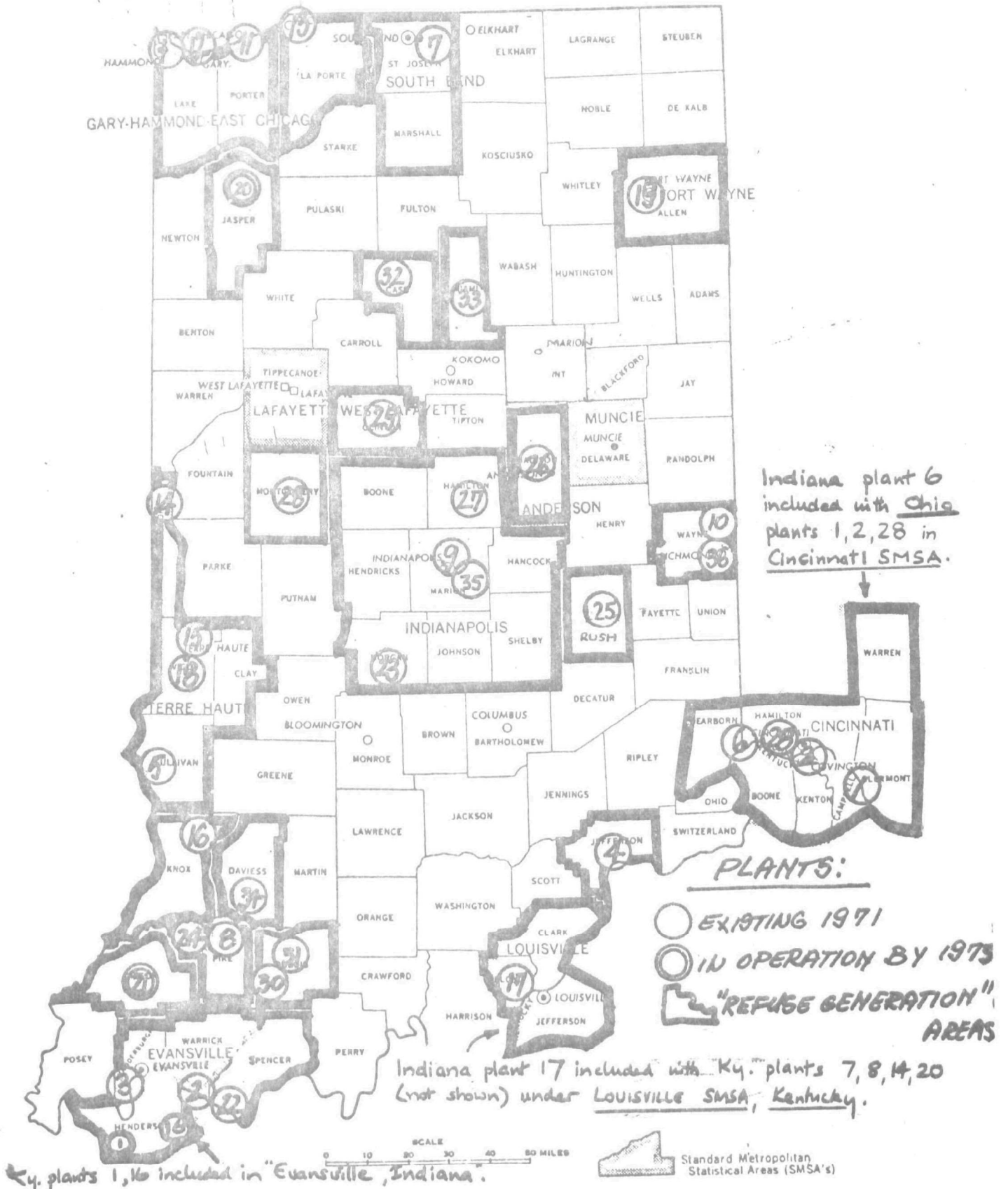
REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: ILLINOIS

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Wabash County</u>													
36. Mount Carmel Mount Carmel Public Utility*													< 5
Boiler	20.5	36	0.9	*	100 des. s. coal	-	-	*	*	*	-	35	
AREA TOTAL	20.5		0.9										
<u>Wayne County</u>													
34. Fairfield Fairfield Munic. Util.	12.5	32	0.49	*	100 des. coal	-	-	*	*	*	-	20	< 5
AREA TOTAL	12.5		0.49										

* No FPC-67 filed

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REFUSE COMBUSTION FOR POWER GENERATION
Indiana, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		10 ⁶ tons yr		10 ¹² BTU yr	Miles		
Anderson SMSA	19.0	neg.	0.140	0.09	0.83	-	5
Evansville SMSA							
(incl. Spencer County)	787.2	49.2	0.255	0.16	1.51	3.1	8
Fort Wayne SMSA	20.0	1.1	0.286	0.18	1.69	146.9	<5
Gary-Hammond-East Chicago SMSA	2117.0	110.6	0.643	0.42	3.80	3.4	<5
Indianapolis SMSA	939.5	32.1	1.132	0.74	6.69	20.8	14
South Bend SMSA	394.0	13.4	0.285	0.18	1.66	12.4	<5
Terre Haute SMSA	2084.6	94.8	0.177	0.11	1.05	1.1	14
Cass County	74.2	1.7	0.041	0.02	0.22	12.7	5
Clinton County	32.5	1.2	0.031	0.01	0.17	13.4	<5
Daviess County	18.0	0.4	0.027	0.01	0.14	30.4	<5
DuBois County	23.5	0.7	0.031	0.01	0.16	21.1	<5
Jefferson County	1303.6	88.1	0.027	0.01	0.14	1.7	<5
Knox County	133.0	8.5	0.042	0.02	0.22	2.6	15
LaPorte County	215.0	10.0	0.107	0.06	0.57	5.7	<5
Miami County	40.0	1.0	0.040	0.02	0.21	20.4	<5
Montgomery County	35.2	1.4	0.035	0.02	0.19	12.8	<5
Pike County	957.6	59.2	0.012	0.00	0.06	0.1	5
Rush County	8.3	neg.	0.021	0.01	0.11	-	<5
Wayne County	67.5	3.3	0.080	0.04	0.43	13.0	<5
INDIANA STATE TOTALS	9269.7	477.6	3.412	2.20	19.9	4.2	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION - Identical to table above
Indiana, 1971- All Fossil Fuel Plants

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DIST.
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Jefferson County													
4. Clifty Creek (Indiana + Kentucky Electric Co.)													
Boiler 1				PCFR	100	-	-	WET	C	96.1	1955		<5 Louisville, Ky 40
2				PCFR	100	-	-	WET	C	96.1	1955		
3				PCFR	100	-	-	WET	C	96.1	1955		
4				PCFR	100	-	-	WET	C	96.1	1955		
5				PCFR	100	-	-	WET	C	96.1	1955		
6				PCFR	100	-	-	WET	C	96.1	1956		
	1303.6	82	88.19		100	-	-						
					des. p. coal								
AREA TOTAL	1303.6		88.19									3750	

NOTE: Plant (No. 6) Tanners Creek, is included in Ohio data, Cincinnati SMSA.
Plant (No. 17) Gallacher, is included in Kentucky data, Louisville SMSA.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
DuBois County													
30. Huntingsburg ** (Huntingsburg Muni. Light & Power)	2.0		neg.		100 des. s. coal	-	-	*	*	*			<5 Evansville 45 Louisville, Ky 65
31. Jasper (Jasper Muni. Electric Util.)	21.5	33	0.76		100 des. s. coal	-	-	*	*	*		3.0	<5
AREA TOTAL	23.5		0.76										
Pike County													
8. Petersburg (Indianapolis Power & Light) Boiler 1	261.7			PCTA	100	-	-	DRY	C	97	1967	670	5
2	462.7			PCTA	100	-	-	DRY	E	90	1969	1185	
	724.4	70	44.09		100 des. p. coal	-	-						
24. Ratts (Indiana Statewide Elec. Corp.) Boiler 1					100	-	-				1969		5
2					100	-	-				1969		
	233.2	77	15.20		100 des p. coal	-	-					650	Evansville 40
AREA TOTAL	957.6		59.29										

* No form FPC-67 filed

** Standby

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles	
<u>South Bend SMSA</u>													
7. Twin Branch (Indiana & Michigan Elec. Co.)													
Boiler 1-1					100	-	-	DRY		1926		<5	
1-2;1-3;1-4					100	-	-	DRY		1925			
2-1					100	-	-	DRY		1927			
2-2					100	-	-	DRY		1925			
2-3					100	-	-	DRY		1926			
2-4					100	-	-	DRY		1926			
3					100	-	-	WET	MCTA	25	1941		
4-1;4-2					100	-	-	WET	MCTA	25	1944		
5					100	-	-	WET	MCTA	50	1949		
	394	35	13.44		100	-	-				575		
					des.p. coal								
AREA TOTAL	394.0		13.44										
<u>Evansville SMSA inc. Spencer County</u>													
Ky 1. Robert Reid (Big Rivers Rural Elec. Coop)													
Boiler 1	80	74	5.86	PCFR	100	-	-	DRY	C	99.5	1965	245	8
					des. p. coal								

Ky 16. Henderson*

* Henderson (plant No. 16) in Sebree Co., Kentucky is not included in data for lack of information. Henderson Station No. 2 (Plant No. 16) in Sebree Co., Kentucky will be in operation by 1975 and will be so recorded.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Evansville SMSA Cont'd.</u>													
<u>Spenser County</u>													
2. Warrick													
(Alcoa Generating Co.)													8
Boiler 1					100	-	-			85			
2					100	-	-			85			
3				PCFR	100	-	-			50 (t)	1965		
4					100	-	-	DRY	MCAX	98	1970		
	432	65	26.30		100	-	-	DRY	E			1120	
					des. p. coal								
3. Ohio River													
(Southern Ind. Gas & Elec.)													
Boiler 1				SPRE				DRY	None	-	1929		<5
2				SPRE				DRY	None	-	1929		
3				SPRE				DRY	None	-	1935		
4	32.5			SPRE				DRY	None	-	1937	90	
5	20			PCFR				DRY	SCTA		1939	55	
6	23			PCFR				DRY	SCTA		1943	65	
7	23			PCFR				DRY	SCTA		1949	65	
8	23			PCFR				DRY	SCTA		1950	65	
	121.5	55*	8.19		3	15	82						
					des.	oil	gas						
22. Culley													
(Southern Ind. Gas & Elec.)													
Boiler 1	50			PCFR	100	-	-	WET	CYCL	85	1955	120	12
2	103.7			PCFR	100	-	-	WET	CYCL	85	1966	255	
	153.7	55*	8.89		100	-	-						
					des. p. coal								
AREA TOTAL	787.2		49.24										

* Based on State average.

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
Gary-Hammond- East Chicago SMSA										
1. State Line (Commonw. Edison of Indiana)										
Boiler 1	208			PCFR		DRY/WET	E 98	1929	480	<5
2	150			PCFR		WET	E 12	1938	345	
3	225			PCTA/ GTAN		WET	E 98	1955	520	
4	389			CYCL/ GOPP		WET	E 98	1962	900	
	972	61	52.58		70 des.p. coal 30 gas					
11. Baffly (Northern Indiana Pub. Ser. Co.)										
Boiler 7	194			CYCL/ GFRO		WET	E 98.5	1962	335	15
8	421.6			CYCL/ GOPP		WET	E 98.1	1968	736	
	615.6	47	25.37		92 des. coal 8 gas					
12. Dean Mitchell (Northern Indiana Pub. Ser. Co.)										
Boiler 4	138.1			PCTA/ GTAN		DRY	E 90	1956	360	<5
5	138.1			PCTA/ GTAN		DRY	E 97	1959	360	
6	138.1			PCTA/ GTAN		DRY	E 91	1959	360	
11	115.1			PCFR		DRY	E 93	1970	300	
	529.4	71	32.66		86 - 14 des.p. coal gas					
AREA TOTAL	2117.0		110.61							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles	
Anderson SMSA													
26. Anderson** (Anderson Municipal Light & Power)	19		neg.		100 des. s. coal	-	-	*	*	*	-	5	
AREA TOTAL	19.0		-										
LaPorte County													
13. Michigan City (Northern Indiana Public Service Company)													
Boiler 1	75			PCFR	100	-	-	WET	E	NR	1931	145 275	<5 Gary 25 South Bend 35
2				PCFR	100	-	-	WET	E	NR	1931		
3				PCFR	100	-	-	WET	E	89.8	1931		
4			CYCL/ GFRO	100	-	-	WET	E	98	1950			
5	140			CYCL/ GFRO	100	-	-	WET	E	98	1950		
6				CYCL/ GFRO	100	-	-	WET	E	98	1951		
	215	44	10.04		100 des.p. coal	-	-						
AREA TOTAL	215.0		10.04										

* No FPC-67 filed

** Standby

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MM	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Fort Wayne SMSA</u>													
19. Lawton Park (Board of Public Utilities "Ft. Wayne")	20	55*	1.15		100 des. s. coal	-	-	*	*	*	-	50	<5
AREA TOTAL	20.0		1.15										
<u>Cass County</u>													
32. Logansport (Logansport Municipal Utilities)	74.2	22	1.73		72 des. s. coal	10	18	*	*	*	-	70	5 Lafayette 40
AREA TOTAL	74.2		1.73										
<u>Miami County</u>													
33. Peru (Peru Electric & Power Plant)	40	25	1.03		100 des. p. coal	-	-	*	*	*	-	45	<5 Indianapolis 7
AREA TOTAL	40		1.03										
<u>Clinton County</u>													
29 Frankfurt	32.5	37	1.27		89 des. s. coal	11	-	*	*	*	-	50	<5 Lafayette 20
AREA TOTAL	32.5		1.27										

* No FPC-67 filed

** State average

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	MILES
<u>MONTGOMERY COUNTY</u>													
28. CRAWFORDSVILLE Crawfordsville Municipal Light & Power Company													
Boiler	35.2	40	1.48		100	-	-	*	*	*		60	<5 Indianapolis 50
					des. s-coal								
AREA TOTAL:	35.2		1.48										

* No FPC-67 Filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles
Indianapolis SMSA												
9. Stout (Indianapolis Power & Light Co.)												< 5
Boiler 1				OSTO				DRY	None	1931		
2				OSTO				DRY	"	1931		
3				OSTO				DRY	"	1931		
4				OSTO				DRY	"	1931		
5				OSTO				DRY	"	1931		
6				OSTO				DRY	"	1931		
7				OSTO				DRY	"	1931		
8				OSTO				DRY	"	1931		
9				PCTA				WET	MCTA	66	1942	
10				PCTA				WET	MCTA	66	1947	
50				PCTA				DRY	C	99	1958	
60				PCTA				DRY	MCTA	80	1961	
	3838	38	13.59		97	3	-					575
					des.p. coal oil							
23. Pritchard (Indianapolis Power & Light Co.)												25
Boiler 1	46			PCTA	100	-	-	WET	MCTA	75	1949	65
2	46			PCTA	100	-	-	WET	MCTA	75	1950	65
3	50			PCTA	100	-	-	WET	MCTA	75	1941	75
4	69			PCTA	100	-	-	DRY	MCTA	75	1953	100
5	69			PCTA	100	-	-	DRY	C	99.5 (t)	1953	100
6	113.6			PCTA	100	-	-	DRY	E	99.5 (t)	1956	170
	396.6	35	14.13		100	-	-					
					des.p. coal oil							

95

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	MILES
INDIANAPOLIS SMSA (Cont'd.)												
35. PERRY K & W Indiana, Power and Light												
Boiler	11			PCFR	100	-	-	Dry	E	97	1938	< 5
	12			PCFR	100	-	-	Dry	E	97	1938	
	13			PCFR	100	-	-	Dry	E	90	1946	
	14			PCFR	100	-	-	Dry	E	90	1947	
	15			SPRE	100	-	-	Dry	MCTA	92.5	1953	
	16			SPRE	100	-	-	Dry	MCTA	92.5	1953	
	6			OSTO	100	-	-	Dry	None	-	1923	
	7			OSTO	100	-	-	Dry	None	-	1923	
	8			OSTO	100	-	-	Dry	None	-	1924	
	9			OSTO	100	-	-	Dry	None	-	1924	
	10			OSTO	100	-	-	Dry	None	-	1924	
	59.1	14	1.23		100	-	-				50	

des. s. and p.coal/oil

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Indianapolis SMSA cont'd													
27. Noblesville (Public Service Co. of Indiana)													
Boiler 1	33.3			PCFR				DRY	E	98	1950	45	17
2	33.3			PCFR				DRY	E	98	1950	45	
3	33.3			PCFR				DRY	E	98	1950	45	
	100	28	3.21		99	1	-						
AREA TOTAL	939.5		32.16		des.p. coal								
Wayne County													
10. Whitewater Valley (Richmond Munic.Lighting & Power)													
Boiler 1	37.5	82	3.31		100	-	-	*	*	*	1955	140	<5
					des.p. coal								
36. Johnson St.** (Richmond Munic.Lighting & Power)	30	-	neg.		100	-	-	*	*	*		-	<5
					des.s. coal								Dayton, Ohio Indianapolis
AREA TOTAL	67.5		3.31										
Rush County													
25. Rushville (Public Service Co. of Indiana)	8.3		neg.		100	-	-	*	*	*		-	<5
					des.s. coal								
AREA TOTAL	8.3		-										

* No FPC-67 filed

**Standby

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Terre Haute SMSA</u>													
5. Breed (Indiana and Michigan Elec. Co) Boiler 1	495.6	46	18.93	CYCL	100 des.p. coal	-	-	WET	CYCL	NA	1960	810	30
14. Cayuga (Public Service Co. of Ind.) Boiler 1	531	47	21.02	PCTA	100 des.p. coal	-	-	DRY	E	97	1970	900	35
15. Dresser (Public Service Co. of Indiana) Boiler 9*				SPRE				DRY			1937		<5
4-1				PCFR				WET			1941		
4-2				PCFR				WET			1941		
5-1				PCFR				WET			1944		
5-2				PCFR				WET			1944		
6-1				PCFR				WET			1945		
6-2				PCFR				WET			1945		
7-1				PCFR				WET			1948		
	150	35	6.24		97 des p. coal	3	-					265	

* Retired in 1971: not included in totals (was 60 MW).

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: INDIANA

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SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Terre Haute SMSA Cont'd.													
18. Wabash River (Public Service Co. of Indiana)													<5
Boiler 1				PCFR				DRY	E	98.5	1953		
2				PCFR				DRY	E	98.5	1953		
3				PCFR				DRY	E	98.5	1954		
4				PCFR				DRY	E	98.5	1954		
5				PCFR				DRY	E	98.5	1956		
6				PCTA				DRY	E	98.5	1968		
	908	55	48.70		99							1890	
					des.p. coal								
AREA TOTAL	2084.6		94.89										
Knox County													
16. Edwards Port (Public Service Co. of Indiana)													15 Terre Haute
Boiler 6-1				PCFR				COMB.			1944		
7-1	**			PCFR				DRY			1949		
7-2				PCFR				DRY			1949		
8-1				PCFR				DRY	MCTA	70	1951		
	133	55	8.55		99							365	
					des.p. coal								
AREA TOTAL	133		8.55										
Daviness County													
34. Washington (Washington Lighting & Power Co.)	18	24	0.46		100			*	*	*		15	5 Evansville
					des.p. coal								
AREA TOTAL	18		0.46										

** No breakdown, common steam header. * No FPC-67 filed.

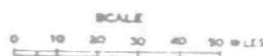
Kansas plants 97, 98, 99
included with Missouri plants
1, 9, 18, 22, 28, 29 in KANSAS CITY,
Mo., SMSA.



PLANTS:

○ EXISTING 1971

■ "REFUSE GENERATION"
AREA 6



LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan
Statistical Areas (SMSA's)

REFUSE COMBUSTION FOR POWER GENERATION
Kansas, 1971 - Kansas City SMSA

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
<u>All Fossil Fuel Plants</u>							
Kansas City SMSA	2395.8	91.3	1.283	0.84	7.60	8.3	<5

NOTE: All Kansas City Plants are included in Missouri under "Kansas City SMSA".

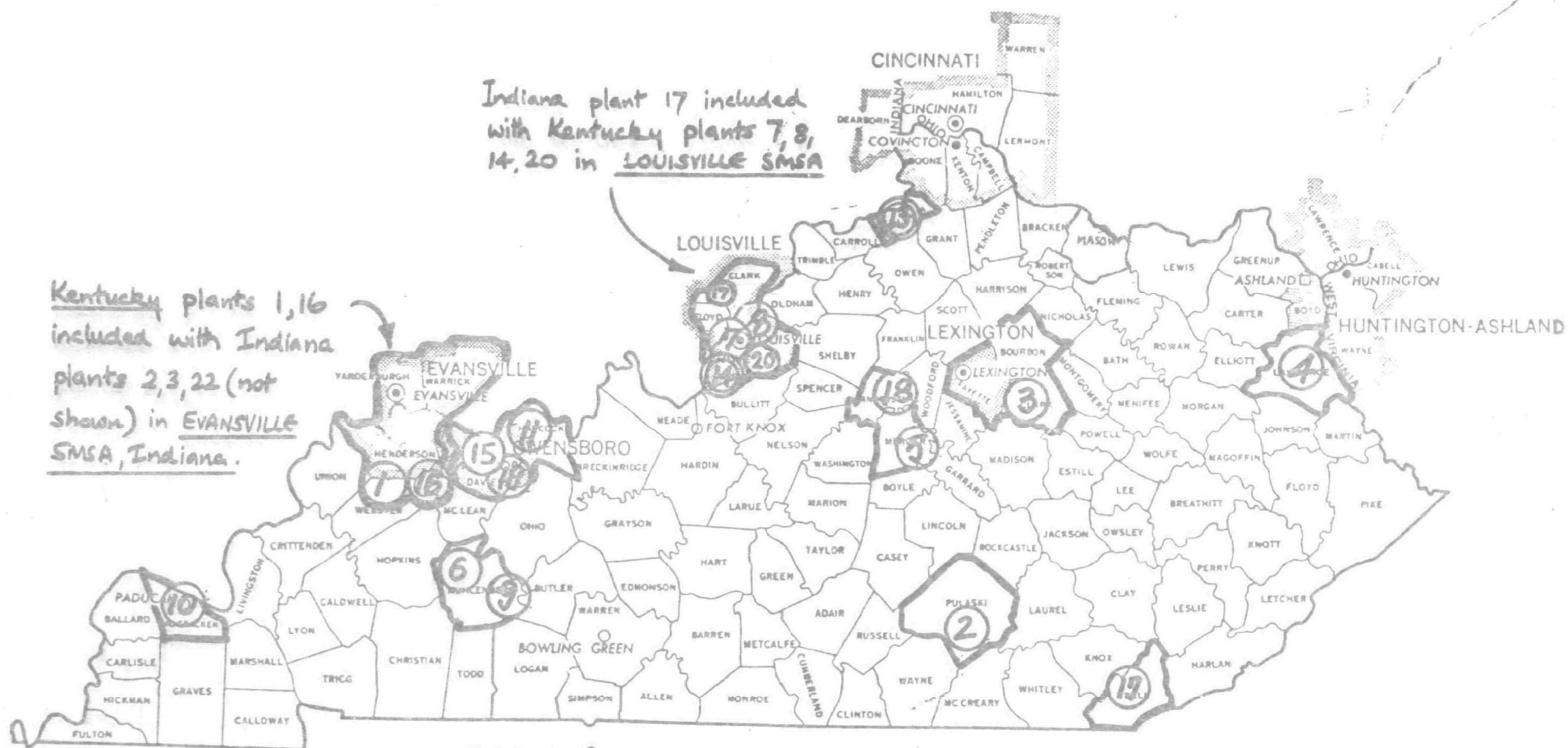
"Coal Plants" only**

Kansas City SMSA	2262.8	89.3	1.283	0.84	7.60	8.5	<5
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Includes all plants capable** of burning coal (design fuel and/or current fuel).

** Does not differentiate between types of firing -- assumes all types capable of refuse burning.

** Includes all plants in the Data Tables except 29.



Indiana plant 17 included
with Kentucky plants 7, 8,
14, 20 in LOUISVILLE SMSA

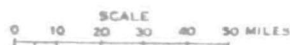
Kentucky plants 1, 16
included with Indiana
plants 2, 3, 22 (not
shown) in EVANSVILLE
SMSA, Indiana.

PLANTS:

- ☐ EXISTING 1971
- ☒ IN OPERATION BY 1975

LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Central cities of SMSA's with fewer than 50,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



"REFUSE GENERATION" AREAS



Standard Metropolitan Statistical Areas (SMSA's)

REFUSE COMBUSTION FOR POWER GENERATION
Kentucky, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ tons yr		10 ¹² BTU yr			
Lexington SMSA (incl. Bourbon Co. & Clark Co.)	196	5.8	0.221	0.14	1.31	22.6	17
Louisville SMSA	2004.1	97.1	0.842	0.55	4.98	5.1	<5
Owensboro SMSA (incl. Hancock Co.)	543.5	32.5	0.087	0.05	0.51	1.6	17
103 Anderson-Mercer Counties	859.1	30.2	0.026	0.01	0.14	0.5	8
Bell County	37.5	1.0	0.032	0.01	0.17	15.7	<5
Lawrence County	1096.8	57.7	0.011	0.00	0.06	0.1	<5
McCracken County	1750.0	102.2	0.059	0.03	0.31	0.3	<5
Muhlenberg County	2821.2	137.1	0.028	0.01	0.15	0.1	<5
Pulaski County	344.0	17.4	0.036	0.02	0.19	1.1	5
KENTUCKY STATE TOTALS	9652.2	481.5	1.342	0.86	7.82	1.6	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION -- Identical to table above.
Kentucky, 1971 - All Fossil Fuel Plants

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>McCracken County</u>													
10. Shawnee Tennessee Valley Authority Boiler 1				*	100	-	-	Dry	MCTA/E	60/94	1953	435	< 5
2				*	100	-	-	Dry	MCTA/E	60/94	1953	435	
3				*	100	-	-	Dry	MCTA/E	60/94	1953	435	
4				*	100	-	-	Dry	MCTA/E	60/94	1954	435	
5				*	100	-	-	Dry	MCTA/E	60/94	1954	435	
6				*	100	-	-	Dry	MCTA/E	60/94	1954	435	
7				*	100	-	-	Dry	MCTA/E	60/94	1954	435	
8				*	100	-	-	Dry	MCTA/E	60/94	1955	435	
9				*	100	-	-	Dry	MCTA/E	60/94	1955	435	
10				*	100	-	-	Dry	MCTA/E	60/94	1956	435	
	1750	68	102.28		100	-	-						
					des.p-coal								Owensboro 95
AREA TOTAL	1750		102.28										
<u>Pulaski County</u>													
2. Cooper East Kentucky Rural Electric Coop. Boiler 1	113.6			PCFR	100	-	-	Dry	MCTA	86(t)	1965	245	5
2	230.4			PCFR	100	-	-	Dry	MCTA	90(t)	1969	495	
	344.0	57	17.46		100	-	-						
					des.coal								Knoxville, Tenn 80
AREA TOTAL	344.0		17.46										

* P-coal circular firing

NOTE: Plants No. 1 (Robert Reid, Henderson Co., KY) and No. 16 (Henderson, Henderson Co., KY) are included in Evansville SMSA, Indiana. See Indiana.

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	miles
Muhlenberg County										
6. Green River Kentucky Utilities Company										
Boiler 1	75			PCFR	100 - -	Dry	MCTA 80	1950	180	< 5
2	75			PCFR	100 - -	Dry	MCTA 80	1950	180	
3	75			PCFR	100 - -	Dry	MCTA 80	1950	180	
4	75			PCFR	100 - -	Dry	MCTA 80	1954	180	
5	113			PCFR	100 - -	Dry	MCTA 80	1959	270	
	263	53	14.81		100 - -					
					des.p-coal					
9. Paradise TVA										
Boiler 1	678.6			CYCL	100 - -	Wet	E 95	1963	1385	< 5
2	678.6			CYCL	100 - -	Wet	E 95	1963	1385	
3	1201.0			CYCL	100 - -	Wet	E 95	1969	2455	
	2558.2	58	122.30		100 - -					
					des.coal					Owensboro 35 Nashville, Tenn 80
AREA TOTAL	2821.2		137.11							
Lawrence County										
4. Big Sandy Kentucky Power Company										
Boiler 1	265			PCFR		Dry	None -	1963	590	< 5
2	831.8			PCFR		Dry	E 75	1969	1855	
	1096.8	66	57.78		98 2 -					Huntington ?
					des.p-coal					
AREA TOTAL	1096.8		57.78							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Lexington SMSA</u>													
Clark County													
3. Dale													
East Kentucky Rural Electric Coop.													
Boiler 1	24.5			PCFR	100	-	-	Dry	MCTA	85	1954	30	17
2	24.5			PCFR	100	-	-	Dry	MCTA	85	1954	30	
3	73.5			PCFR	100	-	-	Dry	MCTA	85	1957	90	
4	73.5				100	-	-	Dry	MCTA	85	1960	90	
	196	29	5.80		100	-	-						
					des.p-coal								
AREA TOTAL	196		5.80										
<u>Anderson-Mercer Counties</u>													
18. Tyrone													
Kentucky Utilities Company													
Boiler 1	15			PCFR				Dry	Grav	20(d)	1947	15	8
2	15			PCFR				Dry	Grav	20(d)	1947	15	
3	15			PCFR				Dry	Grav	20(d)	1948	15	
4	15			PCFR				Dry	Grav	20(d)	1948	15	
5	75			PCFR				Dry	CYCL	81	1953	85	
	135	24	3.59		95	5	-						
					des.p-coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Anderson-Mercer Counties cont'd</u>													
5. Brown Kentucky Utilities Company													
Boiler 1	113.7			PCFR	100	-	-	Dry	SCTA	80	1957	175	8
2	179.5			PCFR	100	-	-	Dry	SCTA	80	1963	280	
3	430.9			PCTA	100	-	-	Dry	E	90.56	1971	675	
	724.1	41	26.68		100	-	-						
					des.p-coal								
AREA TOTAL	859.1		30.27										Lexington 20 Louisville 60
<u>Bell County</u>													
17. Pineville Kentucky Utilities Company													
Boiler 6	37.5	23	1.08	PCFR	100	-	-	Dry	Thermix Standard Tubular Dust Collector	81.7	1951	45	<5
					des.p-coal								Knoxville, Tenn 50 Lexington 90
AREA TOTAL	37.5		1.08										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Owensboro SMSA</u>													
11. Coleman (Hancock Co.) Big River Rural Electric Coop.													
Boiler 1	170			PCFR				Dry	E	99.5	1969	455	18
2	170			PCFR				Dry	E	99.5	1970	455	
	340	74	21.45		97 des.p.coal	-	3						
19. Owensboro No. 1 Owensboro Municipal Utilities													
Boiler 1	7.5			PCFR				Dry	MCTA/E 70			10	<5
2	7.5			PCFR				Dry	MCTA/E 70			10	
3	7.5			PCFR				Dry	MCTA/E 70			10	
4	30.0			PCFR				Dry	MCTA/E 90			45	
	52.5	29	2.0		99 des.coal	1	-						
15. Elmer Smith Owensboro Municipal Utilities													
Boiler 1	151							Wet	E	97	1971	390	<5
	151	67	9.11		100 des.coal	-	-						
<u>AREA TOTAL</u>	<u>543.5</u>		<u>32.56</u>										

REFUSE COMBUSTION FOR POWER GENERATION

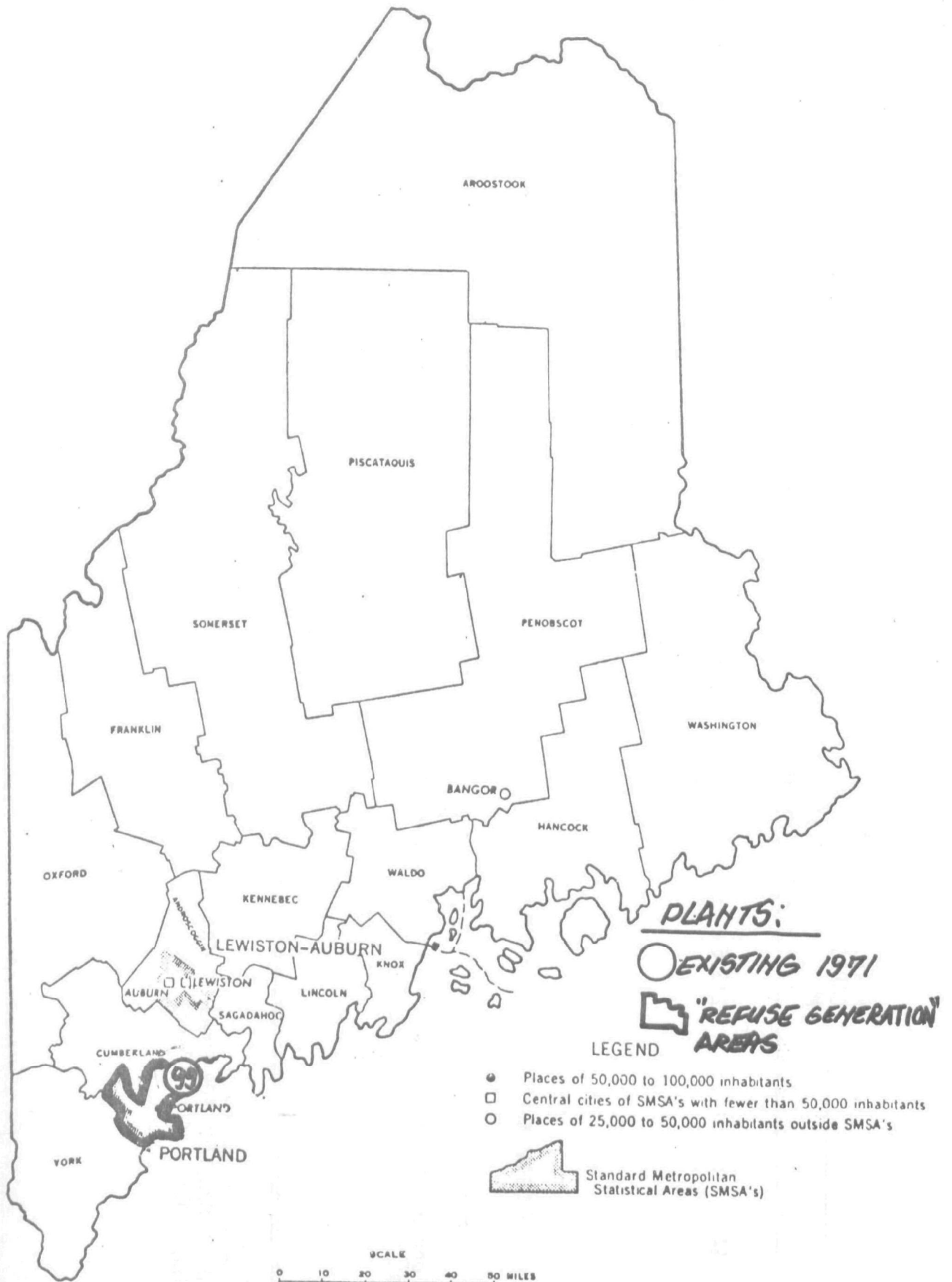
YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Louisville SMSA</u>													
7. Cane Run Louisville Gas & Electric Co.													
Boiler 1	112.5			PCFR/ GFRO				Dry	E	98.8	1954	240	5
2	112.5			PCFR/ GFRO				Dry	E	98	1956	240	
3	147			PCFR/ GFRO				Dry	E	98	1958	315	
4	163.2			PCFR				Dry	E	98.5	1962	350	
5	209.4			PCFR				Dry	E	99.5	1966	450	
6	272			PCTA				Dry	E	99.4	1969	585	
	1016.6	57	51.81		88	-	12						
					des.p.coal/gas								
8. Paddy's Run Louisville Gas & Electric Co.													
Boiler 1	25			PCFR/ GFRO				Dry	E	96.5	1942	20	<5
2	25			PCFR/ GFRO				Dry	E	96.5	1942	20	
3	69			PCFR/ GFRO				Dry	E	98	1947	60	
4	69			PCFR/ GFRO				Dry	E	98	1949	60	
5	74.75			PCFR/ GFRO				Dry	E	98	1950	65	
6	74.75			PCFR				Dry	E	99.1	1952	65	
	337.5	18	7.16		61	-	39						
					des.p-coal/gas								
Ind 17. Gallagher (Floyd County, Indiana) Public Service Co. of Indiana													
Boiler 1	150			PCFR				Dry	E	99	1958	400	<5
2	150			PCFR				Dry	E	99	1959	400	
3	150			PCFR				Dry	E	99	1960	400	
4	150			PCFR				Dry	E	99	1961	400	
	600	70	38.04		99	1	-						
					des.p-coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: KENTUCKY

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	miles
<u>Louisville SMSA cont'd</u>										
20. Canal (standby)										
Louisville Gas & Electric Co.										
Boiler 1	25			PCFR/ GFRO		Dry	E 90	1937	-	<5
2	25			PCFR/ GFRO		Dry	E 96	1941	-	
	50	3.0	0.18							
					des.p-coal/gas					
AREA TOTAL	2004.1		97.19							



REFUSE COMBUSTION FOR POWER GENERATION
Maine, 1971 - All Fossil Fuel Plants - Portland Only

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. 10 ¹² <u>BTU</u> <u>yr</u>	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ <u>tons</u> <u>yr</u>	10 ¹² <u>BTU</u> <u>yr</u>	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Portland SMSA	213.6	14.5	0.197	0.12	1.16	8.0	10

Includes one plant, as detailed in attached data sheet.
This plant is not capable of coal firing.

REFUSE COMBUSTION FOR POWER GENERATION
Maine, 1971 - "Coal Plants" Only

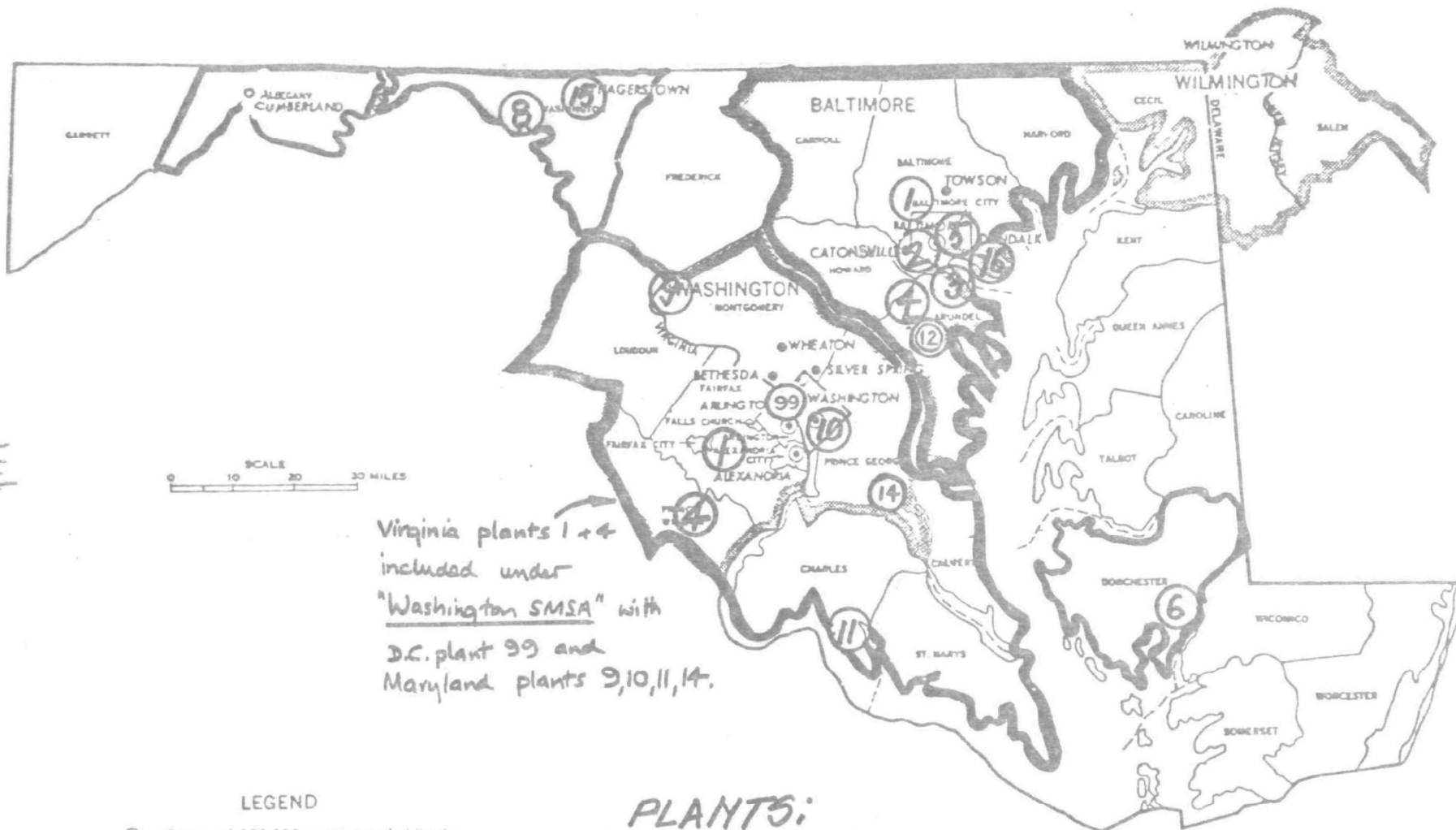
-- None.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maine

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Portland SMSA</u>													
Wyman Central Maine Power Company													
Boiler 1	45			RFRO		100			GRAV/ MCTA	20-40	1957	129	10
2	45			RFRO		100			GRAV/ MCTA	20-40	1958	129	
3	123.6			RTAN		100			GRAV/ MCTA	20-40	1965	355	
	<u>213.6</u>	<u>77</u>	<u>14.93</u>		- des.	<u>100</u> oil	-						

1971 AREA TOTAL 213.6 14.93



LEGEND

- Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan Statistical Areas (SMSA's)

PLANTS:

○ EXISTING 1971

● IN OPERATION BY 1975

▬ "REFUSE GENERATION" AREAS

REFUSE COMBUSTION FOR POWER GENERATION
Maryland, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 1012BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		106 tons yr		1012BTU yr	miles		
Baltimore SMSA	1747.8	104.8	2.110	1.39	12.48	11.9	< 5
Washington SMSA (incl. Charles, Calvert, and St. Mary's Counties)	3388.6	251.0	3.040	1.99	17.98	7.2	26
Washington County	148.3	6.6	0.106	0.06	0.57	8.6	15
Dorchester County	256.6	6.8	0.030	0.01	0.16	2.3	10
MARYLAND STATE TOTALS	5541.3	369.4	5.290	3.47	31.19	8.4	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION
Maryland, 1971 - All Fossil Fuel Plants

-- Identical to table above.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Baltimore SMSA</u>													
1. Crane													
Baltimore Gas & Electric													
Boiler 1	190.9			CYCL				Wet	E	70/63	1961	525	< 5
2	208.9			CYCL				Wet	E	70/55	1963	575	
	399.8	76	26.00		50	50	-						
					des.p.coal	oil							
2. Gould St.													
Baltimore Gas & Electric													
Boiler 1	35			PCFR				Dry	MCTA	63/60	1926	65	< 5
2	35			PCFR				Dry	MCTA	63/60	1926	65	
3	103.5			PCFR				Dry	E	95/60	1952	190	
	173.5	40	8.57		28	71	1						
					des.	oil							
3. Riverside													
Baltimore Gas & Electric													
Boiler 1	60			PCFR				Dry	E	90/70	1942	160	< 5
2	60			PCFR				Dry	E	85/70.7	1944	160	
3	60			PCFR				Dry	E	70	1948	160	
4	72			PCFR				Dry	MCTA	50	1951	190	
5	81.5			PCFR				Dry	MCTA	50	1953	215	
	333.5	51*	20.86		-	100	-						
					des.	oil							

* State Average.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MM	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Baltimore SMSA cont'd													
4. Wagner													
Baltimore Gas & Electric													
Boiler 1	132			PCFR				Dry	C	95/73	1956	335	<5
2	136			PCFR				Dry	C	92/76	1959	345	
3	359			PCOP				Dry	E	98/NR	1966	915	
	627	70	37.66		98	2							
					des.p.coal								
5. Westport													
Baltimore Gas & Electric													
Boiler 1 ***	32.3			PCFR				Dry	E	77/65	1940	75	<5
2	32.3			PCFR				Dry	E	77/65	1940	75	
3	59.5			PCFR				Dry	E	93/80	1941	135	
4	69.9			PCFR				Dry	C	87/80	1950	160	
	194	45	10.52		1	99	-						
					des. oil								
16. Pratt Street													
Baltimore Gas & Electric													
Boiler 1	20	51**	1.25		100	-	-	*	*	*		50	<5
					des.coal								
AREA TOTAL	1747.8		104.86										

* No FPC-67 filed.

** State Average.

*** Capacities prorated to give plant total.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Washington SMSA (incl. Charles, Calvert, St. Mary's Counties)</u>													
Va 1. Potomac River, Va. Potomac Electric Co.	Boiler 1	95.4		PCTA				Dry	MCAX/C	92 (t)	1949	215	26
	2	95.4		PCTA				Dry	MCAX/C	96.1 (t)	1950	215	
	3	108		PCTA				Dry	MCAX/C	94.6 (t)	1954	245	
	4	108		PCTA				Dry	MCAX/C	93.5 (t)	1956	245	
	5	108		PCTA				Dry	MCAX/C	93.6 (t)	1957	245	
	514.8	60	26.00		99	1	-	des.p.coal					
<u>Va 4. Possum Point, Va. Virginia Electric & Power Co.</u>													
	Boiler 1	69		PCTA	-	100	-	Dry	E	72	1948	195	30
	2	69		PCTA	-	100	-	Dry	E	72	1951	195	
	3	113.6		PCTA	-	100	-	Dry	E	72	1955	325	
	4	239.4		PCTA	-	100	-	Dry	E	72	1962	690	
	491	73	37.66		-	100	-	des.p.coal oil					

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	1012 BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Washington SMSA-Charles, Calvert & St. Mary's Counties cont'd</u>													
9. Dickerson Potomac Electric Power Co.													
Boiler 1	195.5			PCTA				Dry	E	86.8	1959	405	30
2	195.5			PCTA				Dry	E	95(t)	1960	405	
3	195.5			PCTA				Dry	E	98.2(t)	1962	405	
	586.5	51**	28.82		92	8	-						
					des. p. coal								
10. Buzzards Point Potomac Electric Power Co.													
Boiler 1	33			PCFR				Wet	C	90	1933	80	45
2	33			PCFR				Wet	C	90	1934	80	
3	51			PCTA				Wet	C	90	1940	125	
4	51			PCTA				Wet	C	90	1941	125	
5	51			PCTA/ RTAN				Dry	C	90	1943	125	
6	51			PCTA/ RTAN				Dry	C	90	1945	125	
11. Morgantown Potomac Electric Power Co.	270	51**	15.68		40	60	-						
Boiler 1	625.5			PCTA/ RTAN	des.	oil		Dry	E	99.5	1970	1840	40
2	625.5			PCTA/ RTAN				Dry	E	99.5	1971	1840	
	1251	84	83.23		21	79	-						
					des. p. coal, oil								

** State Average.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Washington SMSA-Charles, Calvert & St. Mary's Counties cont'd</u>													
99. Benning													
Potomac Electric Power Co.													
Boiler 21				RFRO				Dry	None	-	1918		5
23				RFRO				Dry	"	-	1918		
22				RFRO				Dry	"	-	1918		
24				RFRO				Dry	"	-	1918		
1				OSTO				Dry	"	-	1924		
3				OSTO				Dry	"	-	1924		
5				OSTO				Dry	MCAX	93	1927		
7				OSTO				Dry	MCAX	93	1927		
2				OSTO				Dry	None	-	1924		
4				OSTO				Dry	"	-	1924		
6				OSTO				Dry	MCAX	93	1927		
8				OSTO				Dry	MCAX	93	1927		
9				OSTO				Dry	MCAX	93	1929		
11				OSTO				Dry	MCAX	93	1929		
13				OSTO				Dry	MCAX	93	1929		
15				OSTO				Dry	MCAX	93	1929		
10				OSTO				Dry	MCAX	93	1929		
12				OSTO				Dry	MCAX	93	1929		
14				OSTO				Dry	MCAX	93	1929		
16				OSTO				Dry	MCAX	93	1947		
25	55			RFRO/ PCFR				Dry	E	96	1952	80	
26	88			RTAN/ PCTA				Dry	MCAX/C	89.2/ 74.6(t)	1968	130	
27	289			RTAN				Dry	None	-		430	
	553.5	31	27.49		24	76	-						
					des.p.coal	oil							

120

A11
below
7.5

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Washington SMSA-Charles, Calvert & St. Mary's Counties cont'd</u>													
14. Chalk Point Potomac Electric Power Co.													
Boiler 1	363.8			PCOP				Dry	E	97.5	1964	685	30
2	363.8			PCOP				Dry	E	97.5	1965	685	
	727.6	51	32.14		98	2	-						
					des.p.coal								
AREA TOTAL	3388.6		251.02										

Washington County

8. Smith 1 & 2 Potomac Edison Co.													15
1				OSTO	100	-	-	Dry	SCTA	50	1923		
3				OSTO	100	-	-	Dry	SCTA	50	1923		
5				OSTO	100	-	-	Dry	SCTA	50	1927		
7				OSTO	100	-	-	Dry	SCTA	50	1936		
9				PCFR	100	-	-	Dry	E	97.5	1947		
11				PCTA	100	-	-	Dry	E	99.7	1957		
	109.5	59	6.33		100	-	-						
					des.p.coal								

REFUSE COMBUSTION FOR POWER GENERATION

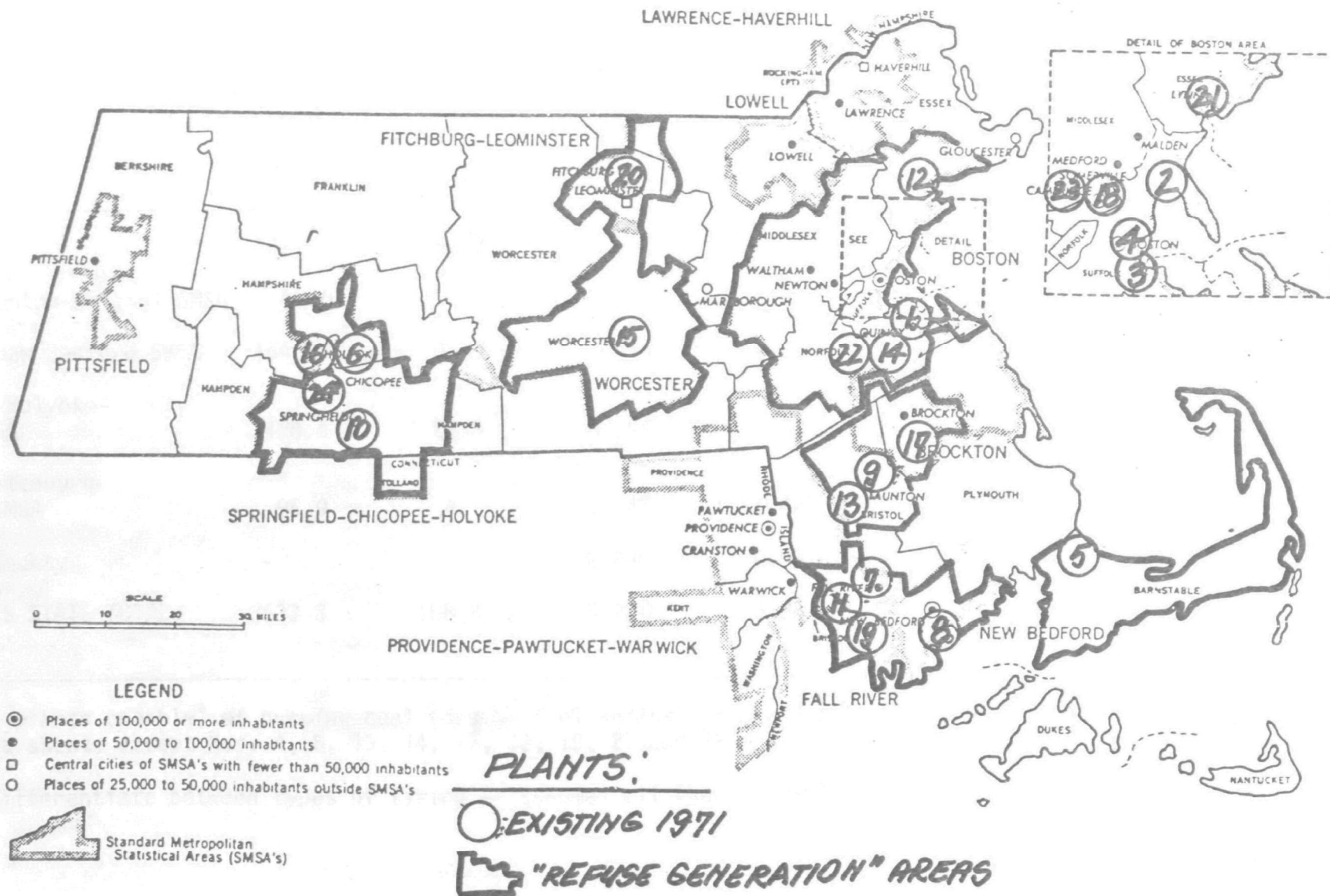
YEAR: 1971
STATE: Maryland

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Washington County con't													
15. Hagerstown (cold standby) Hagerstown Electric	38.8	7	0.33		48 des. p. coal	52 oil	-	*	*	*		10	5
AREA TOTAL	148.3		6.66										
Dorchester County													
6. Vienna** Delmarva Power & Light Co. Boiler 1	12			CYCL				None	None	-	1967	10	10
3	7.5			OSTO				Dry	GRAV	50	1941	5	
4	7.5			OSTO				Dry	MCTA	75	1945	5	
5	15			RFRO				Dry	MCTA	75	1947	15	
6	15			RFRO				Dry	MCAX	65	1949	15	
7	37.5			RFRO				Dry	MCAX	65	1951	40	
8	162			RTAN				Dry	MCAX	87.5	1971	180	
AREA TOTAL	256.5	19	6.88		88 des.s,p.coal	12	-						
					Boiler 1 - des oil								

* No FPC-67 filed.

** Units 1, 2,3,4 retired December 1972.
Units 5,6,7,8 are now oil fired (5,6,7 were PCFR)

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REFUSE COMBUSTION FOR POWER GENERATION
Massachusetts, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. $10^{12}\frac{\text{BTU}}{\text{yr}}$	AREA POP. MILLIONS	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		$10^6\frac{\text{tons}}{\text{yr}}$		$10^{12}\frac{\text{BTU}}{\text{yr}}$			
Boston SMSA	1421.3	66.7	3.780	2.48	22.35	33.5	5
Brockton-Taunton-Bristol SMSA	49.0	1.9	0.351	0.23	2.08	105.1	10
Fall River-New Bedford SMSA	1546.7	92.9	0.449	0.29	2.65	2.8	7
Springfield-Holyoke- Chicopee SMSA	420.4	22.3	0.590	0.38	3.49	15.6	5
Worcester-Fitchburg- Leominster SMSA	95.9	4.1	0.647	0.42	3.83	92.1	13
Barnstable County	-	-	0.098	0.05	0.52	-	-
MASSACHUSETTS STATE TOTAL	3533.3	188.2	5.920	3.88	34.92	18.6	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except Nos. 4, 5, 13, 14, 17, 18, 19, 21 and 22.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Boston SMSA													
2. Mystic I (Boston Edison Co.)													
Boiler 1	50			RTAN	-	100	-	DRY	E	95(d)	1943	105	5
2	50			RTAN	-	100	-	DRY	E	95(d)	1945	105	
3	50			RTAN	-	100	-	DRY	E	95(d)	1947	105	
	150	38	7.40		-	100	-						
					des.p.coal oil								
Mystic II (Boston Edison Co.)													
Boiler 4	156			RTAN	-	100	-	DRY	E	95(d)	1957	280	5
5	156			RTAN	-	100	-	DRY	E	95(d)	1959	280	
6	156.8			RTAN	-	100	-	DRY	E/MgO		1961	280	
	468.8	48	19.94		-	100	-		scrub	95(d)/90(t)			
					des.p. coal oil								
4. New Boston (Boston Edison Co.)													
Boiler 1	380			ROPP	-	100	-	DRY	None	-	1965	950	5
2	380			ROPP	-	100	-	DRY	"	-	1967	950	
	760	72	72.34		-	100	-						
					des. oil								
12. Salem Harbor (New England Power Co.)													
Boiler 1	81.9			PCFR/ RFRO	-	100	-	WET	E	80	1951	165	5
2	81.9			PCFR/ RFRO	-	100	-	WET	E	80	1952	165	
3	156			PCFR/ RFRO	-	100	-	WET	E	80	1958	315	
	319.8	53	15.68		-	100	-						
					des. p. coal oil								

12/6

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Boston SMSA - Cont'd													
3. L-Street (Boston Edison Co.) Boiler													
62	} All boilers under 100 MW			-	100	-	DRY	E	80(d)	1921		5	
64				-	100	-	DRY	E	80(d)	1921			
66				-	100	-	DRY	E	80(d)	1921			
68				-	100	-	DRY	E	80(d)	1921			
70				-	100	-	DRY	E	80(d)	1924			
72				-	100	-	DRY	E	80(d)	1924			
74				-	100	-	DRY	E	84(d)	1939			
75				-	100	-	DRY	E	90(d)	1942			
76				-	100	-	DRY	E	84(d)	1939			
	153.8	19	5.54	des.p. coal							230		
14. Allen St. (Braintree Elec. Light Dept.) Boiler Breakdown Not Available	**						**	**	**		35	5	
	21	38	0.83	-	100	-							
				des. oil									
22. Potter (Braintree Elec. Light Dept.)	**						**	**	**		40	5	
	12.5	72	0.95	-	100	-							
				des. oil									

** No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Boston SMSA - Cont'd</u>													
23. Kendall Square (Cambridge Electric Light Co.)	Common Steam Header			RFRO RFRO RFRO				None None None	E E E	{ Inop- erative	1949 1949 1953		5
Boiler 1													
2													
3	67.5	56	3.63		-	70	30						
				des. p.	coal	oil	gas					130	
18. Blackstone Street (Cambridge Electric Light Co.)													
Boiler Breakdown Not Available	*							*	*	*		30	5
	24.8	31	0.75		-	55	45						
				des.	oil	gas							
21. Lynnway 1+2** (Massachusetts Electric Co.)													
Boiler 1				RFRO/ GFRO	-	100	-	None	None	-			5
2				RFRO/ GFRO	-	100	-	None	None	-			
3				RFRO/ GFRO	-	100	-	None	None	-			
4				RFRO	-	100	-	None	None	-			
	49	40	2.06		-	100	-						
				des.	oil	gas						115	

** Plant Retired 12/31/72

* No FPC-57 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971
STATE:Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	1012 BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Boston SMSA- Cont'd													
1. Edgar II** (Boston Edison Co.)													
Boiler 9	87.1			RTAN	-	100	-	DRY	E	95(d)	1949	170	5
10	87.1			RTAN	-	100	-	DRY	E	95(d)	1952	170	
11	87.1			RTAN	-	100	-	DRY	E	95(d)	1954	170	
	261.3	47	14.57		-	100	-						
				des. p.									
				coal	oil	gas							
AREA TOTAL	2288.6		113.69										
** Edgar I Retired 11/1/71. Capacity was 72.5 MW, current fuel dist. was 100% oil, initial year of operation 1925.													
Fitchburg-Leominster-Worcester SMSA													
20. Fitchburg (Fitchburg Gas & Electric Co.)													
	61.4	39	2.50		1	73	26		*	*	*	105	22
				des. p.									
				coal	oil	gas							
15. Webster Street (Massachusetts Electric Co.)													
Boiler 15 (retired 12.31.72)	34.5	50	1.66	PCFR	91	9	-	DRY	SCIA	NR	1950	70	<5
					des.s.	coal	oil						
AREA TOTAL	95.9		4.16										

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day		
Springfield-Chicopee-Holyoke SMSA													
6. Mt. Tom (Holyoke Water and Power Co.) Boiler 1	136	59***	7.00	PCFR	- des.p.	100 coal	- oil	DRY	C	95*	1960	300	5
10. West Springfield (Western Mass. Electric Co.) Boiler 1	46			PCTA/ RTAN				DRY	E	65	1949	120	5
2	50			PCTA/ RTAN				DRY	E	67	1952	130	
3	113.6			PCTA				DRY	E	98.8/70**	1957	300	
	209.6	62	13.19		14 des.	62 oil	24 gas						
24. Riverside ✓ (Holyoke Water and Power Co.) Boiler 9				PCFR/ RFRO	-	100	-	NR	MCTA	94	1943		5
8	} Range 2-18			RFRO	-	100	-	None	None	-	1936		
6				RFRO	-	100	-	"	"	-	1924		
3				RFRO	-	100	-	"	"	-	1921		
		44.8	19	0.88		-	100	-					
					des.p. coal, oil							35	

* Efficiency based on coal firing.

** 98.8% for coal, 70% for oil.

✓ In addition, boilers 1,2,4 operate as emergency backup only. These 3 boilers are OSTO fired, with dry bottom ash handling, built in 1921-22.

*** State average

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE EFF. %		tons/day	miles
<u>Springfield-Chicopee-Holyoke SMSA -Con't</u>												
16. Holyoke (Holyoke Gas and Electric)												
Boiler 5	Range 5- 17			PCFR/ RFRO/ GFRO				DRY	MCTA	80	1960	5
6				PCFR/ RFRO/ GFRO				DRY	MCTA	80	1954	
7				RFRO/ GFRO				None	None	-	1941	
8				RFRO/ GFRO				"	"	-	1947	
	30	45	1.29		7	61	32				55	
					des.s.p. coal	oil	gas					
AREA TOTAL	420.4		22.36									
<u>Barnstable County</u>												
5. Canal (Canal Electric Co.)												
Boiler 1	542.5	75	32.00	ROPP	- des.	100 oil	-	None	None	-	1968	1370 12
AREA TOTAL	542.5		32.00									

Boston 50
Providence, RI 45

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971

STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	miles	
Fall River-New Bedford SMSA													
7. Somerset													
(Montaup Electric Co.)													
Boiler 1	148	56	19.44	RFRO				DRY	None	-	1925	7	
2				RFRO				DRY	"	-	1928		
3				RFRO				DRY	"	-	1925		
4				RFRO				DRY	"	-	1928		
5				RFRO				DRY	"	-	1925		
6				RTAN				DRY	"	-	1943		
7				RTAN				DRY	MCTA	85	1952		
8				RTAN				WET	MCTA	85	1959		
	329				14	86	-				830		
					des.p. coal oil								
11. Brayton Point													
(New England Power Co.)													
Boiler 1	241			PCTA/ RTAN	-	100	-	WET	E	90	1963	575	7
2	241			PCTA/ RTAN	-	100	-	WET	E	90	1964	575	
3	642.7			PCOP/ ROPP	-	100	-	WET	E	84.5	1969	1540	
	1124.7	72	66.12		-	100	-						
					des.p. coal oil								
19. Hathaway St.													
(Fall River Electric Co.)													
	14.3	9	0.13		-	100	-	*	*	*	*	5	7
					des. oil								

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day		
Fall River-New Bedford SMSA-Cont'd													
8. Cannon St. (New Bedford Gas & Edison El. Lt. Co.)													
Boiler 1	12.5			PCFR/ RFRO/ GFRO				DRY	E	78	1947	35	7
2	12.5			PCFR/ RFRO/ GFRO				DRY	E	79	1947	35	
3	38			RFRO/ GFRO				None	E	88	1950	120	
7	6			RFRO/ GFRO				"	None	-	1956	15	
8	6			RFRO/ GFRO				"	"	-	1956	15	
10	3			RFRO				"	"	-	1967	5	
25	(5.5)			RFRO				"	"	-	1922		
26	(5.5)			RFRO				"	"	-	1922		
27	(5.5)			RFRO				"	"	-	1922		
28	(5.5)			RFRO				"	"	-	1922		
29	7.5			RFRO/ GFRO				"	SCTA	95	1941	20	
30	7.5			RFRO/ GFRO				"	SCTA	95	1941	20	
	93	60	7.42			76	24						
					des.p.	coal	oil	gas					
AREA TOTAL	1561.0		93.11										

* Boilers 25-28 Retired in 1971 and therefore not included in total capacity.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Massachusetts

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles	
<u>Brockton-Taunton-Bristol SMSA</u>														
9. West Water St. (Taunton Municipal Lighting)														
Boiler 1	Range 2.25-18			RFRO	-	100	-	NR	None	-	1926		10	
2				RFRO	-	100	-	NR	"	-	1927			
3				RFRO	-	100	-	NR	"	-	1928			
4				RFRO	-	100	-	NR	"	-	1933			
5				RFRO	-	100	-	NR	"	-	1942			
6				RFRO	-	100	-	NR	"	-	1951			
7				RFRO	-	100	-	NR	"	-	1957			
	49	31	1.98		-	100	-		MCTA	80				
					des. coal	oil						80		
13. Cleary (Taunton Municipal Lighting)														
Boiler 8	28.3	59	1.89	RFRO	-	100	-	None	None	-	1966	80	10	
					des.	oil								
17. E. Bridgewater (Brockton Edison Co.)														
	20	11	0.23		-	100	-		*	*	*	*	10	8
					des.	oil								
AREA TOTAL	97.3		4.09											

* No FPC-67 filed

W
F

PLANTS.

- EXISTING 1971
- ◉ IN OPERATION BY 1975

"REFUSE GENERATION" AREA



REFUSE COMBUSTION FOR POWER GENERATION
Michigan, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Bay City SMSA	1144.5	67.5	0.119	0.07	0.70	1.0	< 5
Detroit SMSA (incl. St. Clair Co.)	5661.3	335.9	4.405	2.89	26.05	7.3	13
Grand Rapids SMSA	747.3	32.9	0.548	0.36	3.24	9.8	27
Kalamazoo SMSA	206.0	13.2	0.206	0.13	1.22	0.2	< 5
Lansing SMSA	467.5	16.7	0.388	0.25	2.29	13.7	< 5
Muskegon-Muskegon Heights SMSA	530.5	36.5	0.160	0.10	0.95	2.6	< 5
Saginaw SMSA	103.5	1.3	0.224	0.14	1.32	99.2	< 5
Baraga County	18.8	1.4	0.008	0.00	0.04	2.7	< 5
Branch County	11.1	0.5	0.039	0.02	0.21	35.6	< 5
Calhoun County	30.0	1.3	0.145	0.08	0.77	56.2	5
Charlevoix County	41.8	2.9	0.017	0.01	0.09	3.0	5
Grand Traverse County	35.0	1.2	0.040	0.02	0.21	16.8	< 5
Huron County	121.0	2.1	0.035	0.02	0.19	9.0	20
Marquette County	174.7	12.0	0.066	0.03	0.35	2.9	< 5
Delta County	29.0	1.8	0.036	0.02	0.19	10.6	< 5
MICHIGAN STATE TOTALS	9322.0	527.9	6.436	4.19	37.82	7.2	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Michigan, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ tons yr		10 ¹² BTU yr			
Bay City SMSA	1144.5	67.5	0.119	0.07	0.70	1.0	<5
Detroit SMSA (incl. St. Clair Co.)	5503.3	329.4	4.405	25.89	26.05	7.9	13
Grand Rapids SMSA	747.3	32.9	0.548	0.36	3.24	9.8	27
Kalamazoo SMSA	206.0	13.2	0.206	0.13	1.22	9.2	<5
Lansing SMSA	467.5	16.7	0.388	0.25	2.29	13.7	<5
Muskegon-Muskegon Heights SMSA	530.5	36.5	0.160	0.10	0.95	2.6	<5
Saginaw SMSA	103.5	1.3	0.224	0.14	1.32	99.2	<5
Baraga County	18.8	1.4	0.008	0.00	0.04	2.7	<5
Branch County	11.1	0.5	0.039	0.02	0.21	35.6	<5
Calhoun County	30.0	1.3	0.145	0.08	0.77	56.2	5
Charlevoix County	41.8	2.9	0.017	0.01	0.09	3.0	5
Grand Traverse County	35.0	1.2	0.040	0.02	0.21	16.8	<5
Huron County	121.0	2.1	0.035	0.02	0.19	9.0	20
Marquette County	174.7	12.0	0.066	0.03	0.35	2.9	<5
Delta County	29.0	1.8	0.036	0.02	0.19	10.6	<5
MICHIGAN STATE TOTALS	9145.5	520.6	6.436	4.19	37.82	7.3	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except plant #37, Detroit SMSA.

* Does not differentiate between types of firing--assumes all types capable of refuse burning

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTNACE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Detroit SMSA													
7. Mistersky (Detroit Public Lighting Co.)													
Boiler 1	20			PCFR	100			Dry	None	-	1927	35	7
2	20			PCFR	100			Dry	"	-	1927	35	
3	20			PCFR	100			Dry	"	-	1927	35	
4	20			PCFR	100			Dry	"	-	1930	35	
5	44			PCTA	100			Wet	C	96.5	1950	80	
6	50			PCTA	100			Wet	C	97.7	1958	90	
	174	45	7.40		100	-	-						
					des p.coal								
11. River Rouge Detroit Edison													
Boiler 1	283			PCFR				Dry	C	90	1956	660	7
2	292			PCTA				Dry	C	97.2	1957	680	
3	358.2			PCFR				Dry	C	96.7	1958	840	
	933.2	65	51.33		92	8	-						
					des p coal/oil								

NOTES:

Plants No. 5 (Whiting) and no. 18 (Monroe) are included in the Toledo SMSA (see Ohio)

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MM	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Detroit SMSA Cont'd</u>													
9. Delray (Detroit Edison) Boiler 1				OSTO/ GOPP				Dry	MCTA *		1942		7
7				OSTO				Dry	MCTA *		1938		
8				GOPP				Dry	MCTA *		1938		
9				OSTO/ GOPP				Dry	MCTA *		1940		
10				OSTO/ GOPP				Dry	MCTA *		1939		
11				OSTO/ GOPP				Dry	MCTA *		1941		
12				OSTO/ GOPP				Dry	MCTA *		1940		
2				OSTO/ GOPP				Dry	MCTA *		1929		
3				OSTO/ GOPP				Dry	MCTA *		1929		
4				OSTO/ GOPP				Dry	MCTA *		1929		
5				OSTO/ GOPP				Dry	MCTA *		1929		
6				OSTO/ GOPP				Dry	MCTA *		1929		
	375	52	25.72										
						75	25						
						des.oil/gas							

* No longer in use. Plant converted to oil/gas March 1970. No longer equipped to burn coal (Dec. 31, 1970: FPC-67)

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Detroit SMSA - Cont'd</u>													
12. St. Clair Detroit Edison													
Boiler 1	169			PCFR				Dry	C	91	1953	440	18
2	156			PCFR				Dry	C	93	1953	400	
3	156			PCFR				Dry	C	93	1954	400	
4	169			PCFR				Dry	C	93	1954	440	
5	358			CYCL				Dry	E	82	1959	935	
6	353			PCFR				Dry	C	96	1961	920	
7	544			PCTA				Dry	E	98.4	1969	1420	
	1905	76	116.10		97 3 - des.p.coal/oil								
10. Marysville Detroit Edison													
Boiler 3				OSTO				Dry	None		1922		45
4				OSTO				Dry	None		1923		
5				OSTO				Dry	None		1926		
6				OSTO				Dry	None		1927		
7				OSTO				Dry	None		1926		
8				OSTO				Dry	None		1930		
9				PCTA				Dry	E	96.2	1942		
10				PCTA				Dry	E	96.2	1943		360
11				PCTA				Dry	E	99.5	1947		
12				PCTA				Dry	E	99.5	1943		
	300	48	16.98		99 - 1 des.s. & p.coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Detroit SMSA - Cont'd</u>													
15. Wyandotte													
Wyandotte Dept. of Municipal Services													
Boiler 1	4			OSTO	100	-	-	Dry	Grav	N.R.	1933	-	7
2	4			OSTO	100	-	-	Dry	Grav	N.R.	1933	-	
3	6			SPRE	100	-	-	Dry	MCTA	80	1942	-	
4	10			SPRE	100	-	-	Dry	MCTA	80	1948	5	
5	22			SPRE	100	-	-	Dry	MCTA	95	1958	15	
	46	19	.768		100	-	-						
					des.s.coal								
40. Wyandotte-North													
Detroit Edison													
Boiler 7				PCFR				Dry	None	-	1942		7
9				PCFR				Wet	C	97	1948		
10				PCFR				Wet	C	99	1948		
11				PCFR				Wet	E	99	1968		
12				PCFR				Wet	E	99	1968		
	54.1	23	1.43		81	6	13					60	
					des.p.coal								
						oil	gas						
Wyandotte-South													
Detroit Edison	18.5	47	0.83		100	-	-					35	
					des.s.coal								
WYANDOTTE TOTALS	72.6		2.26										

* common header system

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Detroit SMSA- Cont'd</u>													
13. Trenton Channel Detroit Edison Boiler 1	23			PCOP/ GOPP				Dry	E	*	1925	65	7
2	23			PCOP/ GOPP				Dry	E	*	1925	65	
4	23			PCOP/ GOPP				Dry	E	*	1924	65	
5	23			PCOP/ GOPP				Dry	E	*	1924	65	
6	23			PCOP/ GOPP				Dry	E	*	1924	65	
7	23			PCOP/ GOPP				Dry	E	*	1924	65	
8	23			PCOP/ GOPP				Dry	E	*	1924	65	
9	23			PCOP/ GOPP				Dry	E	*	1924	65	
10	23			PCOP/ GOPP				Dry	E	*	1926	65	
11	23			PCOP/ GOPP				Dry	E	*	1927	65	
12	23			PCOP/ GOPP				Dry	E	*	1927	65	
13	23			PCOP/ GOPP				Dry	E	*	1928	65	
14	23			PCOP/ GOPP				Dry	E	*	1929	65	

Cont'd next page

* 85(d) not used now (gas-fired boilers)

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Detroit SMSA - Cont'd													
13. Trenton Channel (continued)													
Boiler 16	60			PCTA				Dry	E	95	1949	170	7
17	60			PCTA				Dry	E	95	1949	170	
18	60			PCTA				Dry	E	95	1949	170	
9A	536.5			PCTA				Dry	E	95	1968	1525	
19	60			PCTA				Dry	E	98.5	1949	170	
	1075.5	70	71.57		72	2	26						
26. Pennsalt													
Detroit Edison													
Boiler 21	9.25			PCFR				Dry	MCTA	53	1934	10	7
22	9.25			PCFR				Dry	MCTA	53	1941	10	
23	9.25			PCFR				Dry	C	98	1948	10	
24	9.25			PCFR				Dry	C	96	1949	10	
	37	24	1.06		99	1	-						
					des.p.coal								
37. Enrico Fermi													
(Detroit Edison)													
Boiler 1	158			Tangential									
	158	33	6.48	Fired	-	100	-	None	None	-	1966	275	7
					-	100	-						
						des.oil							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Detroit SMSA - Cont'd</u>													
8. Conners Creek (Detroit Edison)													
Boiler 1				OSTO/GOPP/ ROPP				Dry	Grav	60	1934		7
2				OSTO/GOPP/ ROPP				Dry	Grav	60	1935		
3				OSTO/GOPP/ ROPP				Dry	Grav	60	1935		
4				OSTO/GOPP/ ROPP				Dry	Grav	60	1935		
6				OSTO/GOPP/ ROPP				Dry	Grav	60	1939		
9				OSTO/GOPP/ ROPP				Dry	Grav	60	1939		
10				OSTO/GOPP/ ROPP				Dry	Grav	60	1937		
11				OSTO/GOPP/ ROPP				Dry	Grav	60	1937		
12				OSTO/GOPP/ ROPP				Dry	Grav	60	1936		
13				OSTO/GOPP/ ROPP				Dry	Grav	60	1936		
14				OSTO/GOPP/ ROPP				Dry	Grav	60	1936		
15				PCFR				Dry	C	99	1951		
16				PCFR				Dry	C	99	1951		
17				PCFR				Dry	C	99	1951		
18				PCFR				Dry	C	99	1951		
	585	53	36.26		61	6	33						
					des.s.p.coal								
					oil		gas						
AREA TOTAL	5661.3		335.93										

61 6 33
des.s.p.coal
oil . gas

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Lansing SMSA													
6. Eckert (Lansing Board of Water and Light)													
Boiler 1	50			PCFR	100	-	-	WET	E	97.5	1954	80	< 5
2	50			PCTA	100	-	-	WET	E	97.5	1958	80	
3	50			PCFR	100	-	-	WET	E	97.5	1961	80	
4	75			PCFR	100	-	-	WET	E	97.5	1964	120	
5	80.5			PCFR	100	-	-	WET	E	97.5	1968	130	
6	80.5			PCFR	100	-	-	WET	E	97.5	1970	130	
	<u>386</u>	39	<u>14.61</u>		<u>100</u>	-	-						
					des. p., s. coal								
35. Ottawa St. (Lansing Board of Water and Light)													
Boiler 1	13.9			PCFR				WET	E	97.5	1939	15	< 5
2	13.9			PCFR				WET	E	97.5	1939	15	
3	17.9			PCFR				WET	E	97.5	1949	20	
4	17.9			PCFR				WET	E	97.5	1951	20	
5	17.9			PCFR				WET	E	97.5	1951	20	
	<u>81.5</u>	23	<u>2.15</u>		<u>99</u>	1	-						
					des.p. coal								
AREA TOTAL	467.5		16.76										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Grand Rapids SMSA													
20. Campbell (Consumer Power Company)													
Boiler 1	265			PCTA PCOP	100	-	-	Dry	E	89.9(t)	1962	515	28
2	385				100	-	-	Dry	E	98.1(t)	1966	750	
	650	58	29.93		100	-	-						
					des.p.coal								
25. Wealthy Street (Consumer Power Company)	20	26	0.64		100	-	-	*	*	*		25	< 5
					des.p.coal								
33. J. De Young (Holland Board of Public Works)	77.3	30	2.42		56	-	44	*	*	*		100	21
					des.coal								
AREA TOTAL	747.3		32.99										
Muskegon-Muskegon Heights SMSA													
1. Cobb. (Consumer Power Company)													
Boiler 1	66			PCTA PCTA PCTA PCTA PCTA	100			Dry	E	98	1948	190	< 5
2	66				100			Dry	E	99	1948	190	
3	66				100			Dry	E	98	1950	190	
4	156.25				100			Dry	E	97	1956	455	
5	156.25				100			Dry	E	99	1957	455	
	510.5	73	34.98		100	-	-						
					des.p.coal								

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Muskegon-Muskegon Heights SMA-Cont'd</u>													
32. Harbor Island (Grand Haven Board of Water & Light)	20	68	1.55		100 des.s.coal	-	-	*	*	*	*	65	<5
AREA TOTAL	530.5		36.53										

* No FPC 67 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Michigan

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCES	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	miles	
Saginaw SMSA													
24. Saginaw River (Consumer Power Co.)													
Boiler 6	30			OSTO	100	-	-	DRY	None	-	1928	20	<5
7				OSTO	100	-	-	DRY	None	-	1928		
9	35			OSTO	100	-	-	DRY	None	-	1928	25	
10	35			OSTO	100	-	-	DRY	None	-	1929	25	
11	3.5			OSTO	100	-	-	DRY	None	-	1929	-	
12				OSTO	100	-	-	DRY	None	-	1929		
13				OSTO	100	-	-	DRY	None	-	1929		
14				OSTO	100	-	-	DRY	None	-	1930		
15				OSTO	100	-	-	DRY	None	-	1930		
16				OSTO	100	-	-	DRY	None	-	1930		
				OSTO	100	-	-	DRY	None	-	1930		
	103.5	10	1.33		100	-	-						
AREA TOTAL	103.5		1.33		des.p. coal								
Bay City SMSA													
4. Weadock (Consumer Power Co.)													
Boiler 1	35			PCFR				DRY	MCAX		1940	85	<5
2	35			PCFR				DRY	MCAX		1940	85	
3	50			PCFR				DRY	MCAX		1943	120	
4	50			PCFR				DRY	MCAX		1948	120	
5	66			PCFR				DRY	MCAX		1949	160	
6	66			PCFR				DRY	MCAX		1949	160	
7	156.25			PCTA				DRY	MCAX/E		1955	380	
8	156.25			PCTA				DRY	MCAX/E		1958	380	
	614.5	59	35.20		98	-	2						
					des.p. coal								

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02

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Bay City - SMSA Cont'd</u>													
2. Karn (Consumer Power Co)													
Boiler 1	265			PCTA	100	-	-	Dry	E	70	1959	690	<5
2	265			PCFR	100	-	-	Dry	E	88	1961	690	
AREA TOTAL	530	77	32.32		100								
	1144.5		67.52		des. p. coal								
<u>Grand Traverse County</u>													
34. Bayside Station (Traverse City Light & Power Dept.)	35	31	1.25		89	11	-	*	*	*		50	<5
AREA TOTAL	35		1.25		des. coal	gas							
<u>Charlevoix County</u>													
19. Advance (N. Michigan Electric Corp.)	41.8	64	2.98		100	-	-	*	*	*	1953	125	5
AREA TOTAL	41.8		2.98		des. p. coal								
<u>Marquette County</u>													
14. Presque Isle (Upper Peninsula Power Co.)													
Boiler 1	25			PCFR				Dry	MCTA/E	75/90	1955	70	<5
2	37.5			PCTA				Wet	MCTA/E	75/90	1962	110	
3	54.4			PCTA				Wet	MCTA/E	75/90	1964	160	
4	57.8			PCTA				Wet	MCTA/E	75/90	1966	170	
AREA TOTAL	174.7	71	12.07		99	1	-						
	174.7		12.07		des. p coal	gas							

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Michigan

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	kw	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Kalamazoo SMSA</u>													
3. <u>Morrow</u> (Consumer Power Co.)													
Boiler 1	35			PCFR/ GFRO				DRY	MCAX	80	1939	90	< 5
2	35			PCFR/ GFRO				DRY	MCAX	80	1939	90	
3	50			PCFR/ GFRO				DRY	MCAX	81	1941	125	
4	66			PCFR/ GFRO				DRY	MCAX	81	1949	170	
	<u>186</u>	<u>53</u>	<u>12.60</u>			<u>31</u> des. oil	<u>69</u> gas						
23. <u>Kalamazoo</u> (Consumer Power Co.)	20	27	0.67		100 des.p. coal			*	*	*		25	< 5
<u>AREA TOTAL</u>	<u>206</u>		<u>13.27</u>										
* No FPC 67 filed													
<u>Branch County</u>													
30. <u>Coldwater</u> (Board of Public Utilities)	11.1	46	0.59	*	100 des.s. coal			*	*	*	-	25	< 5
<u>AREA TOTAL</u>	<u>11.1</u>		<u>0.59</u>										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Michigan

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Baraga County</u>													
29. J.H. Warden (Upper Peninsula Power Co.)	18.8	68	1.46		44 des.p. coal	-	56	*	*	*		60	<5
AREA TOTAL	18.8		1.46										
<u>Huron County</u>													
27. Harbor Beach - (Detroit Edison)	121	19	2.12	PCFR	93 des p coal	7 oil	-	DRY	E	99	1968	85	20
AREA TOTAL	121		2.12										
<u>Calhoun County</u>													
22. Elm St. (Consumer Power Co.) Boiler 7	30	37	1.37	PCFR	100 des.p. coal			DRY	MCAX	80	1937	55	5
AREA TOTAL	30		1.37										

* No FPC 67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MICHIGAN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Delta County</u>													
28. Escanaba Upper Peninsula Power Co.	23	61	1.59	*	100 des.s.coal	-	-	*	*	*	-	65	
31. Gladstone City of Gladstone	6.0	33	0.22	*	100 des.coal	-	-	*	*	*		10	
AREA TOTAL	29		1.81										

* No FPC 67 filed

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REFUSE COMBUSTION FOR POWER GENERATION
Minnesota, 1971 - Minneapolis-St. Paul SMSA

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
<u>All Fossil Fuel Plants</u>							
Minneapolis-St. Paul SMSA	2048.8	106.8	1.856	1.21	10.97	10.3	8.5

"Coal Plants" only**

154 Minneapolis-St. Paul SMSA	2018.8	106.1	1.856	1.21	10.97	10.3	8.5
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Includes all plants capable* of burning coal (design fuel and/or current fuel).

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

** Includes all plants in the Data Tables except 95.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MINNESOTA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU YR	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
					COAL	OIL	GAS		TYPE	EFF. %			
	MW	%										tons/day	MILES
<u>MINNEAPOLIS-ST. PAUL SMSA</u>													
94. ISLAND Northern States Power Co.	20	1	.02		-	-	100	*	*	*		-	< 5
					des. p. coal/gas								
95. SOUTHEAST Northern States Power Co.													
Boiler												20	< 5
	30	10	0.74		-	29	71						
					des. oil/gas								
96. KING Northern States Power Co.													
Boiler												1315	10
	598.4				100	-	-						
	598.4	62	30.98										
					des. p. coal								

* No FPC-67 Filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MINNESOTA

SMSA-COUNTY/PLANT		RATED	LOAD	ENERGY	TYPE	CURRENT FUEL			BOTTOM	AIR POLLUTION		INITIAL	REFUSE	TYPICAL
		CAPACITY	FACTOR	RQMT.		OF	DISTRIBUTION	ASH		CONTROL	YEAR OF			
				10 ¹²	FIRING	BY	BTU	%	HANDLING		EFF. %		"CAPACITY"	DISTANCE
		MW	%	BTU		COAL	OIL	GAS		TYPE			tons/day	MILES
				yr										
MINNEAPOLIS-ST. PAUL SMSA (Cont'd.)														
97.	HIGH BRIDGE													
	Northern States Power Co.													
	Boiler	1	80		RFRO/GFRO				None	None	-	1924	190	10
		3	80		RFRO/GFRO				None	None	-	1924	190	
		5	80		RFRO/GFRO				None	None	-	1924	190	
		7	80		RFRO/GFRO				None	None	-	1924	190	
		2			RFRO/GFRO				None	None	-	1924	190	
		4	35		RFRO/GFRO				None	None	-	1924	86	
		6			RFRO/GFRO				None	None	-	1924		
		8			RFRO/GFRO				None	None	-	1924		
		9	60		PCFR/GFRO				Dry	E	94(d)	1942	145	
		10	60		PCFR/GFRO				Dry	E	94(d)	1944	145	
		11	113.6		PCFR/GFRO				Dry	E	98(d)	1956	275	
		12	163.2		PCFR/GFRO				Dry	E	96.9(d)	1959	395	
		463.8	58	26.50		38	2	60						

des. p.coal/oil/gas

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MINNESOTA

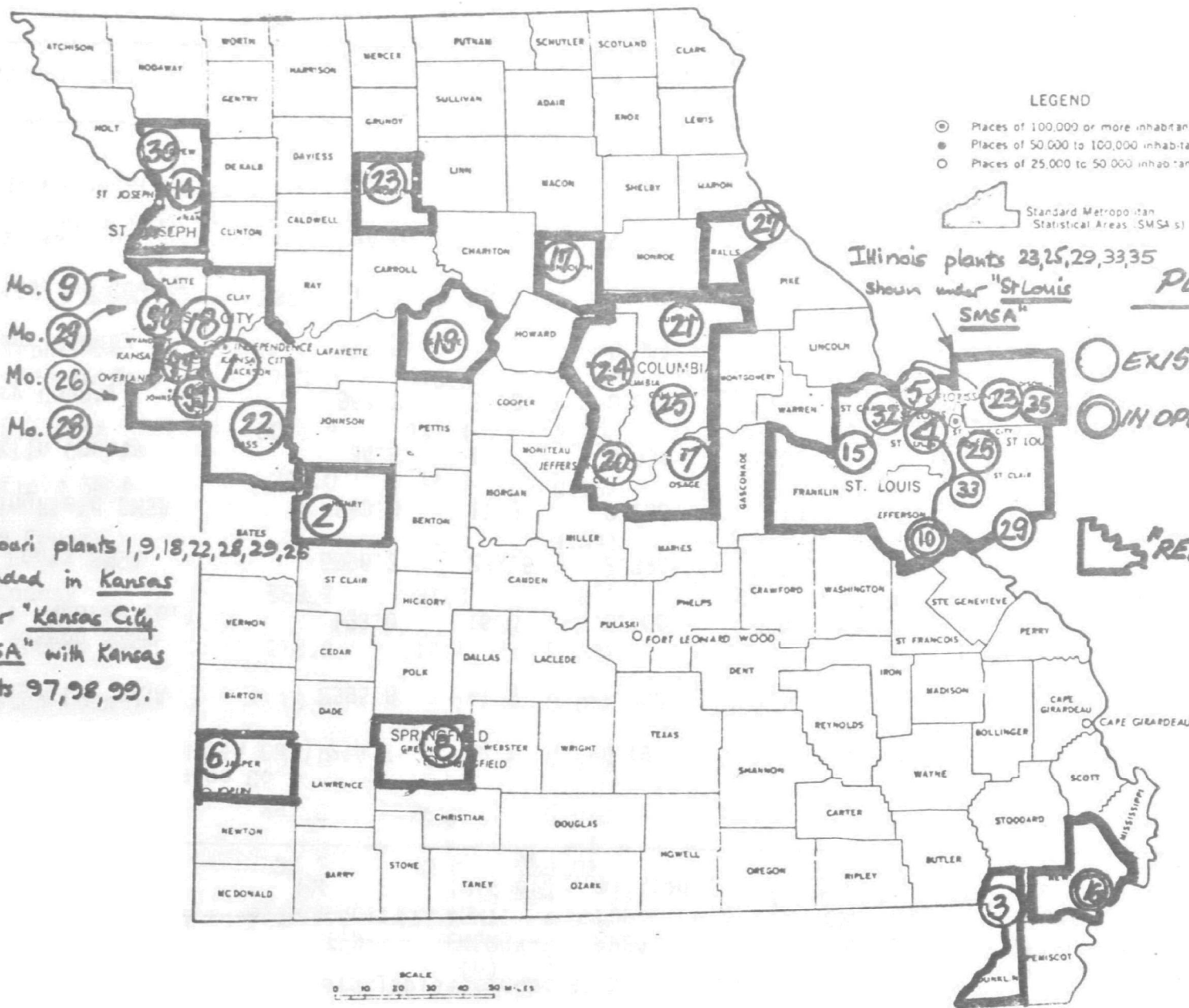
SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
					COAL	OIL	GAS		TYPE	EFF. %			
	MW	%	10 ¹² BTU /YR									tons/day	MILES
<u>MINNEAPOLIS/ST. PAUL SMSA (Cont'd.)</u>													
98. RIVERSIDE Northern States Power Co.													<5
Boiler													
1				OSTO/GFRO				Dry	Cycl	94(d)	1938	80	
3	35			OSTO/GFRO				Dry	Cycl	94(d)	1938		
5				OSTO/GFRO				Dry	Cycl	94(d)	1938	80	
2	35			OSTO/GFRO				Dry	Cycl	94(d)	1938		
4	35			OSTO/Gfro				Dry	Cycl	94(d)	1938	80	
8	239.4			Cycl				Wet	E	98(d)		550	
7	68.5			PCFR/GFRO				Dry	E	98(d)		155	
6	68.5			PCFR/GFRO				Dry	E	98(d)		155	
13				GOPP/ROPP				Dry	None	-	1918		
14				GOPP/ROPP				Dry	None	-	1918		
15				GOPP/ROPP				Dry	None	-	1918		
16				GOPP/ROPP				Dry	None	-	1918		
17	72			GOPP/ROPP				Dry	None	-	1918	165	
18				GOPP/ROPP				Dry	None	-	1918		
19				GOPP/ROPP				Dry	None	-	1918		
20				GOPP/ROPP				Dry	None	-	1918		
21				GOPP/ROPP				Dry	None	-	1918		
22				GOPP/ROPP				Dry	None	-	1918		
	449.9	53	24.42		74	2	24						

des. p. and s. coal/oil/gas

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MINNESOTA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Minneapolis-St. Paul SMSA cont'd</u>													
99. Black Dog Northern States Power Company													
Boiler 1	81			PCTA/GTAN				Dry	E	94	1952	170	10
2	112.5			PCFR/GFRO				Dry	E	94	1954	4465	
3	113.6			PCFR/GFRO				Dry	E	94	1955	6580	
4	179.5			PCFR/GFRO				Dry	E	94	1960	8840	
	486.7	53	24.16		47	-	53						
					des p. coal/gas								
AREA TOTAL	2048.8		106.82										



LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's

Standard Metropolitan Statistical Areas (SMSA's)

Illinois plants 23, 25, 29, 33, 35 shown under "St. Louis SMSA"

PLANTS:

- EXISTING 1971
- ⊙ IN OPERATION BY 1975

"REFUSE GENERATION"

Mo. 9
Mo. 29
Mo. 26
Mo. 28

Missouri plants 1, 9, 18, 22, 28, 29, 26 included in Kansas under "Kansas City SMSA" with Kansas plants 97, 98, 99.

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SCALE
0 10 20 30 40 50 MILES

REFUSE COMBUSTION FOR POWER GENERATION
Missouri, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	10 ⁶	(a) REFUSE GENERATION 10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANSPORTATION DISTANCE miles
Columbia SMSA (inc. Cole Co., Osage Co., Callaway Co., Andrain Co.)	218.7	8.1	0.195	0.12	1.15	14.0	27
Kansas City SMSA	2395.8	91.3	1.283	0.84	7.60	8.3	8
St. Joseph SMSA (incl. Andrew Co.)	193.0	16.0	0.100	0.06	0.59	3.7	5
St. Louis SMSA	5096.3	237.5	2.398	1.57	14.18	6.0	16
Springfield SMSA	253.0	11.3	0.156	0.10	0.92	8.1	< 5
Dunklin County	34.5	1.7	0.034	0.02	0.18	10.3	10
Henry County	563.1	31.3	0.019	0.01	0.10	0.3	10
Jasper County	212.8	12.1	0.081	0.04	0.43	3.5	10
Livingston County	15.0	0.7	0.016	0.00	0.09	11.5	5
Ralls County	34.0	0.4	0.008	0.01	0.04	9.3	10
Randolph County	447.0	26.2	0.023	0.01	0.12	0.5	10
Saline County	30.5	0.8	0.025	0.01	0.13	15.1	10
MISSOURI STATE TOTALS	9493.7	437.9	4.338	2.84	25.53	5.8	

REFUSE COMBUSTION FOR POWER GENERATION
Missouri, 1971 - "Coal Plants" only*

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANSPORTATION DISTANCE miles
Columbia SMSA (incl. Cole Co., Osage Co., Callaway Co., Andrain Co.)	187.0	6.3	0.195	0.12	1.15	18.0	27
Kansas City SMSA	2262.8	89.3	1.283	0.84	7.6	8.5	8
St. Joseph SMSA (incl. Andrew Co.)	193.0	16.0	0.100	0.06	0.59	3.7	5
St. Louis SMSA	5041.3	237.4	2.398	1.57	14.18	6.0	16
Springfield SMSA	253.0	11.3	0.156	0.10	0.92	8.1	<5
Dunklin County	-	-	0.034	0.02	0.18	-	
Henry County	563.1	31.3	0.019	0.01	0.10	0.3	10
Jasper County	212.8	12.1	0.081	0.04	0.43	3.5	10
Livingston County	15.0	0.7	0.016	0.00	0.09	11.5	5
Ralls County	34.0	0.4	0.008	0.01	0.04	9.3	10
Randolph County	447.0	26.2	0.023	0.01	0.12	0.5	10
Saline County	30.5	0.8	0.025	0.01	0.13	15.1	10
MISSOURI STATE TOTALS	9239.5	432.4	4.338	2.84	25.53	5.9	

* Includes all plants in the Data Tables except 3, 20, 21, 29.

REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%			COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Kansas City SMSA</u>													
1. Hawthorn (Kansas City Power and Light)													
Boiler 1	69			PCTA/ GTAN				DRY	MCAX	85	1951	135	< 5
2	69			PCTA/ GTAN				DRY	MCAX	85	1951	135	
3	112.5			PCTA/ GTAN				DRY	MCAX	NR/99	1953	225	
4	142.8			PCTA/ GTAN				DRY	MCAX	NR/99	1955	285	
5	514.8			PCTA/ GTAN				DRY	E		1969	1030	
	<u>908.1</u>	49	<u>42.97</u>		55 des.p. coal	-	45 gas						
18. Sibley (Missouri Public Service)													
Boiler 1	50			CYCL	100			WET	MCAX	NR	1960	55	22
2	50			CYCL	100			WET	MCAX/E	NR/99	1962	55	
3	<u>418.5</u>			CYCL	100			WET	E	99	1969	495	
	<u>518.5</u>	30	<u>14.48</u>		100 des.p. coal	-	-						
22. R.J. Green (Missouri Public Service Co.)													
Boiler 1	24.5			GFRO				DRY	MCAX	94	1954	35	25
2	<u>25.0</u>			PCFR				DRY	MCAX	94	1958	35	
	<u>49.5</u>	28	<u>1.73</u>		1 des.p. coal	-	99 gas						

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REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Kansas City SMSA cont'd													
28. Grand Avenue (Kansas City Power and Light)													
Boiler 1				GFRO/ RFRO				NONE	NONE	-	1968		10
5				GTAN/ OSTO				DRY	CYCL/C		1930		
6				GTAN/ PCTA				DRY	CYCL/C	99	1944		
7				GTAN/ PCTA				DRY	CYCL/C	99	1950		
8				GTAN/ PCTA				DRY	CYCL/C	99	1948		
	126.8	14	2.26		37 des. p.coal		63 oil gas					95	
9. Missouri City (Chameron) (NW Electric Power Corp.)													
Boiler 1	20			PCFR				WET	MCTA	52 (t)	1953	55	20
2	20			RFRO				WET	MCTA	52 (t)	1953	55	
	40	59	2.77		92 des.p. coal		8 oil						

* Common header system.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU YR	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY RTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
Kansas City SMSA cont'd														
KS 99, Kaw River (Kansas City Board of Pub. Utilities)														
Boiler 1	46				GFRO/PCFR				Wet	MCAX	85	1955	115	5
2	50				GFRO/PCFR				Wet	MCAX	85	1957	125	
3	65.3				CYCL				Wet	E	97	1962	165	
	161.3	58		9.54		22	-	78						
						des p. coal/gas								
KS 98, Quindaro No. 2* (Kansas City Bd. of Pub. Utilities)														
Boiler 17					GFRO/PCFR				Wet	None	-	1932	105	<5
18					GFRO/PCFR				Wet	None	-	1933		
19					GFRO/PCFR				Wet	None	-	1938		
20					GFRO/PCFR				Wet	None	-	1942		
21					GFRO/PCFR				Wet	MCAX	85	1946		
22	34.5				GFRO/PCFR				Wet	MCAX	85	1952	60	
	94.5	29		4.04		87	-	63						
						des. p. coal/gas								

* Common steam header

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE Miles
					COAL	OIL	GAS		TYPE	EFF. %			
	MW	%	10 ¹² BTU /yr									tons/day	
<u>Kansas City SMSA cont'd</u>													
KS 97, Quindaro No.3 Kansas City Board of Pub. Utilities													
Boiler 1	81.6			CYCL				Wet	E	98	1966	95	<5
2	157.5			PCFR				Dry	E	99.35	1971	190	
	239.1	25	6.70		37	-	63						
					des p. coal/gas								
26, Blue Valley Independence City Power & Light													
Boiler 1								Wet					8
2								Wet					
3								Wet					
	125	40	4.87		10	-	90					205	
					des. coal/oil/gas								

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REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Kansas City SMSA cont'd</u>													
29. Northeast (Kansas City Power and Light)													
Boiler 9				RFRO/ GFRO				None	None	-	1922	Yes	<5
10				RFRO/ GFRO				"	"	-	1929		
11				RFRO/ GFRO				"	"	-	1922		
12				RFRO/ GFRO				"	"	-	1929		
13				RFRO/ GFRO				"	"	-	1923		
14				RFRO/ GFRO				"	"	-	1937		
15				RFRO/ GFRO				"	"	-	1923		
16				RFRO/ GFRO				"	"	-	1950		
	133	10	1.94			2	98					85	
					des.	oil	gas						
AREA TOTAL	2395.6		91.30										
<u>Henry County</u>													
2. Montrose (Kansas City Power and Light)													
Boiler 1	187.5			PCTA	100			DRY	E	95	1958	435	10
2	187.5			PCTA	100			DRY	E	99.5	1960	435	
3	188.1			PCTA	100			DRY	E	99.5	1964	440	Kansas City 60
	563.1	58	31.34		100								
					des.p.	coal							
AREA TOTAL	563.1		31.34										

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED	LOAD	ENERGY	TYPE	CURRENT FUEL	BOTTOM	AIR POLLUTION	INITIAL	REFUSE	TYPICAL
	CAPACITY	FACTOR	RENT.	OF	DISTRIBUTION	ASH	CONTROL	YEAR OF	COMBUSTION	TRANS.
	MW	%	1012 BTU	FIRING	BY BTU %	HANDLING		OPERATION	"CAPACITY"	DISTANCE
			YR		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
St. Joseph SMSA - Andrew Co.										
14. Lake Road (St. Joseph Light & Power Co)										
Boiler 1	60.5*			GFRO/RFRO		Dry	None	1961		<5
2				GFRO/RFRO		Dry	None	1961		
3				GFRO/RFRO		Dry	None	1938		
4				GFRO/RFRO/PCFR		Dry	MCAX	85(d)	1950	
5				GFRO/RFRO/PCFR		Dry	MCAX	85.7 (d)	1957	
6				GFRO/GYCC		Dry	MCAX	70(d)	1967	
	90				8	-	92			
	150.5	76	13.96						590	
					des coal/oil/gas					
30. Edmond Street (St. Joseph Lgt. & Power Co)										
Boiler 16	42.5*			SPRE/RFRO/GFRO		Dry	MCTA	93	1950	<5
17				SPRE/RFRO/GFRO		Dry	MCTA	93	1950	
18				RFRO/GFRO		Dry	None	-	1955	
20				ROPP/GFRO		Dry	None	-	1962	
19				RFRO/GFRO		Dry	None	-	1957	
				42.5						
	42.5	25	2.71							
					5	95				
					des coal/oil/gas				85	
* Header system, boilers not directly associated										
AREA TOTAL	193.0		16.07							

REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Randolph County</u>													
17. Thomas Hill													
(Assoc. Electric Corp.)													
Boiler 1	175			CYCL	100			DRY	E	96.5	1966	435	10
2	272			CYCL	100			DRY	E	95.3	1966	680	
	447	68	26.29		100	-	-						Columbia 50
				des. coal									
AREA TOTAL	447.0		26.29										
<u>Saline County</u>													
19. Marshall													
(Marshall Municipal Utility)	30.5	27	0.86		6	-	94	*	*	*		35	10
					des. coal	oil	gas						Columbia 50
													Kansas City 75
AREA TOTAL	30.5		0.86										

* No FPC-67 Filed.

REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

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SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Livingston County													
23. Chillicothe (Chillicothe Municipal Util.)	15	50	0.78		100 des. s. coal	-	-	*	*	*		30	5 St Joseph 60 Kansas City 70
AREA TOTAL	15.0		0.78										
Rolls County													
27. Hannibal (Hannibal Board of Public Works)	34	12	0.43		85 des. p. coal	-	15	*	*	*		15	10 St Louis 95
AREA TOTAL	34.0		0.43										
St. Louis SMSA													
4. Meramec (Union Electric)													
Boiler 1	137.5			PCTA				DRY	E	98	1953	305	10
2	137.5			PCTA				DRY	E	98/83(d)	1954	305	
3	289			PCFR				DRY	E	98	1959	645	
4	359			PCFR				DRY	E	98	1961	800	
	923	58	48.16		92 des.p. coal	-	8 gas						
III.29. Baldwin, Illinois													
(Illinois Power Company)													
Boiler 1	623.1			CYCL	100	-	-	WET	E	97	1970	1405	45
	623.1	62	33.13		100 des. coal	-	-						

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU /yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles	
					COAL	OIL	GAS		TYPE	EFF. %				
St. Louis SMSA cont'd														
ILL23. Wood River, Illinois (Illinois Power Company)														
Boiler	1	70	40.68	PCTA PCTA PCTA PCTA PCTA	76	-	24	Dry Dry Dry Dry Dry	Grav Grav Grav C C	15 15 15 99.3(t) 99.1(t)	1949 - 1950 1954 1964	395 300 1025	15	
	2													
	3													
	4													
	5													
		</												

* Boilers 2,3,4,5,6: common steam header. All five boilers similarly equipped.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>ST. LOUIS SMSA-cont'd</u>													
III.33. Cahokia (Union Electric) Boiler 1				RFRO				Dry	-	-	1923		5
2				RFRO				Dry	-	-	1923		
3				RFRO				Dry	-	-	1923		
4				RFRO				Dry	-	-	1923		
5				RFRO				Dry	-	-	1923		
6				RFRO				Dry	-	-	1923		
7				RFRO				Dry	-	-	1923		
8				RFRO				Dry	-	-	1923		
9				RFRO				Dry	-	-	1924		
10				RFRO				Dry	-	-	1924		
11				RFRO				Dry	-	-	1924		
12				RFRO				Dry	-	-	1924		
13				RFRO				Dry	-	-	1925		
14				RFRO				Dry	-	-	1925		
15				RFRO				Dry	-	-	1925		
16				PCFR				Dry	-	-	1927		
17				PCFR				Dry	E	95	1927		
18				PCFR				Dry	E	95	1927		
19				PCFR				Dry	E	95	1937		
20				PCFR				Dry	E	95	1937		
21				PCFR				Dry	E	95	1937		
22				PCFR				Dry	E	95	1937		
23				PCFR				Dry	E	95	1937		
24				PCFR				Dry	E	95	1937		
	300	16	4.25		- - 100 des.p-coal/oil							180	

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>ST. LOUIS SMSA-cont'd</u>													
III. 35. Highland* (Highland Electric Light)	16.6	22	0.44		100 des.s-coal	-	-	*	*	*		15	30
III. 25. Venice, Illinois (Union Electric Company)													
Venice #1													
Boiler 1								None	None	-	1960		45
2								None	None	-	1960		
3								None	None	-	1960		
4								None	None	-	1960		
5								None	None	-	1960		
7								None	None	-	1925		
8								None	None	-	1925		
9								None	None	-	1925		
10								None	None	-	1925		
11								None	None	-	1925		
12								None	None	-	1929		
	55	0.9	0.06		-	-	100						
					des. oil/gas								

* NoFPC-67 filed
** All boilers front-fired

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: MISSOURI

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	1012 BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>ST. LOUIS SMSA-cont'd</u>													
III. 25. Venice, Illinois-cont'd (Union Electric Company)													
Venice #2													
Boiler 1				PCFR				Dry	E	96	1942		< 5
2				PCFR				Dry	E	96	1942		
3				PCFR				Dry	E	96	1943		
4				PCFR				Dry	E	96	1943		
5				PCFR				Dry	E	96	1948		
6				PCFR				Dry	E	96	1948		
7				Top- fired				Dry	E	96	1950		
8				Top- fired				Dry	E	96	1950		
	500	45	26.38		67	-	33						
					des.p.coal		gas					1125	
AREA TOTAL	5096.3		237.5										

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REFUSE COMBUSTION FOR POWER GENERATION

MISSOURI
1971

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Columbia SMSA-Callaway County, Cole County, Osage County</u>													
7. Chamois (Central Electric Power Corp.)	67.7	64	4.29	*	100 des. p. coal	-	-	*	*	*	1954	180	35
20. Jefferson City (Missouri Power and Light)	12.7	3	0.04	*	- des.	-	100 gas	*	*	*		-	25
21. Mexico (Missouri Power and Light)	19	88	1.76	*	- des.	-	100 gas	*	*	*		70	30
24. Columbia (Columbia Water and Light)	107.8	15	1.70	*	100 des. s. coal	-	-	*	*	*		70	<5
25. Fulton (Fulton Dept. of Utilities)	11.5	34	0.4	*	100 des. s. coal	-	-	*	*	*		15	25
AREA TOTAL	218.7		8.19										

* No FPC-67 Filed.

REFUSE COMBUSTION FOR POWER GENERATION

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Dunklin County</u>													
3. Jim Hill (Ark.-Miss. Power Co.)	34.5	48	1.74	*	- des.	5 oil	95 gas	*	*	*	1950	70	10 Poplar Bluff 20
AREA TOTAL	34.5		1.74										
<u>Springfield SMSA</u>													
8. James River (Springfield City Util.)													
Boiler 1	22			GTAN/ PCTA				DRY	CYCL	88	1952	40	<5
2	22			GTAN/ PCTA				DRY	CYCL	88	1957	40	
3	44			GFRO/ PCFR				DRY	CYCL	87	1960	80	
4	60			GFRO/ PCFR				DRY	CYCL	87	1964	110	
5	105			GFRO/ PCFR				DRY	E	98	1970	200	
	253	44	11.32		9 des. coal	-	91 gas						
AREA TOTAL	253.0		11.32										
<u>Jasper County</u>													
6. Asbury (Empire District Electricals)													
Boiler 1	212.8	63	12.15	CYCL	100 des. coal	oil		WET	E	92	1970	515	10 Springfield 80
AREA TOTAL	212.8		12.15										

* No FPC-67 Filed.



LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan
Statistical Areas (SMSA's)

○ Plants: EXISTING 1971



'REFUSE GENERATION' AREAS

SCALE
0 10 20 30 40 50 MILES

REFUSE COMBUSTION FOR POWER GENERATION
Nebraska, 1971 -- Omaha SMSA

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
<u>All Fossil Fuel Plants</u>							
Omaha SMSA	794.2	39.23	.552	.362	3.264	8.3	5

"Coal Plants" only**

Omaha SMSA	774.2	38.93	.552	.362	3.264	8.4	5
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Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

** Includes all plants in the Data Tables except 98.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEBRASKA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>OMAHA SMSA</u>													
99. North Omaha Omaha Public Power District													
Boiler 1	73.5			PCTA				Dry	C	96	1954	165	5
2	108.8			PCTA				Dry	C	96	1957	245	
3	108.8			PCTA				Dry	C	96	1959	245	
4	136.0			PCTA				Dry	E	96	1963	305	
5	217.6			PCFR				Dry	E	98.8	1968	490	
	600.7	61	38.23		43	-	57						
					des.p.coal/gas								
98. South Omaha Omaha Public Power District	20	14	0.3		17	-	83	*	*	*		10	5
					des. oil/gas								
97. Jones Street Station Omaha Public Power District													
Boiler 20				OSTO				Dry	None	-	1920		5
21				OSTO				Dry	None	-	1923		
22	65**			OSTO				Dry	None	-	1923		
23				OSTO				Dry	None	-	1925		
24				OSTO				Dry	None	-	1929		
25	25			OSTO				Dry	MCTA	85	1937	5	
26	34.5			OSTO				Dry	MCTA	85	1949	5	
27	49			OSTO				Dry	MCTA	85	1951	10	
	173.5	4	0.70		44	-	56						
					des.s.p.coal/gas								
AREA TOTAL	794.2		39.23										

* No FPC-67 filed.

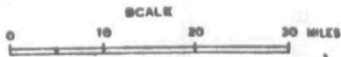
** header system

LEGEND

- Places of 50,000 to 100,000 inhabitants
- Central cities of SMSA's with fewer than 50,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan Statistical Areas (SMSA's)

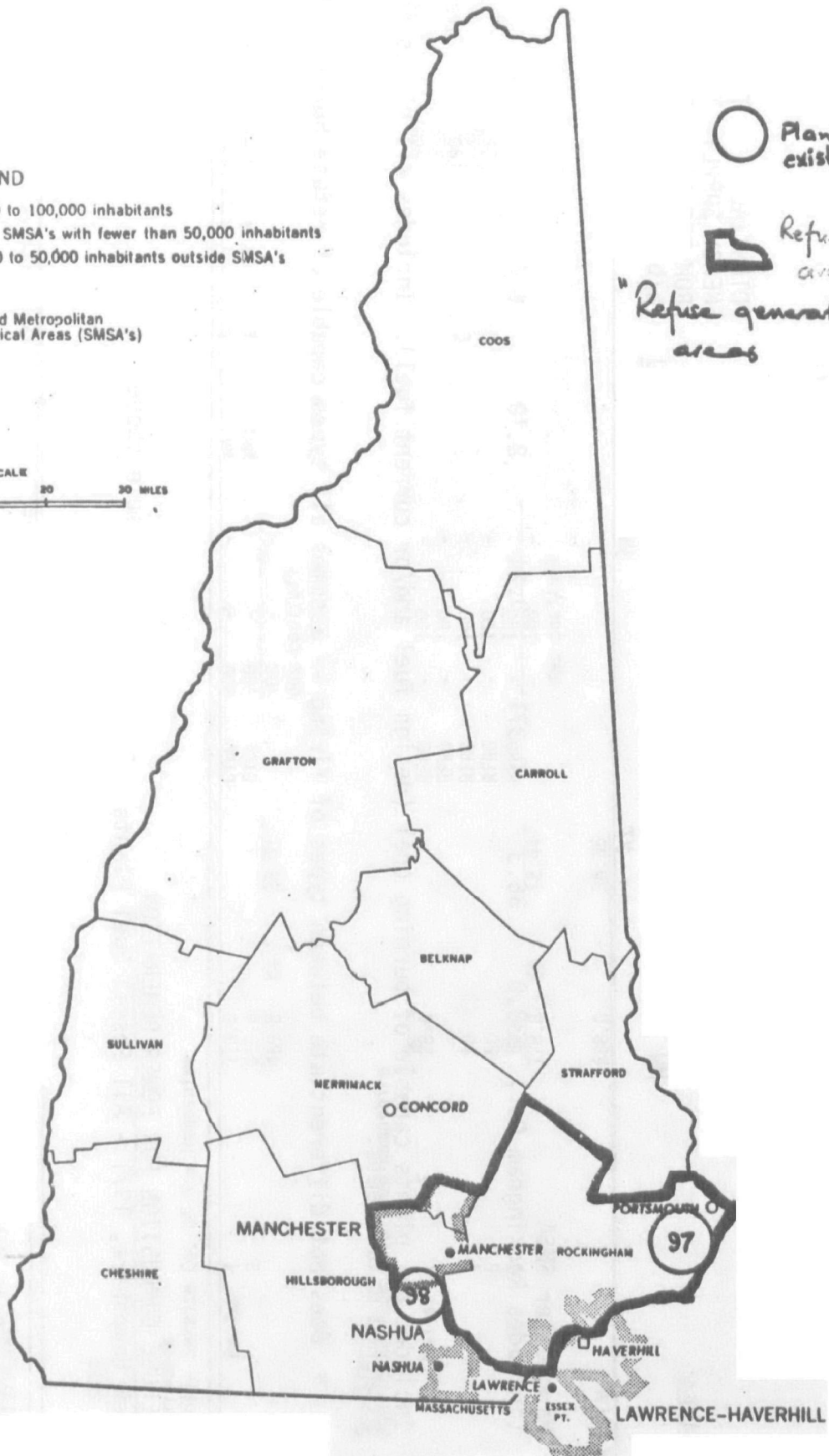


○ Plants existing 1971



Refuse areas

"Refuse generation areas"



REFUSE COMBUSTION FOR POWER GENERATION
New Hampshire, 1971 - "Coal Plants" only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	10 ⁶	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Manchester SMSA (includes Rockingham Co.)	638.0	36.3	0.371	0.24	2.19	6.0		

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION
New Hampshire, 1971 - All Fossil Fuel Plants -- Identical to table above.

Note: Data includes Merrimack and Schiller Plants only.

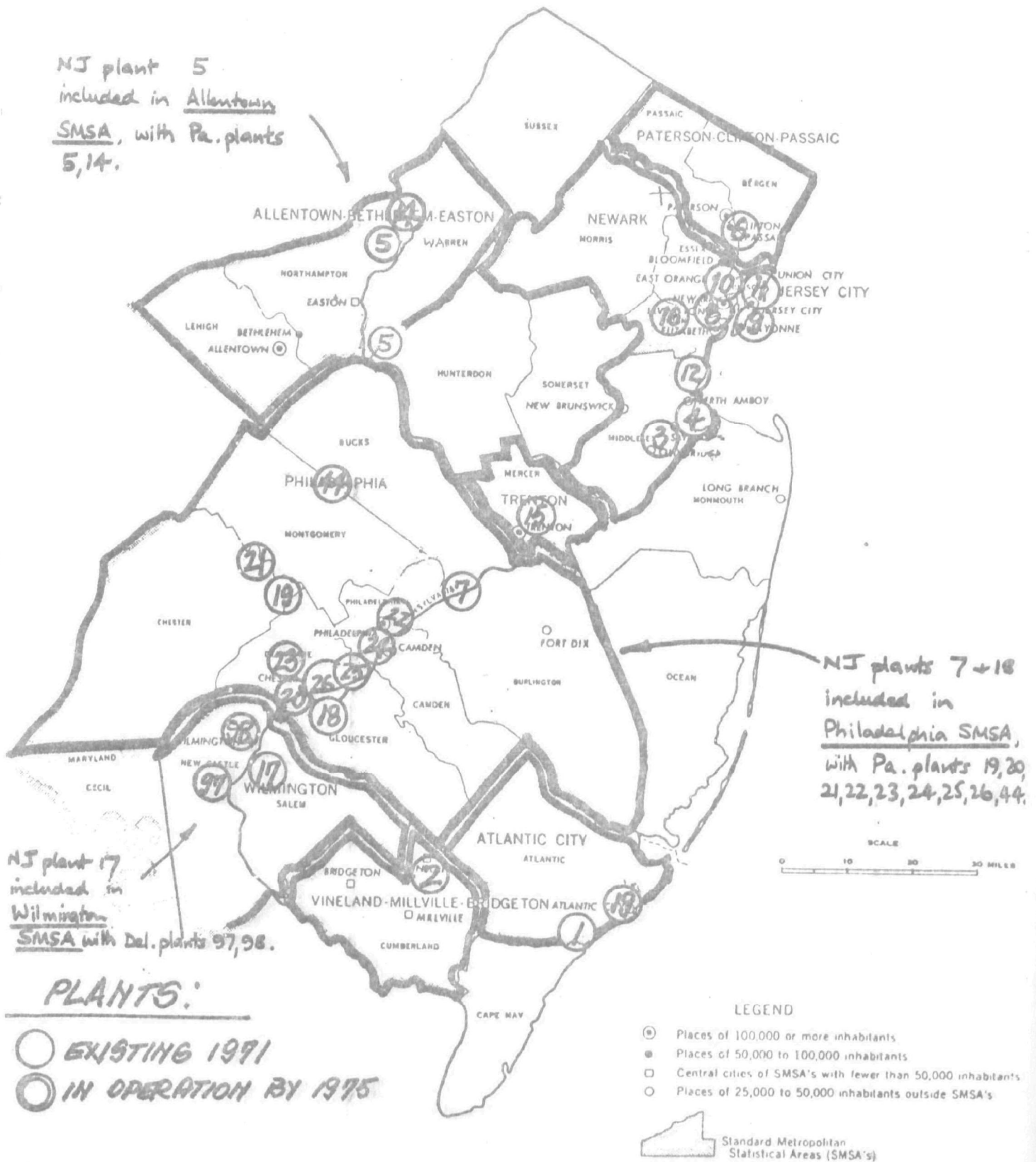
REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Hampshire

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE Miles
					COAL	OIL	GAS		TYPE	EFF. %			
	MW	%	10 ¹² BTU yr									tons/day	
<u>Manchester SMSA</u>													
<u>Rockingham Co.</u>													
98. Merrimack Public Service Co. of New Hampshire													
Boiler 1	113.6			CYCL	100	-	-	Wet	E	77.4	1960	250	10
2	345.6			CYCL	100	-	-	Wet	E	92.4	1968	760	
	459.2	61	23.91		100	-	-						
					des coal/oil								
97. Schiller Public Service Co. of New Hampshire													
Boiler 1	28.8			RFRO	-	100	-				1968	85	10
2				RFRO	-	100	-				1968		
4	50			RFRO	-	100	-		C		1952	145	
5	50			RFRO	-	100	-		C		1955	145	
6	50			RFRO	-	100	-				1957	145	
	178.8	68	12.44		-	100	-						
					des coal/oil								
AREA TOTAL	638.0		36.35										

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NJ plant 5
included in Allentown
SMSA, with Pa. plants
5, 14.



REFUSE COMBUSTION FOR POWER GENERATION
New Jersey, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	Typical Trans. Distance Miles
		10 ⁶ tons yr		10 ¹² BTU yr			
Atlantic City SMSA	351.7	21.1	0.177	0.11	1.05	5.0	8
Newark SMSA (incl. Middlesex County)	3977.4	204.6	2.491	1.64	14.73	7.2	<5
Patterson-Clifton-Passaic SMSA	650.4	27.9	1.394	0.91	8.24	29.5	5
Trenton SMSA	652.8	32.0	0.314	0.20	1.86	5.8	<5
Vineland-Millville-Bridgeton SMSA	82.0	3.8	0.125	0.08	0.74	19.1	<5
NEW JERSEY TOTALS	5714.3	289.6	4.501	2.96	26.62	9.19	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
New Jersey, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr 10 ¹² BTU yr		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	Typical Trans. Distance miles
Atlantic City SMSA	351.7	21.1	0.177	0.11	1.05	5.0	8
Newark SMSA (incl. Middlesex County)	3458.0	178.8	2.491	1.64	14.73	8.2	<5
Patterson-Clifton-Passaic SMSA	650.4	27.9	1.394	0.91	8.24	29.5	5
Trenton SMSA	652.8	32.0	0.314	0.20	1.86	5.8	<5
Vineland-Millville- Bridgeton SMSA	82.0	3.8	0.125	0.82	0.74	19.1	<5
NEW JERSEY STATE TOTALS	5194.9	263.8	4.501	2.96	26.62	10.1	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except No. 16.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Newark SMSA-Middlesex County													
9. Hudson Public Service Electric & Gas Boiler 1	454.8			CYCL				Wet	E	97.6	1964	780	<5
2	659.7			PCOP				Dry	E	98	1968	1135	
	1114.5	47	45.04		38	40	22						
					des.p.	coal	oil						
							gas						
11. Marion Public Service Electric & Gas Boiler 51	62.5			RFRO	-	100	-	-	E	95(d)	1941	135	<5
52	62.5			RFRO	-	100	-	-	E	95(d)	1941	135	
	125	42	6.46		-	100	-						
					des.p.	coal	oil						
8. Essex Public Service Electric & Gas Boiler 1				RFRO				-	E	93(d)	1947		<5
17				RFRO				-	-	-	1923		
18				RFRO				-	-	-	1923		
19				RFRO				-	-	-	1924		
20				RFRO				-	-	-	1924		
21				RFRO				-	-	-	1924		
22				RFRO				-	-	-	1924		
23				RFRO				-	-	-	1924		
24				RFRO				-	-	-	1924		
25				RFRO				-	E	90(d)	1938		
26				RFRO				-	E	90(d)	1938		
	336.8	36	17.05		-	97	3						
					des.p.	coal	oil						
							gas						

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance Miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Newark SMSA-Middlesex County cont'd													
10. Kearny "B"*													
Public Service Electric & Gas													
Boiler 1	157			RTAN	-	100	-	-	C	97(d)	1953	305	< 5
2	157			RTAN	-	100	-	-	C	97(d)	1953	305	
	598.6	**51	33.48		-	100	-						
					des.p.coal oil								
16. Linden													
Public Service Electric & Gas													
Boiler 11	259.7			RFRO	-	100	-	-	-	-	1957	385	< 5
12	259.7			RFRO	-	100	-	-	-	-	1957	385	
13	259.7			RFRO	-	100	-	-	-	-	1957	385	
2	259.7			RFRO	-	100	-	-	-	-	1957	385	
	519.4	47	25.73		-	100	-						
					des oil								
12. Sewaren													
Public Service Electric & Gas													
Boiler 1	103			RTAN				-	C	95(d)	1948	240	< 5
2	107			RTAN				-	C	95(d)	1948	250	
3	103			RTAN				-	C	95(d)	1949	240	
4	119			RTAN				-	C	97(d)	1949	275	
5	388			RFRO				-	-	-	1962	905	
	820	58	46.77		-	97	3						
					des.p.coal oil gas								

* Total Rated Capacity figure (598.6) uprated from 314.1MW during the period 1971-73 because boilers 41-43 and 51-53 from Kearny "A" have been included prior to retirement in 1973. Boilers 11-13, 21-23, 31-33 from Kearny "A" were retired in 1971. Each boiler from Kearny "A" was an "RFRO" boiler burning oil, with no operable ash handling or pollution control equipment, and all were constructed during the period 1925-28.

** State average

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance miles
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	
Newark SMSA-Middlesex County (cont'd)										
4. Werner Jersey Central Power & Light										
Boiler 1				RFRO	- 100 -			1930		<5
2				RFRO	- 100 -			1930	140	
3				RFRO	- 100 -			1930		
4				CYCL/ RFRO	- 100 -	E	86.7(t)	1953	150	
	60				- 100 -					
	116.25	54	6.83		des.coal oil					
3. Sayreville Jersey Central Power & Light										
Boiler 2				RFRO				1930		<5
3				RFRO				1930		
5				top- fired		Wet	MCTA 89	1942		
6				top- fired		Wet	MCTA 88	1949		
7				PCFR, CYCL, RFRO, GFRO		Wet	E 95	1955		
8				PCFR, CYCL, RFRO, GFRO		Wet	E 90	1958		
	346.8	69	23.25		- 82 18 -				980	
					des.s,p coal oil gas					
AREA TOTAL	3977.35		204.61							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Atlantic City SMSA</u>													
1. England													
Atlantic City Electric Co.													
Boiler 1	136			CYCL				Wet	E	93.5	1962	340	8
2	163.2			CYCL				Wet	E	94	1964	410	
	299.2	70	17.69		92	8	-						
					des.p.coal	oil							
19. Missouri Avenue													
Atlantic City Electric Co.													
Boiler 6	26.25			PCFR	100	-	-	Dry	E	87.8	1941	70	5
7	26.25			PCFR	100	-	-	Dry	E	81.4	1946	70	
	52.5	63	3.48		100	-	-						
					des.p.coal								
<u>AREA TOTAL</u>	351.7	21.17											

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance Miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day		
<u>Vineland SMSA</u>													
2. Vineland Vineland Electric Department Boiler information not available	82	35	3.88		21 des.s.coal	79	-	*	*	*	1900	160	<5
AREA TOTAL	82		3.88										
<u>Trenton SMSA</u>													
15. Mercer Public Service Electric & Gas Boiler 1	326.4			PCFR			-	Wet	C	95.5	1960	675	<5
2	326.4			PCFR				Wet	C	90.3	1961	675	
	652.8	60	32.02		91 des.p.coal	-	9 gas						
AREA TOTAL	652.8		32.02										

NOTES

- 18-Gibbstown (Atlantic City Electric Company) and 7-Burlington (Public Service Electric & Gas) plants included in Philadelphia SMSA, Pennsylvania.
- 17-Deepwater (Atlantic City Electric Company) plant included in Wilmington SMSA, Delaware.
- N.J. Plants 5 and 13 included in Allentown-Bethlehem-Eastern SMSA, Pennsylvania.

*No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: New Jersey

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SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Paterson-Clifton-Passaic SMSA</u>													
6. Bergen													
Public Service Electric & Gas				PCFR				Wet	C	96.5	1959	590	5
Boiler 1	325.2			PCFR				Wet	C	94.7	1960	590	
2	325.2												
	650.4	51	27.94		60	27	13						
					des.p.coal		gas						
AREA TOTAL	650.4		27.94										

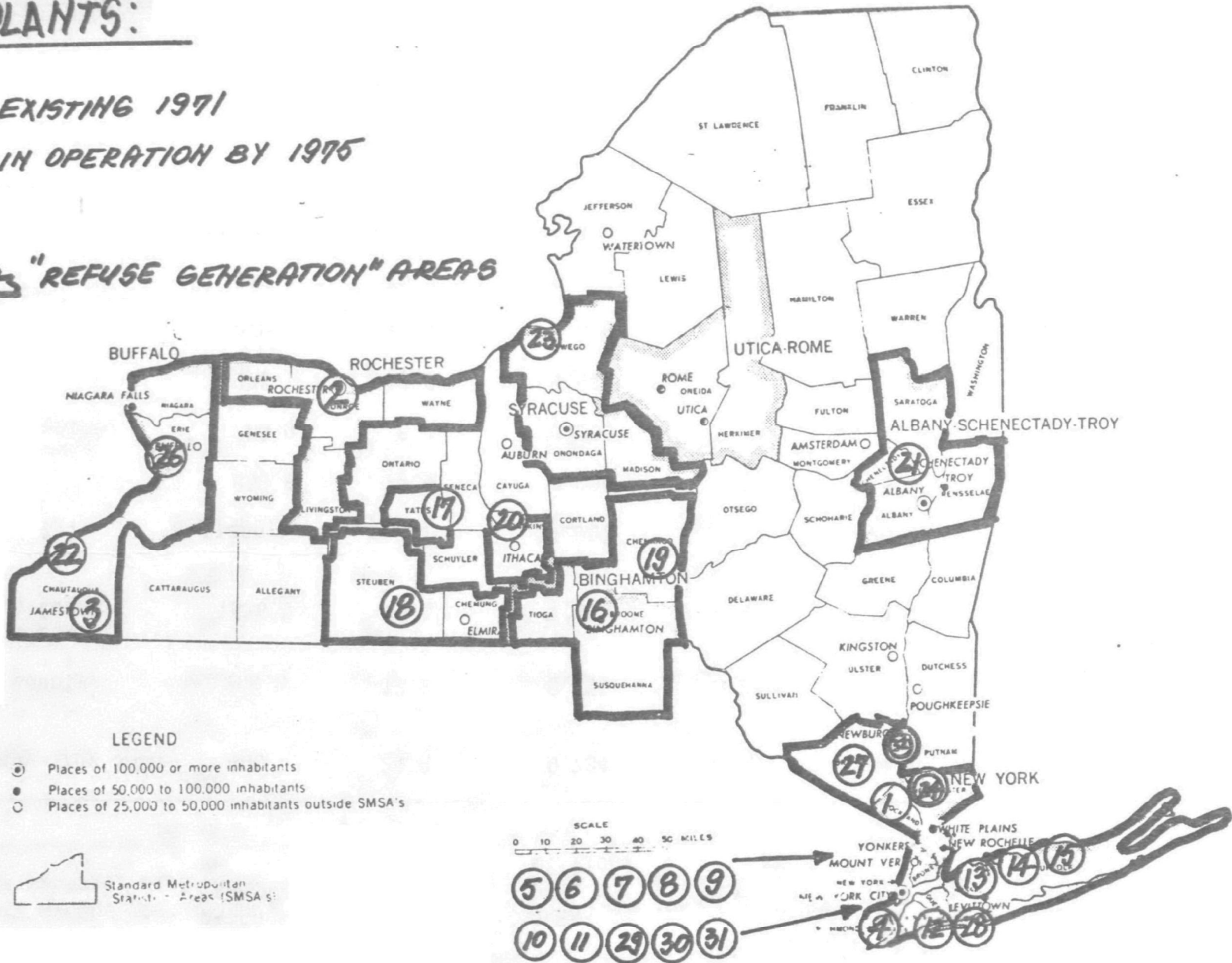
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PLANTS:

○ EXISTING 1971

⊙ IN OPERATION BY 1975

REFUSE GENERATION AREAS



REFUSE COMBUSTION FOR POWER GENERATION
New York, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	Typical Trans. Distance miles
				10 ⁶ tons yr	10 ¹² BTU yr		
Albany-Schenectady-Troy SMSA	400	24.9	0.734	0.48	4.34	17.3	< 5
Binghamton SMSA (incl. Chenango County)	205.8	13.2	0.355	0.23	2.10	15.9	8
Buffalo SMSA (incl. Chautauqua County)	1536.5	70.0	1.518	0.99	8.97	12.8	25
New York SMSA (incl. Orange County)	11499.1	518.9	11.961	7.85	70.72	13.6	11
Rochester SMSA	458.8	24.9	0.906	0.59	5.36	21.4	< 5
Steuben-Chemung Counties	70.0	8.7	0.205	0.12	1.10	12.6	8
Syracuse SMSA	376	19.9	0.647	0.42	3.83	19.2	30
Tompkins County	270	18.4	0.078	0.04	0.41	2.2	11
Yates County	160	10.8	0.020	0.01	0.11	1.0	10
NEW YORK TOTAL	14976.2	710.0	16.424	10.77	96.94	13.6	

Includes all plants detailed in attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
New York, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ¹⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	Typical Trans. Distance miles
Albany-Schenectady-Troy SMSA	400	24.9	0.734	0.48	4.34	17.3	< 5
Binghamton SMSA (incl. Chenango County)	205.8	13.2	0.355	0.23	2.10	15.9	8
Buffalo SMSA (incl. Chautauqua County)	1536.5	70.0	1.518	0.99	8.97	12.8	25
New York SMSA (incl. Orange County)	6657.4	312.8	11.961	7.85	70.72	22.6	11
Rochester SMSA	458.8	24.9	0.906	0.59	5.36	21.4	< 5
Steuben-Chemung Counties	70.0	8.7	0.205	0.12	1.10	12.6	8
Syracuse SMSA	376	19.9	0.647	0.42	3.83	19.2	30
Tompkins County	270	18.4	0.078	0.04	0.41	2.2	11
Yates County	160	10.8	0.020	0.01	0.11	1.0	10
NEW YORK TOTAL	10134.5	503.9	16.424	10.77	96.94	19.2	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except Nos. 6, 7, 8, 10, 11, 14, 29 and 30 (New York City area).

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Binghamton SMSA Chenango County													
16. Goudey													
New York State Electric & Gas Corp.													
Boiler 8	9			PCFR	100	-	-	Wet	E	90	1927	20	< 5
9	10.5			PCFR	100	-	-	Wet	E	90	1927	20	
10	10.5			PCFR	100	-	-	Wet	E	90	1927	20	
11	21.9			PCOP	100	-	-	Wet	E	85	1943	50	
12	21.9			PCOP	100	-	-	Wet	E	85	1943	50	
13	60			PCTA	100	-	-	Wet	E	75.7	1951	140	
	145.8	58	8.27		100	-	-						
					des.p.coal								
19. Jennison													
New York State Electric & Gas Corp.													
Boiler 1	15			OSTO	100	-	-	Wet	MCAX	86	1945	50	22
2	15			OSTO	100	-	-	Wet	MCAX	86	1945	50	
3	15			OSTO	100	-	-	Wet	MCAX	86	1950	50	
4	15			OSTO	100	-	-	Wet	MCAX	86	1950	50	
	60	62	4.94		100	-	-						
					des.s.coal								
761													
AREA TOTAL	205.8		13.21										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day		
Syracuse SMSA													
23. Oswego													
Niagara Mohawk Power Company													
Boiler 1	92			PCFR	100	-	-	Wet	MCTA	86	1940	205	30
2	92			PCFR	100	-	-	Wet	MCTA	86	1941	205	
3	92			PCFR	100	-	-	Wet	MCYA	88	1948	205	
4	100			PCFR	100	-	-	Wet	MCAX	89	1951	225	
	376	55	19.94		100	-	-						
					des.p.coal								
AREA TOTAL													
	376		19.94										
Buffalo SMSA													
Chautauqua County													
22. Dunkirk													
Niagara Mohawk Power Company													
Boiler 1	96			PCTA	100	-	-	Dry	MCAX	85.6	1950	185	45
2	96			PCTA	100	-	-	Dry	MCAX	80	1950	185	
3	218			PCTA	100	-	-	Dry	C	95.1	1959	420	
4	218			PCTA	100	-	-	Dry	C	95.5	1960	420	
	628	54	28.56		100	-	-						
					des.p.coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Buffalo SMSA cont'd</u>													
<u>Chautauqua County</u>													
26. Huntley													
Niagara Mohawk Power Company													
Boiler 63	92			PCFR	100	-	-	Wet	C	93-95	1942	180	5
64	100			PCFR	100	-	-	Wet	C	93-95	1948	195	
65	100			PCFR	100	-	-	Wet	C	93-95	1953	195	
66	100			PCFR	100	-	-	Wet	C	93-95	1954	195	
67	218			PCTA	100	-	-	Dry	C	93-95	1957	430	
68	218			PCTA	100	-	-	Dry	C	93-95	1958	430	
	828	53	38.26		100	-	-						
					des.p.coal								
3. Carlson													
Jamestown Board of Public Utilities													
Boiler 1					100	-	-						60
2					100	-	-						
3					100	-	-						
4	23				100	-	-						
5	25				100	-	-					35	
	80.5	34	3.19		100	-	-					40	
					des.p.coal								
AREA TOTAL	1536.5		70.01										

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %	tons/day	
<u>Albany-Schenectady-Troy SMSA</u>												
21. Albany												<5
Niagara Mohawk Power Company												
Boiler 1	100			PCTA	-	100	-	Dry	MCAX	75	1952	260
2	100			PCTA	-	100	-	Dry	MCAX	75	1952	260
3	100			PCTA	-	100	-	Dry	MCAX	75	1953	260
4	100			PCTA	-	100	-	Dry	MCAX	75	1954	260
	400	71	24.95			100	-					
					des.p.coal							
					oil							
AREA TOTAL	400		24.95									

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Yates County													
17. Greenidge													10
New York State Electric & Gas Corp.													
Boiler 1	10			PCFR	100	-	-	Wet	CYCL	75	1938	25	
2	10			PCFR	100	-	-	Wet	CYCL	75	1938	25	
3	20			PCFR	100	-	-	Wet	MCAX	75	1943	55	
4	20			PCFR	100	-	-	Wet	MCAX	75	1950	55	
5	20			PCFR	100	-	-	Wet	MCAX	75	1950	55	
6	80			PCTA	100	-	-	Wet	E	85	1953	230	
	160	69	10.84		100	-	-						
					des.p.coal								Rochester 45 Elmira 35
AREA TOTAL													
	160		10.84										
Rochester SMSA													
2. Rochester 3													
Rochester Gas & Electric Corp.													
Boiler 1	20.8			PCFR				Dry	E	75-80	1936	55	<5
2	20.8			PCFR				Dry	E	84-86	1937	55	
3	20.8			PCFR				Dry	E	75-80	1938	55	
4	20.8			PCFR				Dry	E	85-90	1940	55	
7	20.8			PCFR				Dry	E	82-86	1947	55	
8	20.8			PCFR				Dry	E	90-91	1942	55	
12	81.6			PCTA				Dry	E	93-96	1959	230	
	206.2	64	8.10		98	-	2						
					des.p.coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	1012 BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>Rochester SMSA cont'd</u>													
2. Rochester 7													<5
Rochester Gas & Electric Corp.													
Boiler 1	46			PCTA				Dry	E	97.5	1949	130	
2	62.5			PCTA				Dry	E	97.5	1951	175	
3	62.5			PCTA				Dry	E	97.5	1953	175	
4	81.6			PCTA				Dry	E	97.5	1957	230	
	252.6	64	16.88		99	-	1						
					des.p.coal								
AREA TOTAL	458.8		24.98										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Tompkins County													
20. Milliken													
New York State Electric & Gas Corp.													
Boiler 1	135			PCTA	100	-	-	Wet	E	84	1955	380	11
2	135			PCTA	100	-	-	Wet	E	86	1958	380	
	270	81	18.47		100	-	-						
					des.p.coal								Syracuse 35 Binghamton 45
AREA TOTAL 270 18.47													
Steuben County-Chemung County													
18. Hickling													
New York State Electric & Gas Corp.													
Boiler 1	15			OSTO	100	-	-	Wet	MCAX	86	1948	75	8
2	15			OSTO	100	-	-	Wet	MCAX	86	1948	75	
3	20			OSTO	100	-	-	Wet	MCAX	86	1952	105	
4	20			OSTO	100	-	-	Wet	MCAX	86	1952	105	
	70	96	3.70		100	-	-						
					des.s.coal								Binghamton 55 Rochester 80
AREA TOTAL 70 8.70													

REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971

STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
New York SMSA Orange County													10
12. Far Rockaway (Long Island Lighting Co.) Boiler 4	113.6	58	6.10	RTAN- GTAN- PCTA	-	85	15	DRY	C	N.R.	1953	260	
					des.p.	coal	oil	gas					
13. Glenwood (Long Island Lighting) Boiler 1	30			RFRO				DRY	E	N.R.	1928	55	15
	30			GFRO				DRY	E	N.R.	1928	55	
	30			RFRO				DRY	C	N.R.	1930	55	
	30			GFRO				DRY	C	N.R.	1930	55	
	30			GFRO				DRY	C	N.R.	1930	55	
	30			Top				DRY	None	N.R.	1942	55	
	30			Fired				DRY	None	N.R.	1946	55	
	30			PCTA				DRY	None	N.R.	1952	190	
	100			GTAN				DRY	C	N.R.	1954	190	
	100			RTAN				DRY	C	N.R.			
	100			PCTA									
	100			RTAN									
	100			GTAN									
	380.3	40	17.24		-	75	25						
					des.p.	coal	oil	gas					

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
New York SMSA Orange County cont'd													
15. Port Jefferson (Long Island Lighting Co.)													44
Boiler 10	46			PCTA									
				RTAN				DRY	C/MCTA	NR	1948	115	
20	46			PCTA									
				RTAN				DRY	C/MCTA	NR	1950	115	
30	187.5			PCTA									
				RTAN				DRY	C/MCTA	NR	1958	480	
40	187.5			PCTA									
				RTAN				DRY	C/MCTA	NR	1960	480	
	467	67	28.31			100							
					des.p. coal oil								
30. 59th Street (Con Edison)													
Boiler 111	30.5			RFRO				None	None	-	1962	65	45
112	30.5			RFRO				None	None	-	1962	65	
113	30.5			RFRO				None	None	-	1952	65	
110	58			RFRO				None	None	-	1962	125	
114	} 35			RTAN				None	None	-	1967	75	
115				RTAN				None	None	-	1967	75	
	184.5	36	5.86			100							
					des. oil								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans. Distance Miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>New York SMSA Orange County cont'd</u>													
27. Danskammer (Central Hudson Gas & Elec.)													50
Boiler 1	72.7			PCTA				Dry	E	98	1951	170	
2	74.2			PCTA/GTAN				Dry	E	98	1954	175	
3	148.5			PCTA				Dry	E	98	1959	350	
4	242.0			PCTA				Dry	E	98	1967	575	
	537.4	63	30.19		12	84	4						
					des p. coal oil gas								
1. Lovett (Orange & Rockland Utilities)													40
Boiler 1	23			PCFR, RFRO				Dry	MCTA	85	1949	55	
2	23			GFRO				Dry	MCTA	85	1951	55	
3	69			PCFR, RFRO				Dry	MCTA	85	1955	170	
4	179.5			GRRP				Dry	MCTA	85	1955	170	
5	200.6			PCTA, RTAN				Dry	E	92	1966	445	
	495.1	63	28.96	GTAN				Dry	E	92	1969	500	
				PCFR, RFRO				Dry	E	92	1969	500	
				GFRO				Dry	E	92	1969	500	
				PCFR, RFRO				Dry	E	92	1969	500	
				GPRO				Dry	E	92	1969	500	
					-	64	36						
					des. p. coal/oil/gas								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971
STATE:NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Dist. miles
					COAL	OIL	GAS		TYPE	EFF. %			
	MW	%	10 ¹² BTU yr									tons/day	
New York SMSA Orange County cont'd.													
5. Astoria (Con Edison)													<5
Boiler 10	200			RFRO,PCFR				Dry	C	97(d)	1953	360	
20	200			GFRO				Dry	C	97(d)	1954	360	
30	376			RFRO,PCFR,				Dry	C	99(d)	1958	680	
40	387			GFRO				Dry	C	99(d)	1961	700	
50	387			PCTA				Dry	C	99(d)	1961	700	
	1550	45	66.56	PCTA	16	63	21						
					des p. coal oil gas								
6. East River (Con Edison)													<5
Boiler 1				RFRO				None	None	-	1926		
2				RFRO				None	None	-	1926		
3				RFRO				None	None	-	1927		
4				RFRO				None	None	-	1927		
5				RFRO				None	None	-	1927		
6				RFRO				None	None	-	1927		
7				ROPP				None	None	-	1929		
8				ROPP				None	None	-	1929		
9				ROPP				None	None	-	1929		
50	156			top-fired				None	None	-	1950	310	
60	156			top-fired				None	None	-	1951	310	
70	200			RFRO				None	C	97(d)	1955	400	
	834	38	39.02		-	38	62						
					des oil gas								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971
STATE:NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>New York SMSA - Orange Co. cont'd.</u>													
7. Hell Gate (Con Edison)													< 5
Boiler 11				GFRO/RFRO				None	None	-	1946		
12				GFRO/RFRO				None	None	-	1946		
31				RFRO				None	None	-	1922		
32				RFRO				None	None	-	1922		
33				RFRO				None	None	-	1922		
41				RFRO				None	None	-	1922		
42				RFRO				None	None	-	1922		
43	**			RFRO				None	None	-	1922		
51				RFRO				None	None	-	1923		
52				RFRO				None	None	-	1923		
53				RFRO				None	None	-	1924		
71				RFRO				None	None	-	1925		
72				RFRO				None	None	-	1925		
73				RFRO				None	None	-	1925		
81				GTAN/RTAN				None	None	-	1928		
82				GTAN/RTAN				None	None	-	1928		
83				GTAN/RTAN				None	None	-	1929		
91				GOPP/ROPP				None	None	-	1930		
92				GOPP/ROPP				None	None	-	1930		
	511*	40	28.60			91	9					1320	
						des oil gas							

* Note: 2-50 MW boilers retired in 1971 and not included in total

**No breakdown in FPC-67

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	Typical Trans Distance miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>New York SMSA Orange Co. cont'd</u>													
10. Sherman Creek *													
(Con Edison)													
Boiler 90	108.25			RTAN				None	None	-	1943	85	<5
100	108.25			RTAN				None	None	-	1947	85	
	216.5	10	4.02		-	97	3						
					des. oil								
9. Ravenswood													
(Con Edison)													
Boiler 10	400			GTAN/RTAN				-	-	-	1963	730	<5
20	400			GTAN/RTAN				-	-	-	1963	730	
30	1028			RTAN/PCTA				Dry	C	99(d)	1965	1880	
	1828	50	78.27		-	92	8						
					des p. coal oil gas								
4. Arthur Kill													
(Con Edison)													
Boiler 2	376			RFR0/PCFR				Dry	C	99	1959	605	<5
3	535			PCTA				Dry	E	99.5	1969	1840	
	911	41	34.72		56	44	-						
					des p. coal oil								

* Retired 1972

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
New York SMSA Orange County cont'd													
8. Hudson Avenue (Con Edison) Boiler 61				RFRO	-	100	-	None	None	-	1930		<5
62				RFRO	-	100	-	None	None	-	1930		
63				RFRO	-	100	-	None	None	-	1930		
64				RFRO	-	100	-	None	None	-	1930		
71				RFRO	-	100	-	None	None	-	1932		
72				RFRO	-	100	-	None	None	-	1932		
73				RFRO	-	100	-	None	None	-	1932		
74				RFRO	-	100	-	None	None	-	1932		
81				RFRO	-	100	-	None	None	-	1932		
82				RFRO	-	100	-	None	None	-	1932		
83				RFRO	-	100	-	None	None	-	1932		
84				RFRO	-	100	-	None	None	-	1932		
100				RFRO	-	100	-	None	None	-	1950		
32				RFRO	-	100	-	None	None	-	1924		
33				RFRO	-	100	-	None	None	-	1924		
34				RFRO	-	100	-	None	None	-	1924		
41				RFRO	-	100	-	None	None	-	1926		
42				RFRO	-	100	-	None	None	-	1926		
43				RFRO	-	100	-	None	None	-	1927		
44				RFRO	-	100	-	None	None	-	1927		
51				RFRO	-	100	-	None	None	-	1928		
52				RFRO	-	100	-	None	None	-	1928		
53				RFRO	-	100	-	None	None	-	1928		
54				RFRO	-	100	-	None	None	-	1928		
	845	26	30.71		-	100	-					1440	
					des	oil							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT		RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
		MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	MILES	
NEW YORK SMSA, Orange County (Cont'd.)															
31. KENT AVENUE** Con Edison	Boiler	1	36		*				None	None	-	1938	25	<5	
		2	36		*				None	None	-	1938	25		
		3	36		GTAN				None	None	-	1959	25		
		108	11	19.87	RTAN	-	-	100							
des. oil/gas															

* Fired Vertically Downward from Furnace Roof

** Retired, 1972.

800

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MM	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>New York SMSA, Orange County cont'd</u>													
29. 74th Street (Con Edison) Boiler 120	89.7			RTAN	-	100	-	None	None	-	1956	105	<5
121	89.7			RTAN	-	100	-	None	None	-	1956	105	
122	89.7			RTAN	-	100	-	None	None	-	1960	105	
	269.1	22	5.68			100							
					des	oil							
11. Waterside (Con Edison) Boiler 41				GTAN/RTAN				None	None				<5
42				GTAN/RTAN				None	None				
51				GTAN/RTAN				None	None				
52				GTAN/RTAN				None	None				
61				RTAN				None	None				
62				RTAN				None	None				
71				*				None	None				
72				*				None	None				
80				RTAN				None	None	-	1949		
90				RTAN				None	None	-	1949		
	712.3	33	30.19			61	39					1275	
					des	oil	gas						
28. Barrett (Long Island Lighting) Boiler 10	187.5			RTAN/GTAN/PCTA				Dry	C	97.9(t)	1956	475	10
20	187.5			RTAN/GTAN				Dry	none	-	1963	475	
	375	67	22.45			85	15						
					des	p. coal	oil	gas					

* fired vertically downward from furnace roof

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NEW YORK

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE EFF. %		tons/day	miles
<u>New York SMSA Orange County cont'd</u>												
14. Northport (Long Island Lighting)												
Boiler 10	387.1			RTAN	-	100	-	Dry	MCTA 85(d)	1967	900	27
20	387.1			RTAN	-	100	-	Dry	MCTA 85(d)	1968	900	
3	387.1			RTAN	-	100	-	Dry	E 98.4(t)	1972	900	
	1161.3	65	42.20		-	100	-					
				des oil								
AREA TOTAL	11499.1		518.95									



LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Central cities of SMSA's with fewer than 50,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan Statistical Areas (SMSA's)

PLANTS:

○ EXISTING 1971

⊙ IN OPERATION BY 1975

□ "REFUSE GENERATION" AREAS

SCALE
0 10 20 30 40 50 MILES

REFUSE COMBUSTION FOR POWER GENERATION
North Carolina, 1971 - Coal Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹²	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		BTU yr		10 ⁶ tons yr	10 ¹² BTU yr		
Asheville SMSA	413.6	20.2	0.148	0.09	0.87	4.3	< 5
Charlotte-Gastonia SMSA	1792.0	120.9	0.568	0.37	3.35	2.8	5
Durham SMSA	12.5	0.5	0.193	0.12	1.14	219.0	22
Wilmington SMSA	225.0	13.0	0.109	0.07	0.64	5.0	12
Catawba County	2000.0	118.9	0.092	0.05	0.49	0.4	8
Chatham County	421.0	20.1	0.030	0.01	0.16	0.8	10
Cleveland County	210.0	15.8	0.074	0.04	0.39	2.5	10
Davidson County	444.0	32.4	0.097	0.05	0.51	1.6	10
Person County	1067.9	62.3	0.026	0.01	0.13	0.2	< 5
Pitt County	20.0*	-	0.074	0.04	0.39	-	
Robeson County	165.5	9.6	0.085	0.05	0.45	4.7	< 5
Stokes County	290.0	20.5	0.024	0.01	0.12	0.6	5
Wayne County	402.5	23.0	0.086	0.05	0.45	2.0	< 5
NORTH CAROLINA STATE TOTALS	7464.0	457.8	1.606	1.01	9.15	2.0	

* Plant was retired in 1971.

REFUSE COMBUSTION FOR POWER GENERATION

North Carolina, 1971 - All Fossil Fuel Plants - Identical to table above.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NORTH CAROLINA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU/yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Asheville SMSA													
1. Asheville (Carolina Power & Light)													
Boiler 1	206.6			PCFR	100			Dry	C	95.6	1964	430	5
2	207			PCFR	100			Dry	C	99.7	1971	430	
	413.6	58	20.27		100								
AREA TOTAL	413.6		20.27		des p. coal								
Chatham County													
2. Cape Fear (Carolina Power & Light)													
Boiler 1				SPRE	100			Dry	None	-	1923	60	10
2	30			SPRE	100			Dry	None	-	1923		
3				SPRE	100			Dry	None	-	1923		
4				SPRE	100			Dry	None	-	1923		
5				SPRE	100			Dry	None	-	1923		
6				SPRE	100			Dry	None	-	1923		
7				SPRE	100			Dry	None	-	1926		
8	62.5			PCFR	100			Dry	MCTA	70	1942	125	
9	140.6			PCFR	100			Dry	MCTA	70	1943		
10	187.9			PCTA	100			Dry	MCTA	80	1956		
	421	55	20.13	PCTA	100			Dry	MCTA	80	1958	385	
					100								
					des p. coal								
AREA TOTAL	421.0		20.13										
												Durham 23	
												Raleigh 30	

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NORTH CAROLINA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE EFF. %		tons/day	miles
<u>Robeson County</u>												
6. Weatherspoon (Carolina Power & Light)												
Boiler 1	46			PCFR				Dry	MCTA 80	1949	110	<5
2	46			PCFR				Dry	MCTA 80	1950	110	
3	73.5			PCTA				Dry	MCTA 80	1952	180	Fayetteville 30
	<u>165.5</u>	60	<u>9.68</u>		-	46	54					
						des.p.coal / gas						
AREA TOTAL	<u>165.5</u>		<u>9.68</u>									
<u>Charlotte-Gastonia SMSA</u>												
7. Allen (Duke Power Co.)												
Boiler 1	165			PCTA	100			Dry	C 97.1	1957	455	5
2	165			PCTA	100			Dry	C 97.1	1957	455	
3	275			PCTA	100			Dry	E 87	1959	765	
4	275			PCTA	100			Dry	E 99.5	1960	765	
5	275			PCTA	100			Dry	E 87	1961	765	
	<u>1155</u>	81	<u>75.25</u>		<u>100</u>							
						des p. coal						

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NORTH CAROLINA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Charlotte-Gastonia SMSA cont'd</u>													
11. Riverbend (Duke Power Co.)													
Boiler 1	27.5			PCFR	100	-	-	Dry	None	-		70	5
2	27.5			PCFR	100	-	-	Dry	None	-		70	
3	27.5			PCFR	100	-	-	Dry	None	-		70	
4	27.5			PCFR	100	-	-	Dry	None	-		70	
5	27.5			PCFR	100	-	-	Dry	None	-		70	
6	27.5			PCFR	100	-	-	Dry	None	-		70	
7	100			PCFA	100	-	-	Dry	E	87		255	
8	100			PCFA	100	-	-	Dry	E	99		255	
9	133			PCTA	100	-	-	Dry	E	99		340	
10	133			PCTA	100	-	-	Dry	E	87		340	
	637	65	45.73		100	-	-						
					des.p.coal								
AREA TOTAL	1792.0		120.98										

Davidson County

8. Buck
(Duke Power Co.)

Boiler 1	17.5			PCFR	100	-	-	Dry	None	-	1926	40	10
2	17.5			PCFR	100	-	-	Dry	None	-	1926	40	
3	17.5			PCFR	100	-	-	Dry	None	-	1926	40	
4	17.5			PCFR	100	-	-	Dry	None	-	1926	40	
5	40			PCTA	100	-	-	Dry	E	99	1941	100	Winston-Salem 27
6	40			PCTA	100	-	-	Dry	E	99	1941	100	Charlotte 40
7	40			PCTA	100	-	-	Dry	E	99	1942	100	

(Continued on next page)

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NORTH CAROLINA

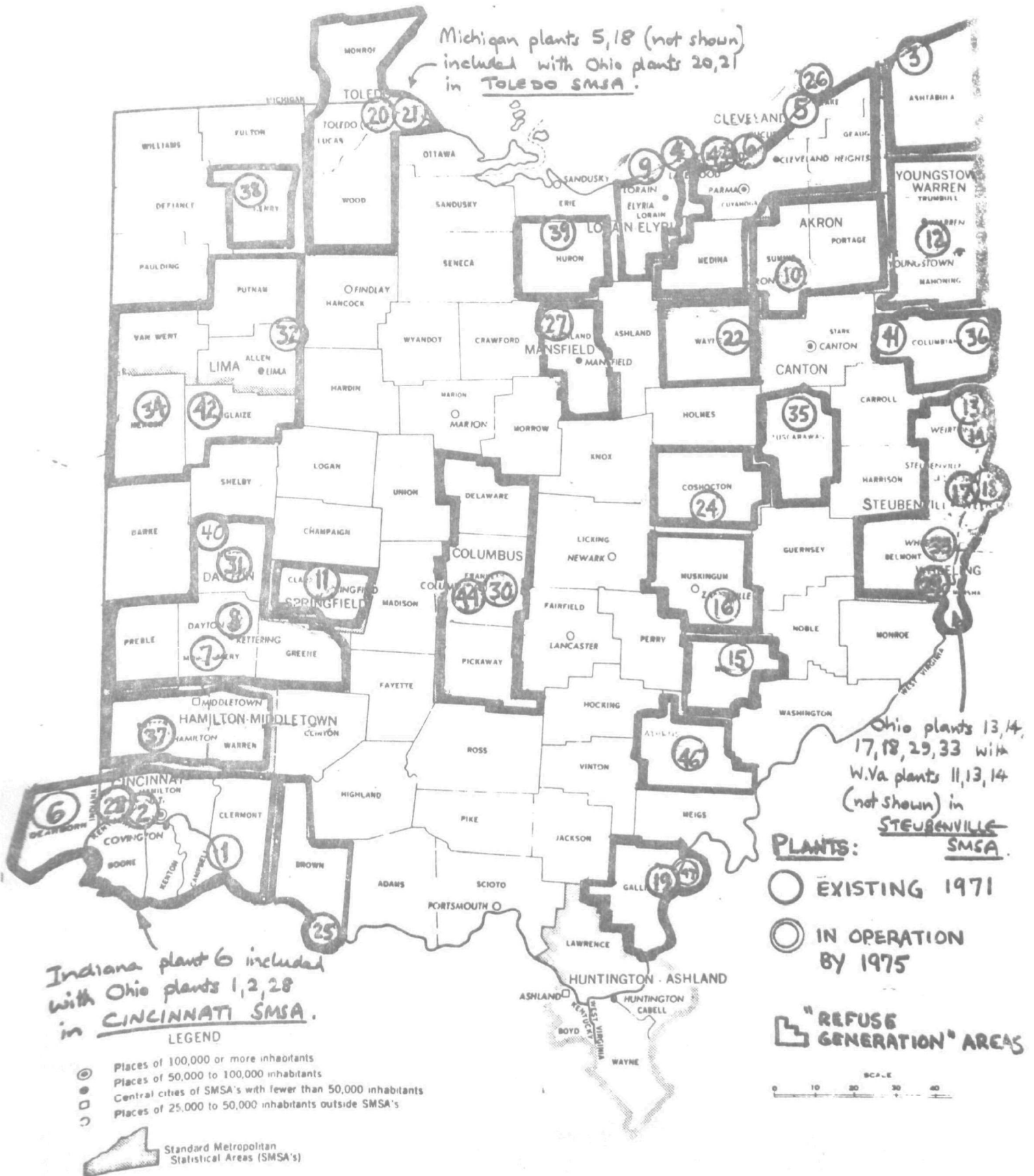
SMSA-COUNTY/PLANT	RATED	LOAD	ENERGY	TYPE	CURRENT FUEL			BOTTOM	AIR POLLUTION	INITIAL	REFUSE	TYPICAL
	CAPACITY	FACTOR	RQMT.	OF	DISTRIBUTION			ASH	CONTROL	YEAR OF	COMBUSTION	TRANS.
				FIRING	BY BTU %			HANDLING		OPERATION	"CAPACITY"	DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	miles
<u>Davidson cont'd</u>												
8	125			PCTA	100	-	-	Dry	E	88	1953	310
9	125			PCTA	100	-	-	Dry	E	88	1953	310
	444	60	32.46		100	-	-					
des.p.coal												
AREA TOTAL	444.0		32.46									
<u>Cleveland County</u>												
9. Cliffside (Duke Power Co.)												
Boiler 1	40			PCTA	100	-	-	Dry	E	99	1940	125 10
2	40			PCTA	100	-	-	Dry	E	99	1940	125
3	65			PCTA	100	-	-	Dry	E	88	1948	205 Gastonia 30
4	65			PCTA	100	-	-	Dry	E	88	1948	205 Greenville, SC
	210	75	15.84		100	-	-					
des.p.coal												
AREA TOTAL	210.0		15.84									
<u>Catawba County</u>												
10. Marshall (Duke Power Co.)												
Boiler 1	350			PCTA				Dry	C	95	1965	885 8
2	350			PCTA				Dry	C	95	1966	885
3	650			PCTA				Dry	E	97.5	1969	1645 Charlotte 27
4	650			PCTA				Dry	E	97.5	1970	1645
	2000	78	118.97		99	1	-					
des.p.coal												
AREA TOTAL	2000.0		118.97									

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: NORTH CAROLINA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %				tons/day
Stokes County														
13. Dan River (Duke Power Co.)														
212	Boiler 1		70		PCTA	100	-	-	Dry	E	99.1	1949	210	5 Winston-Salem 30
	2		70		PCTA	100	-	-	Dry	E	99.1	1950	210	
	3		150		PCTA	100	-	-	Dry	MCTA/E	99.2	1955	450	
			290	79		100	-	-						
				20.56	des.p.coal									
AREA TOTAL														
	290.0		20.56											
Durham SMSA														
15. Chapel Hill (Chapel Hill, University of N.C.)														
	12.5	36.5	0.52		10	27	63	*	*	*	-	20	5	
				des.p.coal										
AREA TOTAL														
	12.5		0.52											

* No FPC-67 filed.



REFUSE COMBUSTION FOR POWER GENERATION
Ohio, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Akron SMSA	87.5	5.4	0.691	0.45	4.09	75.2	5
Cincinnati SMSA	3060.1	114.4	1.409	0.92	8.33	7.3	20
Cleveland SMSA	1289.0	77.7	2.104	1.38	12.44	16.0	14
Columbus SMSA	287.3	8.4	0.939	0.61	5.55	65.6	3
Dayton SMSA	935.5	43.2	0.873	0.57	5.16	11.9	8
Hamilton-Middletown SMSA	83.5	4.3	0.230	0.15	1.36	31.3	10
Lima SMSA (Incl. Anglaize Co. & Mercer Co.)	85.1	2.2	0.251	0.16	1.48	64.6	18
Lorain-Elyria SMSA	787.9	73.0	0.262	0.17	1.55	2.1	9
Mansfield SMSA	26.0	2.1	0.133	0.08	0.79	37.1	12
Springfield SMSA	100.0	2.8	0.161	0.10	0.95	33.9	<5
Steubenville-Weirton- Wheeling SMSA	7131.6	332.9	0.350	0.23	2.07	0.6	11
Toledo SMSA	2088.7	110.4	0.704	0.46	4.16	3.8	12
Youngstown-Warren SMSA	250.0	14.0	0.541	0.35	3.20	22.8	10
Ashtabula County	456.0	20.9	0.100	0.05	0.53	2.5	<5
Athens County	232.0	14.5	0.055	0.03	0.29	2.0	5
Brown County	1220.4	49.9	0.027	0.01	0.14	0.3	15
Columbiana County	31.8	0.8	0.109	0.06	0.58	69.2	12
Coshocton County	433.5	26.5	0.034	0.02	0.18	0.7	10
Gallia County	1086.5	67.7	0.025	0.01	0.13	0.2	8
Henry County	23.5	0.6	0.028	0.01	0.15	22.1	5
Huron County	31.0	0.7	0.050	0.03	0.26	34.7	12
Morgan County	1529.6	85.1	0.012	0.00	0.06	0.1	7
Muskingum County	500.0	19.5	0.078	0.04	0.41	2.1	10
Tuskarawas County	35.9	0.8	0.077	0.04	0.41	46.7	<5
Wayne County	104.5	1.7	0.089	0.05	0.47	27.8	9
OHIO STATE TOTALS	21896.9	1080.7	9.332	6.04	54.36	5.0	

REFUSE COMBUSTION FOR POWER GENERATION
Ohio, 1971 - "Coal Plants" Only *

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ tons yr		10 ¹² BTU yr			
Akron SMSA	87.5	5.4	0.691	0.45	4.09	75.2	5
Cincinnati SMSA	2840.8	6.8	1.409	0.92	8.33	1.2	18
Cleveland SMSA	1289.0	77.7	2.104	1.38	12.44	16.0	14
Columbus SMSA	287.3	8.4	0.939	0.61	5.55	65.6	3
Dayton SMSA	935.5	43.2	0.873	0.57	5.16	11.9	8
Hamilton-Middletown SMSA	83.5	4.3	0.230	0.15	1.36	31.3	10
Lima SMSA (Incl. Anglaize Co. & Mercer Co.)	85.1	2.2	0.251	0.16	1.48	64.6	18
Lorain-Elyria SMSA	787.9	73.0	0.262	0.17	1.55	2.1	9
Mansfield SMSA	26.0	2.1	0.133	0.08	0.79	37.1	12
Springfield SMSA	100.0	2.8	0.161	0.10	0.95	33.9	< 5
Steubenville-Weirton- Wheeling SMSA	7131.6	332.9	0.350	0.23	2.07	0.6	11
Toledo SMSA	2088.7	110.4	0.704	0.46	4.16	3.8	12
Youngstown-Warren SMSA	250.0	14.0	0.541	0.35	3.20	22.8	10
Ashtabula County	456.0	20.9	0.100	0.05	0.53	2.5	< 5
Athens County	232.0	14.5	0.055	0.03	0.29	2.0	5
Brown County	1220.4	49.9	0.027	0.01	0.14	0.3	15
Columbiana County	31.8	0.8	0.109	0.06	0.58	69.2	12
Coshocton County	433.5	26.5	0.034	0.02	0.18	0.7	10
Gallia County	1086.5	67.7	0.025	0.01	0.13	0.2	8
Henry County	23.5	0.6	0.028	0.01	0.15	22.1	5
Huron County	31.0	0.7	0.050	0.03	0.26	34.7	12
Morgan County	1529.6	85.1	0.012	0.00	0.06	0.1	7
Muskingum County	500.0	19.5	0.078	0.04	0.41	2.1	10
Tuskarawas County	35.9	0.8	0.077	0.04	0.41	46.7	< 5
Wayne County	104.5	1.7	0.089	0.05	0.47	27.8	9
OHIO STATE TOTALS	21677.6	973.2	9.332	6.04	54.36	5.6	

*include all plants in the Data Tables except 2.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE miles
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
Akron SMSA														
10. Gorge (Ohio Edison Co.)														
Boiler	25	43.75	56	5.43	PCFR	100	-	-	Dry	MCAX/E	83/99.5	1943	115	5
	26	43.74			PCFR	100	-	-	Dry	MCAX/E	85/99.5	1948	115	
		87.50				100	-	-						
AREA TOTAL		87.5		5.43		des. p-coal							Warren-Youngstown 40 Cleveland 25	

Cincinnati SMSA

1. Beckjord
(Cincinnati Gas & Electric)

CCE	Boiler 1	115			PCTA				Dry	E	92	1952	275	20
	2	112.5			PCTA				Dry	E	92	1953	270	
	3	125			PCFR				Dry	E	93	1954	300	
	4	163.2			PCTA				Dry	C	94	1958	390	
	5	244.8			PCTA				Dry	E	95	1962	585	
	6	460.8			PCTA				Dry	E	97	1969	1105	
		1221.3	65	42.94		99	1	-						
						des. p-coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE miles
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
Cincinnati SMSA - cont'd														
2. West End (Cincinnati Gas & Electric)														
Boiler	5-1	107	26	7.69	GFRO	-	-	100	None	None	-	1937	155	8
	5-2				GFRO	-	-	100	None	None	-	1937		
	5-3				GFRO	-	-	100	None	None	-	1938		
	6-1	GFRO			-	-	100	None	None	-	1948	160		
	6-2	GFRO			-	-	100	None	None	-	1948			
	6-3	GFRO			-	-	100	None	None	-	1948			
		219.3				-	-	100						
						des. gas								
28. Miami Fort (Cincinnati Gas & Electric)														
Boiler	1	63	41	20.01	PCFR	100	-	-	Dry	None	-	1925	100	15
	2	63			PCFR	100	-	-	Dry	None	-	1926	100	
	3	65			PCFR	100	-	-	Wet	None	-	1938	105	
	4	65			PCFR	100	-	-	Wet	None	-	1942	105	
	5	100			PCFR	100	-	-	Dry	None	-	1949	160	
	6	163.2			PCTA	100	-	-	Dry	C	94	1960	265	
		519.2				100	-	-						
						des. p-coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANS. DISTANCE Miles
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
CINCINNATI SMSA-cont'd														
Ind. 6 Tanners Creek, Dearborn Co., Ind. (Indiana & Michigan Elec. Co.)														
Boiler	1				PCFR	100	-	-	Dry	MCTA	77.9(t)			20
	2				PCFR	100	-	-	Dry	MCTA	75			
	3				PCFR	100	-	-	Dry	MCTA	72.2(t)			
	4				CYCL	100	-	-	Dry	MCTA	74.7			
		1100.3	48	43.77		100	-	-						
						des. p-coal						1875		
AREA TOTAL		3060.1		114.41										
Cleveland SMSA														
26. Painesville* (Painesville Electric Lgt. Dept)														
Boiler	1	6.5			OSTO				Dry	None	-	1938	10	35
	2	7.5			OSTO				Dry	None	-	1947	15	
	3	7.5			SPRE				Dry	MCAX	94.3(d)	1954	15	
	4	16.5			SPRE				Dry	MCAX	94.3(d)	1960	30	
		38.0	33	1.85		100	-	-						
						des. coal/oil								

* to be expanded 1974

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
CLEVELAND SMSA - cont'd														
5. EASTLAKE Cleveland Electric Illum.Co. Boiler	1	123			PCTA	100	-	-	Dry	C	98	1953	365	22
	2	123			PCTA	100	-	-	Dry	C	98	1953	365	
	3	123			PCTA	100	-	-	Dry	C	98	1954	365	
	4	208			PCTA	100	-	-	Dry	C	96	1956	620	
		577.0	81	40.38		100	-	-						
						des	p-coal							
6. CUYAHOGA Cleveland Electric Illum.Co. Boiler	91	60			PCFR	100	-	-	Wet	E	82	1941	140	<5
	92	60			PCFR	100	-	-	Wet	E	82	1941	140	
	93	69			PCFR	100	-	-	Wet	E	94	1951	160	
	94	69			PCFR	100	-	-	Wet	E	94	1951	160	
	18	256			PCTA	100	-	-	Dry	E	99	1962	605	
		514	58	28.55		100	-	-						
						des.	p-coal							

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
CLEVELAND SMSA-cont'd													
43. Lake Road Cleveland Dept. of Public Utilities Boiler 1								Dry	MCTA	70	1941	145	5
2								Dry	MCTA	70	1941		
3								Dry	MCTA	70	1941		
4								Dry	C	70	1953		
5								Dry	C	70	1953	155	
6								Dry	E	98	1967		
	85				98	2	-						
	160	28	6.94		des.p-coal/oil								
AREA TOTAL	1289.0		77.72										
COLUMBUS SMSA													
30. PICWAY Columbus & So.Ohio Elec. Boiler 6				PCFR				Wet	None	-	1935	Yes	5
7				PCFR				Wet	None	-	1945		
8				PCFR				Wet	None	-	1949		
9				PCFR				Dry	Cycl.	50	1955		
	230.8	25	6.95		99	1	-					290	
					des	coal							
44. COLUMBUS City of Columbus Electric Boiler 6	12.5			SPRE				Dry	MCAX	92.3(t)	1938	10	<5
7	12.5			OSTO				Dry	None	-	1949	10	

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	
<u>COLUMBUS SMSA-cont'd</u>												
44. Columbus-cont'd												
8	19			GFRO				None	None	-	1962	20
9	12.5			GRFO				None	None	-	1969	10
	56.5	25	1.51		32	2	66					
					des.s-coal/gas							
AREA TOTAL	287.3		8.46									Dayton 60
<u>DAYTON SMSA</u>												
7. HUTCHINGS												
Dayton Power & Light Co.												
Boiler												
1	69			PCTA				Dry	MCTA	29.8	1948	140
2	69			PCTA				Dry	MCTA	32.8	1949	140
3	69			PCTA				Dry	MCTA	80.8	1950	140
4	69			PCTA				Dry	MCTA/E	85.8/ 99.9	1951	140
5	69			PCTA				Dry	MCAX/E	84.8/ 99.9	1952	140
6	69			PCTA				Dry	MCAX/E	81.8/ 99.9	1953	140
	419	54	20.34		99	-	1					
					des	p-coal						

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

		RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
SMSA-COUNTY/PLANT		MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
Dayton SMSA-cont'd														
8.	Tait Dayton Power & Light Co.													
	Boiler 4	147			PCTA	100	-	-	Dry	C	94	1958	280	< 5
	5	147.1			PCTA	100	-	-	Dry	C	94	1959	280	
	7-1	37.5			PCFR	100	-	-	Dry	C	71	1937	70	
	7-2	37.5			PCFR	100	-	-	Dry	C	71	1937	70	
	8-1	37.5			PCFR	100	-	-	Dry	C	71	1940	70	
	8-2	37.5			PCFR	100	-	-	Dry	C	71	1940	70	
		444.1	48	19.95		100	-	-						
						des.p-coal								
31.	Troy Dayton Power & Light Co.									*	*	*		
		24.4	2	0.04		100	-	-						17
						des.s-coal								
40.	Piqua Piqua Municipal Power Plant													
	Boiler 1	33			OSTO				Dry	None	-	1933	75	30
	2				OSTO				Dry	None	-	1933		
	3				OSTO				Dry	None	-	1940		
	4				OSTO				Dry	GRAV	80	1947		
	5	20			OSTO				Dry	GRAV	80	1951	45	
	6				OSTO				Dry	GRAV	90	1961		
		53	31	2.93		100	-	-						
						des.s-coal								
AREA TOTAL		935.5		43.26										

* Jo FPC 67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>HAMILTON-MIDDLETOWN SMSA</u>													
37. Hamilton Hamilton Municipal Electric Boiler 1								Dry	None	-	1929		10
2	38.5			under-				Dry	None	-	1929		
3				feed				Dry	None	-	1929	85	
4								Dry	None	-	1930		
5	10			OSTO				Dry	GRAV	70	1946	20	
6	10			OSTO				Dry	GRAV	70	1950	20	
7				SPRE				Dry	MCTA	90(d)	1960		
8	25			PCFR				Dry	MCTA	85	1966	50	
	83.5	39	4.35		74	1	25						
					des.coal								
AREA TOTAL	83.5		4.35										Cincinnati 20 Dayton 30
<u>LIMA SMSA</u>													
32. Woodcock Ohio Power Company Boiler 1				PCFR				Dry	None	-	1938		15
2	12.5			PCFR				Dry	None	-	1938	15	
3				PCFR				Dry	None	-	1941		
4	12.5			PCFR				Dry	None	-	1947	15	
5	12.5			PCFR				Dry	MCTA	NR	1950	15	
	37.5	25	1.47		95	5	-						
					des.p-coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>Lima SMSA-cont'd</u> Mercer County													
34. Celina Celina Municipal Utilities	25	17	0.46		100 des.s-coal	-	-	*	*	*		15	30
42. St. Mary's St. Mary's Municipal Light & Power Dept.	22.6	15	0.36		98 des.s-coal	2	-	*	*	*		10	20
													Springfield 55 Dayton 55
AREA TOTAL	85.1		2.29										
<u>Lorain-Elyria SMSA</u>													
9. Edgewater Ohio Edison Co. Boiler 11 } 12 } 13 }	87.9			PCFR	100	-	-	Dry	MCTA	85(d)	1949	150	5
				PCFR	100	-	-	Dry	MCTA	85(d)	1949		
	105.0			PCFR	100	-	-	Dry	E	98	1957	180	
	192.9	40	7.84		100 des.p.coal	-	-						

* No FPC 67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE EFF. %		tons/day	
LORAIN-ELYRIA SMSA - cont'd												
4. AVON LAKE Cleveland Electric Illumin- ating Company												
Boiler	1	190	120	PCOP/	100	-	-	Dry	E	95	1926, * 1928	415
	2			ROPP	100	-	-	Dry	E	95		
	3			PCOP/	100	-	-	Dry	E	95		
	4			ROPP	100	-	-	Dry	E	95		
	5			PCOP/	100	-	-	Dry	E	95		
	6			ROPP	100	-	-	Dry	E	95		
	7			PCOP/	100	-	-	Dry	E	95		
	8			ROPP	100	-	-	Dry	E	95		
	9			PCTA	100	-	-	Dry	E	95		
	10			PCTA	100	-	-	Dry	E	95		
	11			PCTA	100	-	-	Dry	E	97		
		595	59	65.18	100	-	-					
des. p-coal/oil												
AREA TOTAL:	787.9		73.02									

* efficiency based on coal-firing

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT			RATED	LOAD	ENERGY	TYPE	CURRENT FUEL			BOTTOM	AIR POLLUTION		INITIAL	REFUSE	TYPICAL
			CAPACITY	FACTOR	RQMT.		OF	DISTRIBUTION	ASH		CONTROL	YEAR OF		COMBUSTION	
						FIRING	BY	BTU		HANDLING		EFF.		"CAPACITY"	DISTANCE
			MW	%	10 ¹²			BTU	COAL	OIL	GAS	TYPE	%	tons/day	MILES
					yr										
<u>MANSFIELD SMSA</u>															
27. SHELBY															
Shelby Municipal Co.	Boiler	1	12.5			PCFR	100	-	-	Dry	MCAX/E 99(t)	1967	25		12
		3	6			PCFR	100	-	-	Dry	MCAX/E 80/N.R.	1945	10		
		4	7.5			PCFR	100	-	-	Dry	MCAX/E 80/N.R.	1954	165		
			<u>26</u>	55*	<u>2.13</u>		<u>100</u>	-	-						
									des.	coal					

* State average

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT		RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES	
		MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day		
WHEELING-STEUBENVILLE-WEIRTON SMSA*															
17. TIDD															
Ohio Power Company	Boiler	11 } 12 } 21 }			PCTA PCTA PCFR				Dry Dry Dry	MCTA MCTA MCTA	30 30 73	1945 1945 1948	250 250	10	
		113.1 113.2 226.3	60	14.08		99	1	-							
						des	p-coal								
18. CARDINAL															
Ohio Power Co.&Buckeye Rural Corp. (Op.by Cardinal Operating Co.)	Boiler	1 2			PCFR PCFR				Dry Dry	E E	92 92	1967 1967	1615 1615	10	
		615.2 615.2 1230.4	74	75.93		99	1	-							
						des	p-coal								

*Steubenville-Weirton SMSA and Wheeling SMSA are two separate SMSA's
combined into one unit for the purpose of this study.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
WHEELING-STEUBENVILLE-WEIRTON SMSA - cont'd														
29. BURGER														
Ohio Edison Co.														
Boiler	1	31.25			PCFR	100	--	--	Dry	MCTA	80	1944	75	10
	2	31.25			PCFR	100	-	-	Dry	MCTA	80	1944	75	
	3	31.25			PCFR	100	-	-	Dry	MCTA	80	1947	75	
	4	31.25			PCFR	100	-	-	Dry	MCTA	80	1947	75	
	5	50			PCFR	100	--	-	Dry	MCTA	80	1950	125	
	6	50			PCFR	100	--	--	Dry	MCTA	80	1950	125	
	7	159.5			PCFR	100	-	-	Dry	C	97	1955	400	
	8	159.5			PCFR	100	-	-	Dry	C	97	1955	400	
		544.0	64	32.12		100	-	-						
					des	p-coal								
33. MARTINS FERRY														
Ohio Power Co.														
		6.5	6	0.04		100	-	-	*	*	*		-	5
					des	p-coal								

* No FPC 67 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
	MW	%				COAL	GIL	GAS		TYPE	EFF. %			
WHEELING-STEUBENVILLE-WEIRTON SMSA - cont'd														
13. SAMMIS														
Ohio Edison														
Boiler	1	185			PCFR	100	-	-	Dry	E	97	1959		10
	2	185			PCFR	100	-	-	Dry	E	97	1960	275	
	3	185			PCFR	100	-	-	Dry	E	97	1961	275	
	4	185			PCFR	100	-	-	Dry	E	97	1962	275	
	5	317.5			PCOP	100	-	-	Dry	E	99	1967	470	
	6	623			PCOP	100	-	-	Dry	E	99	1969	925	
	7	623			PCOP	100	-	-	Dry	E	99	1971	925	
		2303.5	43	81.29		100	-	-						

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES	
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %				tons/day
WHEELING-STEUBENVILLE-WEIRTON SMSA Cont'd														
WV 13 WINDSOR, W.Virginia Beechbottom Power Co.	Boiler	72	150	-	PCTA	99	1	-	Dry	MCTA	77	1939	240	10
		74												
		82												
		84												
			300	24	11.55						240			
des p-coal														
WV 11 KAMMER, W.Virginia Ohio Power Company	Boiler	1	712.5	58	CYCL	100	-	-	Wet	MCTA	85	1958	1540	11
		2												
		3												
			712.5	58	35.94						1540			
des p-coal														
WV 14 MITCHELL, W.Virginia Ohio Power Company	Boiler	1	816.3	53*	PCOP	98	2	-	Dry	E	96.88	1971	1535	13
		2	816.3											
			1632.6											
des p-coal														
AREA TOTAL: 7131.6 332.99														

* This plant started up in 1971 with an actual plant factor of 25% . The energy requirement shown here is based on a 53% factor, the average for W.Va.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
TOLEDO SMSA														
20. ACME Toledo Edison Co.														<5
Boiler	16				Top-fired				Dry	C	98.5	1951		
	13				Top-fired				Dry	MCTA	99.5	1938		
	14				Top-fired				Dry	MCTA	99.5	1941		
	15				Top-fired				Dry	MCTA	99.5	1941		
	91				Top-fired				Dry	C	96.5	1949		
	92				Top-fired				Dry	C	96.5	1949		
	307		30	10.74		82	10	8					435	
						des p-coal/oil								
21. BAYSHORE Toledo Edison Co.														10
Boiler	1	140			Top-fired	100	-	-	Dry	C	98	1955	345	
	2	140			Top-fired	100	-	-	Dry	C	96.7	1959	345	
	3	140			PCFR	100	-	-	Dry	E	99.5	1963	345	
	4	219.6			PCFR	100	-	-	Dry	E	99	1968	545	
	639.5		72	37.26		100	-	-						
						des p-coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES	
	MW	%				COAL	OIL	GAS		TYPE	EFF. %				
TOLEDO SMSA - cont'd															
MICH 5 WHITING Consumer Power Co.	Boiler	1	100		PCFR	100	-	-	Dry	MCAX	85	1952		7	
		2	100		PCFR	100	-	-	Dry	MCAX	85	1952	285		
		3	125		PCFR	100	-	-	Dry	MCAX	86	1953	285		
			325	77		100	-	-					355		
						des	p-coal								
MICH 18 MONROE Detroit Edison	Boiler	1	817.2 817.2	59 *	PCOP	97	3	-	Dry	E	96	1971	1725	20	
						des	p-coal								
AREA TOTAL:			2088.7		110.49										

* Based on a load factor of 59% (average for Michigan). This plant was started up in 1971, and had a load factor of 30% for that year.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY MW	LOAD FACTOR %	ENERGY RQMT. 10 ¹² BTU YR	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
					COAL	OIL	GAS		TYPE	EFF. %			

YOUNGSTOWN-WARREN SMSA

12. NILES

Ohio Edison Company

Boiler	1	125	63	14.06	Cycl	100	-	-	Wet	MCAX	70	1954	10
	2	125				100	-	-					
		250				100	-	-					
						des	p-coal						

AREA TOTAL: 250 14.06

ASHTABULA COUNTY

3. ASHTABULA

Cleveland Elec. Illum. Co.

Boiler	1	200	48	20.98	PCOP	100	-	-	Dry	E	75	395	<5
	2				PCOP	100	-	-	Dry	E	75		
	3				PCOP	100	-	-	Dry	E	75		
	4				PCOP	100	-	-	Dry	E	75		
	5				PCOP	100	-	-	Dry	E	75		
	6				PCOP	100	-	-	Dry	E	75		
	7	255	48	20.98	PCTA	100	-	-	Dry	E	96	1958	500
		456				100	-	-					

des p-coal

AREA TOTAL: 456 20.98

Cleveland 55
Warren-Youngstown

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SWSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
					COAL	OIL	GAS		TYPE	EFF. %			
1971													
ATHENS COUNTY													
46. POSTON Columbus & S. Ohio Elec. Co. Boiler	1			PCFR	100	--	--	Dry	MCTA	50	1949		5
	2			PCFR	100	--	--	Dry	MCTA	50	1950		
	3			PCFR	100	--	--	Dry	MCAX	50	1952		
	4			PCTA	100	--	--	Dry	MCAX	50	1954		
		232	54		100	--	--					615	
			14.58		des	p-coal							Columbus 65
AREA TOTAL:	232		14.58										
BROWN COUNTY													
25. STUART Dayton Power & Light Co. Boiler	1			PCOP				Dry	E	86(t)	1970	1045	
	2	610.2		PCOP				Dry	E	92(t)	1971	1045	15
		610.2			99	1	--						
		1220.4	50		des	p-coal							Cincinnati 50
			49.43										
AREA TOTAL:	1220.4		49.43										

OK

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>COLUMBIANA COUNTY</u>													
41. READING City of Reading	15.3	32	0.52		100	-	-	*	*	*		20	12
				des	p-coal								
36. EAST PALESTINE East Palestine Lgt. & Water	16.5	19	0.32		100			*	*	*		10	12
				des	p-coal								Warren-Youngstown 20 Akron 40
AREA TOTAL:	31.8		0.84										
<u>COSHOCTON COUNTY</u>													
24. CONESVILLE Columbus & S. Ohio													
Boiler													
1											1954		
2											1957		
3											1962		
	433.5	67	26.55		100	-	-	Wet Wet Dry	None None Cycl	- - 60			10
												1130	Columbus 60 Canton 50
				des	p-coal								
AREA TOTAL:	433.5		26.55										

* No FPC-67 filled

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY		LOAD FACTOR	ENERGY RQMT. 10 ¹² BTU yr	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY" tons/day	TYPICAL TRANSPORT DISTANCE MILES
	MW	%				COAL	OIL	GAS		TYPE	EFF. %			
<u>GALLIA COUNTY</u>														
19. KYGER CREEK														
Ohio Valley Elec. Corp.														
Boiler	1	217.3			PCFR	100	-	-	Wet	C	96.1	1955	570	8
	2	217.3			PCFR	100	-	-	Wet	C	96.1	1955	570	
	3	217.3			PCFR	100	-	-	Wet	C	96.1	1955	570	
	4	217.3			PCFR	100	-	-	Wet	C	96.1	1955	570	
	5	217.3			PCFR	100	-	-	Wet	C	96.1	1955	570	
		1086.5	76	67.70		100	-	-						
						des p. coal							Huntington, W Va	45
AREA TOTAL:		1086.5		67.70										
<u>HENRY COUNTY</u>														
38. NAPOLEON														
Napoleon Municipal Utilities														
		23.5	28	0.68		100	-	-	*	*	*	*	25	5
						des	coal							
AREA TOTAL:		23.5		0.68										
														Toledo 40 Lima 45

* No FPC-67 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
					1012 BTU yr	COAL	OIL		GAS	TYPE			
<u>HURON COUNTY</u>													
39. NORWALK Norwalk Municipal Light.				Front- fired									
Boiler	1			OSTO				Dry	None	--	1955		
	2			OSTO				Dry	None	--	1935		
	3			OSTO				Dry	None	--	1941		12
	4			SPRE				Dry	MCAX	88	1961		
	5			PCFR				Dry	E	98	1969		
	31	24	0.77		99	1	--						
					des	s-coal/oil						30	Lorain-Elryia 25 Cleveland 45
AREA TOTAL:	31.0		0.77										
<u>MORGAN COUNTY</u>													
15. MUSKINGUM RIVER Ohio Power Company				PCFR	100	-	--	Wet	MCTA/E	80/99	1953	470	
Boiler	2	214		PCFR	100	-	--	Wet	MCTA/E	80/99	1954	470	
	3	229		Cycl	100	--	--	Wet	E	88	1957	505	7
	4	229		Cycl	100	--	--	Wet	E	88	1958	505	
	5	643.6		PCOP	100	--	--	Dry	C/E	85(t)✓	1968	1425	Columbus 65
	1529.6	63	85.16		100	-	--			67.5			
					des	p-coal							
AREA TOTAL:	1529.6		85.16										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: OHIO

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANSPORT DISTANCE MILES
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
MUSKINGUM COUNTY													
16. PHILO Ohio Power Company													
Boiler	2-1	}		OSTO	100	-	-	Dry	None	-	1924		10
	2-4		OSTO	100	-	-	Dry	None	-	1924			
	31		OSTO	100	-	-	Dry	None	-	1929			
	32		OSTO	100	-	-	Dry	None	-	1929			
	33		OSTO	100	-	-	Dry	None	-	1929			
	35		OSTO	100	-	-	Dry	None	-	1929			
	36		OSTO	100	-	-	Dry	None	-	1929			
	37		OSTO	100	-	-	Dry	None	-	1929			
	34 *		PCFR	100	-	-	Dry	MCTA	84	1931			
	38		PCFR	100	-	-	Dry	MCTA	64	1931			
	41		PCFR	100	-	-	Dry	MCTA	86	1941			
	42		PCFR	100	-	-	Dry	MCTA	86	1941			
	51		PCFR	100	-	-	Dry	MCTA	84	1942			
	52		PCFR	100	-	-	Dry	MCTA	84	1942			
	6		Cycl	100	-	-	Wet	None	-	1957			
			500	34	19.57	100	-	-				840	
					des	s & p-coal							Columbus 55 Wheeling 65
AREA TOTAL:	500		19.57										

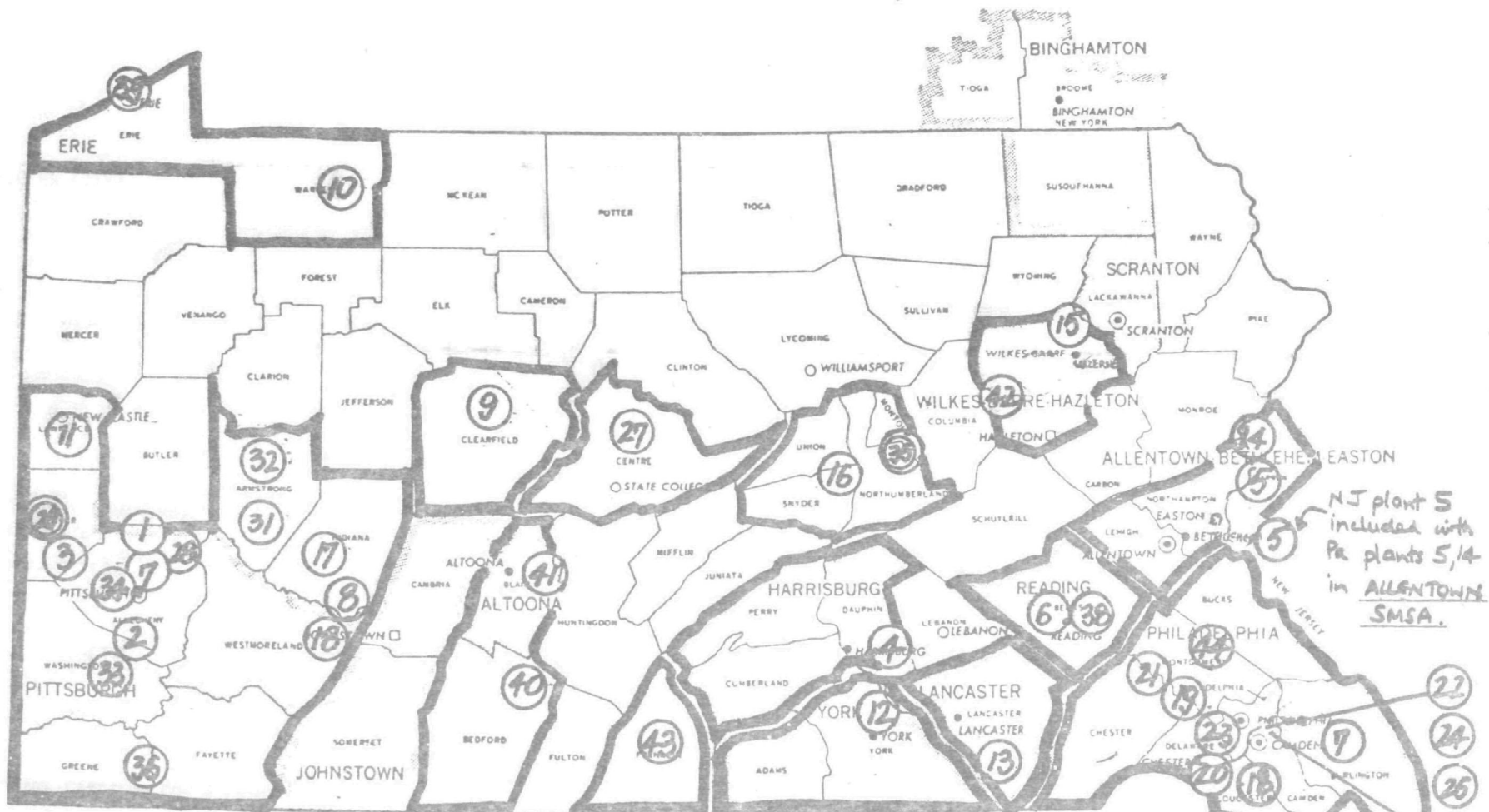
* Deactivated Reserve; boiler capacities not reported.

YEAR: 1971
STATE: OHIO

YEAR: 1971
STATE: OHIO

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* No FPC-67 filed



LEGEND

- Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Central cities of SMSA's with fewer than 50,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan
Statistical Areas (SMSA's)

PLANTS:

○ EXISTING 1971

○ IN OPERATION BY 1975

NJ plants 7+18
included in Phila. SMSA with Pa. plants
19, 20, 21, 22, 23, 24, 25, 26, 44.

"REFUSE GENERATION" AREA

SCALE
0 10 20 30 40 50 MILES

REFUSE COMBUSTION FOR POWER GENERATION
Pennsylvania, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	TYPICAL TRANS. DISTANCE miles
Allentown-Bethlehem-Easton SMSA	865.3	55.5	0.549	0.36	3.25	5.8	25
Altoona SMSA							
(incl. Bedford County)	70.9	4.5	0.180	0.11	1.06	23.3	18
Erie SMSA (incl. Warren Co.)	203.4	14.6	0.316	0.20	1.87	12.8	25
Harrisburg SMSA	117.0	4.5	0.418	0.27	2.47	54.3	10
Lancaster SMSA	105.0	8.5	0.325	0.21	1.92	22.6	15
Philadelphia SMSA	3660.2	205.3	4.893	3.21	28.94	14.1	10
Pittsburgh SMSA (incl. Lawrence Co, Green Co, Fayette Co, Indiana Co, and Armstrong Co)	10417.9	460.5	2.884	1.89	17.05	3.7	25
Reading SMSA	309.0	16.1	0.299	0.19	1.77	10.9	5
Wilkes-Barre-Hazleton SMSA	239.0	15.2	0.348	0.22	2.06	13.5	12
York SMSA	1558.7	84.0	0.334	0.21	1.97	2.3	15
Clearfield County	640.0	43.7	0.075	0.04	0.40	0.9	5
Centre County	46.0	3.5	0.101	0.06	0.54	15.2	10
Franklin County	19.1	0.8	0.102	0.06	0.54	63.3	5
Union-Snyder-Montour- Northumberland Counties	409.8	31.3	0.175	0.10	0.94	3.0	10
PENNSYLVANIA STATE TOTALS	18661.3	948.5	11.002	7.36	64.78	6.8	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Pennsylvania, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY REQMT. 10 ¹² ^{BTU} yr	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ tons yr		10 ¹² ^{BTU} yr			
Allentown-Bethlehem-Easton SMSA	865.3	55.5	.549	.36	3.25	5.8	25
Altoona SMSA (incl. Bedford County)	70.9	4.5	.180	.11	1.06	23.3	18
Erie SMSA (incl. Warren Co.)	203.4	14.6	.316	.20	1.87	12.8	25
Harrisburg SMSA	117.0	4.5	.418	.27	2.47	54.3	10
Lancaster SMSA	105.0	8.5	.325	.21	1.92	22.6	15
Philadelphia SMSA	3334.8	187.1	4.893	3.21	28.94	15.5	10
Pittsburgh SMSA (incl. Lawrence, Greene, Fayette, Indiana and Armstrong Counties)	10417.9	460.5	2.884	1.89	17.05	3.7	25
Reading SMSA	309.0	16.1	.299	.19	1.77	10.9	<5
Wilkes-Barre-Hazleton SMSA	239.0	15.2	.348	.22	2.06	13.5	12
York SMSA	1558.7	84.0	.334	.219	1.97	2.3	15
Clearfield County	640.0	43.7	.075	.04	0.40	0.9	5
Centre County	46.0	3.5	.101	0.06	0.54	15.2	10
Franklin County	19.1	0.8	.02	0.06	0.54		
Union-Snyder-Montour							
Northumberland Counties	409.8	31.3	.175	0.10	0.94	3.0	
PENNSYLVANIA STATE TOTALS	18335.9	930.3	11.002	7.19	64.78	7.0	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets except No. 25 (Philadelphia SMSA).

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Allentown-Bethlehem-Easton SMSA													
5. Portland (Metropolitan Edison)													
Boiler 1*	174.7			PCTA				Dry	C	99	1958	435	25
2	252.0			PCTA				Dry	C/cat-ox	99/90	1962	630	
	426.7	69	25.28		99	1	-		desulf.				
					des. p. coal								
14. Martins Creek (Pennsylvania Power & Light)													
Boiler 1	156.25			PCFR	100	-	-	Dry	E	85	1954	430	25
2	156.25			PCFR	100	-	-	Dry	E	85	1956	430	
	312.5	66	20.51		100	-	-						
					des. p. coal								
NJ 5. Gilbert (New Jersey Power & Light)													
Boiler 1				PCOP				Dry	E	88.8	1930	185	25
2	57.1			PCOP				Dry	E	88.8	1930		
3	69.0			PCTA				Dry	Cycl/E	90	1949	225	
	126.1	72	9.78		4	65	31						
					des. p. coal	oil	gas						
AREA TOTAL	865.3		(55.57)										

* Boiler capacities prorated to give plant total.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Altoona SMSA</u>													
<u>Bedford County</u>													
40. Saxton (Penn. Elec. Co.)													
Boiler 2	5.8			SPRE	100	-	-	Dry	-	-	1923	5	20
3	5.8			SPRE	100	-	-	Dry	-	-	1923	5	
4	5.8			SPRE	100	-	-	Dry	-	-	1923	5	
5	5.8			SPRE	100	-	-	Dry	-	-	1926	5	
6	5.8			SPRE	100	-	-	Dry	-	-	1926	5	
7	5.8			SPRE	100	-	-	Dry	-	-	1926	5	
8	6.1			SPRE	100	-	-	Dry	-	-	1926	5	
	40.9	14	0.98		100	-	-						
					des. p. Coal								
41. Williamsburg (Penn. Elec. Co.)													
Boiler 11				PCFR	100	-	-	Dry	Mech. Collect. 78		1944		12
2				SPRE	100	-	-	Dry	-	-			
4				SPRE	100	-	-	Dry	-	-	1914		
6				SPRE	100	-	-	Dry	-	-	to		
8				SPRE	100	-	-	Dry	-	-	1921		
10				SPRE	100	-	-	Dry	-	-			
	30	68	3.56		100	-	-					150	
					des. s,p. coal								
AREA TOTAL	70.9		4.54										

0.52

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %	BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE . COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL OIL GAS		TYPE EFF. %		tons/day	Miles
Erie SMSA Warren County										
10. Warren (Penn. Elec. Co.)										
Boiler 1	21.15			PCFR	100 - -	Dry	E 95	1948	75	40
2	21.15			PCFR	100 - -	Dry	E 95	1948	75	
3	21.15			PCFR	100 - -	Dry	E 95	1949	75	
4	21.15			PCFR	100 - -	Dry	E 95	1949	75	
	84.6	75	7.14		100 - -					
					des. p. coal					
39. Front Street										
Boiler 7	15.4			PCFR		Dry	E 80	1944	40	10
8	15.4			PCFR		Dry	E 80	1944	40	
9	44			PCTA		Dry	E 90	1952	115	
10	44			PCTA		Dry	E 90	1952	115	
	118.8	52	7.50		99 1 -					
					des. p. coal					
AREA TOTAL	203.4		14.64							

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Clearfield County													
9. Shawville (Penn. Elec. Co.)													
Boiler 1	134			PCFR				Dry	C	95.8	1954	385	5
2	134			PCFR				Dry	C	95.8	1954	385	Altoona 40
3	186			PCTA				Dry	C	98.5	1959	535	
4	186			PCTA				Dry	C	98.5	1960	535	
	640	72	43.70		99	1	-						
					des. p. coal								
AREA TOTAL	640		43.70										
Lancaster SMSA													
13. Holtwood (Penn. Power & Light)													
Boiler 1	10			PCFR	100	-	-	Dry	E	85	1925	30	15
2	10			PCFR	100	-	-	Dry	E	85	1925	30	
3	10			PCFR	100	-	-	Dry	E	85	1925	30	
17	75			PCFR	100	-	-	Dry	C	97	1954	255	
	105	66	8.51		100	-	-						
					des. p. coal								
AREA TOTAL	105		8.51										

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YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RAIED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Centre County													
27. Milesburg (West Penn. Power Co.)													
Boiler 1	23			PCFR	100	-	-	Dry	C	81	1950	70	10
2	23			PCFR	100	-	-	Dry	C	86	1950	70	
	46	69	3.54		100	-	-						Altoona 45
AREA TOTAL	46		3.54		des. p. coal								
Harrisburg SMSA													
4. Crawford (Metropolitan Edison)													
Boiler 1	10			top fired				Dry	-	-	1924	15	10
2	10			top fired				Dry	-	-	1925	15	
3	10			top fired				Dry	-	-	1924	15	
4	10			top fired				Dry	-	-	1925	15	
5	10			top fired				Dry	-	-	1926	15	
6	15			top fired				Dry	-	-	1927	20	
7	26			PCOP				Dry	E	90	1947	40	
8	26			PCOP				Dry	E	90	1947	40	
	117	27	4.55		62	38	-						
AREA TOTAL	117		4.55		des. p. coal/oil								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU /yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Philadelphia SMSA													
25. Schuylkill													
(Philadelphia Elec. Co.)													
Boiler 1*	188.6			RTAN	-	100	-	-	MCAX	66	1958	450	10
2	83.1			RTAN	-	100	-	-	MCAX	80	1968	195	
3				RTAN	-	100	-	-	MCAX	80	1968		
23	53.7			RTAN	-	100	-	-	E	90 (d)	1938	125	
24				RTAN	-	100	-	-	E	90 (d)	1938		
	325.4	66	18.24		-	100	-						
					des.	oil							
20. Chester													
(Philadelphia Elec. Co.)													
Boiler 1	126.5			SPRE				DRY	None			245	10
2				SPRE				DRY	"				
3				SPRE				DRY	"				
4				SPRE				DRY	"				
5				SPRE				DRY	"				
6				SPRE				DRY	"				
7				SPRE				DRY	"		1918-1924		
8				SPRE				DRY	"				
9				SPRE				DRY	"				
11				SPRE				DRY	"				
13	129.5			SPRE				DRY	"			250	
15				SPRE				DRY	"				
18				PCFR				DRY	MCAX	85 coal 40 oil	1941		
20	256	36	11.80	PCFR		73	26	DRY	MCAX	85 coal 40 oil	1941		
					des.	p. coal	oil gas						

* Boiler capacities prorated to give plant total

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
					10 ¹² BTU yr	COAL	OIL		GAS	TYPE			
Philadelphia SMSA - cont'd													
NJ 7. Burlington (NJ)													
(PSE & G)													
Boiler	11 *	46.4		RFRO	-	100	-	None	None	-	1932	90	10
	12	126.8		RFRO	-	100	-	"	E	95 (d)	1940	255	
	13			RFRO	-	100	-	"	E	95 (d)	1940		
	14	128.8		RFRO	-	100	-	"	E	95 (d)	1943	260	
	15			RFRO	-	100	-	"	E	95 (d)	1943		
	7	201.0		RFRO	-	100	-	"	C	97 (d)	1955	410	
		503	48	24.24	-	100	-						
				des.p. coal oil									
24. Richmond													
(Philadelphia Elec. Co.)													
Boiler	63 *	184.8		PCTA	-	100	-	DRY	MCAX/E	50	1950	475	10
	64			PCTA	-	100	-	DRY	MCAX/E	50	1950		
	49	119.9		OSTO	-	100	-	DRY	-	-	1926	310	
	50			OSTO	-	100	-	DRY	-	-	1926		
	51			OSTO	-	100	-	DRY	-	-	1926		
	52			OSTO	-	100	-	DRY	-	-	1926		
	53			OSTO	-	100	-	DRY	-	-	1926		
	54			OSTO	-	100	-	DRY	-	-	1926		
	55			OSTO	-	100	-	DRY	-	-	1926		
	56			OSTO	-	100	-	DRY	-	-	1926		
	57			OSTO	-	100	-	DRY	-	-	1926		
	58			OSTO	-	100	-	DRY	-	-	1926		
	59	170.1		OSTO	-	100	-	DRY	-	-	1926	440	
	60			OSTO	-	100	-	DRY	-	-	1926		
	65	170.1		PCFR	-	100	-	WET	MCAX/E	50	1935	440	
	66			PCFR	-	100	-	WET	MCAX/E	50	1935		
		474.8	54	28.96	-	100	-						
				des.p. coal oil									
* Boiler capacities prorated to plant total.													

* Boiler capacities prorated to plant total.

des.p. coal oil

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Philadelphia SMSA - Cont'd													
22. Delaware													
(Philadelphia Elec. Co.)													
Boiler 71				PCFR	-	100	-	DRY	MCAX/E 50		1953		10
81				PCFR	-	100	-	DRY	MCAX/E 55		1953		
13				SPRE	-	100	-	DRY	None				
14				SPRE	-	100	-	DRY	.				
15				SPRE	-	100	-	DRY	.				
16				SPRE	-	100	-	DRY	.				
17				SPRE	-	100	-	DRY	.				
18				SPRE	-	100	-	DRY	.				
19				SPRE	-	100	-	DRY	.				
20				SPRE	-	100	-	DRY	.				
21				SPRE	-	100	-	DRY	.				
22				SPRE	-	100	-	DRY	.				
23				SPRE	-	100	-	DRY	.		1920-		
24				SPRE	-	100	-	DRY	.		1924		
	439.3	50	20.77		-	100	-						
					des.p. coal oil							875	
NJ 18. Gibbstown (NJ)													
(Atlantic City Elec. Dept.)	11.5	51	0.61	* des p. coal				*	*	*		25	10
23. Eddystone													
(Philadelphia Elec. Co.)													
Boiler 1 **	351.7			PCTA				DRY	MCAX/E 99.4 (t)		1959	800	10
2	355.5			PCTA				DRY	MCAX/E 99.3 (t)		1960	805	
	707.2	68	37.56		99	1	-						
					des.p. coal								

* No FPC-67 filed

** Boiler capacities prorated to give plant total

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Philadelphia SMSA</u>													
21. Cromby (Philadelphia Elec. Co.)				PCFR				DRY	MCAX/E	98.5 coal	1954		10
Boiler 1										55 oil			
Boiler 2				PCTA				DRY	MCAX/E	95 coal	1955		
	417.5	72	26.08		22	78	-			50 oil		1110	
					des.p. coal oil								
19. Barbadoes (Philadelphia Elec. Co.)				PCFR				DRY	MCAX/E	90 coal	1949	180	10
Boiler 31	66									50 oil			
41	66			PCFR				DRY	MCAX/E	90 coal	1949	160	
										50 oil			
1	23			RFRO				DRY	-	-	1923	60	
2				RFRO				DRY	-	-	1923		
3				RFRO				DRY	-	-	1923		
4				RFRO				DRY	-	-	1923		
	155	59	10.12		9	49	42						
					des.p. coal oil gas								
44. Landsdale (Landsdale Elec. Dept.)								*	*	*		30	10
	25.5	27	0.73		94	4	-						
					des.s.p. coal								

* No FPC-67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Philadelphia SMSA-Cont'd													
26. Southwark													
(Philadelphia Electric Co.)													
Boiler 11				PCFR	-	100	-	DRY	MCAX/E	91.4	1947		10
12				PCFR	-	100	-	DRY	MCAX/E	91.4	1947		
21				PCFR	-	100	-	DRY	MCAX/E	92.7	1948		
22				PCFR	-	100	-	DRY	MCAX/E	92.7	1948		
	345	70	26.24		-	100	-						
				des.p. coal oil									
AREA TOTAL	3660.2		205.35									1120	

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Reading SMSA</u>													
6. Titus (Metropolitan Edison)													
Boiler 1	75			PCTA				Dry	E	96.7	1951	210	< 5
2	75			PCTA				Dry	E	96.7	1951	210	
3	75			PCTA				Dry	E	96.7	1953	210	
	225	73	14.89		98	2	-						
					des. p. coal								
38. Eyler* (Metropolitan Edison)													
Boiler 1	42			PCOP				Dry	E	76.8(t)	1941	35	< 5
2	42			PCOP				Dry	E	78.4(t)	1941	35	
	84	13	1.26		67	33	-						
					des. oil								
AREA TOTAL	309		16.15										
<u>Wilkes-Barre-Hazleton SMSA</u>													
42 Hunlock United Gas Improvement													
Boiler 1				OSTO				Dry	-	-	1925	20	5
3				OSTO				Dry	-	-	1925	20	
5				OSTO				Dry	-	-	1925	20	
2				PCTA				Wet	C	90	1947	45	
4				PCTA				Wet	-	-	1947	45	
6				PCTA				Wet	C	85	1959	145	
	93	53	6.91		99	1	-						
					des. s. p. coal								

* Boilers 3-8 were retired in 1971. These were identical coal-fired boilers(OSTO) with a capacity of 62MW, and were all built in 1923-1924.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Wilkes Barre-Hazleton SMSA-Cont'd</u>													
15. Stanton (Pennsylvania Power & Light)													
Boiler 1-1	50			OSTO	100	-	-	DRY	Cinder traps/ E	30	1927	120	15
1-2				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
1-3				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
1-4				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
2-1	50			OSTO	100	-	-	DRY	Cinder traps/ E	30	1927	120	
2-2				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
2-3				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
2-4				OSTO	100	-	-	DRY	Cinder traps/ E	30	1927		
3	46 146	41	8.31	PCOP	100 100	- -	- -	WET	Grav/E	85	1953	110	
					des. sap coal								
AREA TOTAL	239		15.23										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	
PITTSBURGH SMSA												
1. Colfax Dusquesne Lgt. Co.												
Boiler 1	60*			OSTO	100	-	-	Dry	None	-	1921	5
2				OSTO	100	-	-	Dry	"	-	1920	
3				OSTO	100	-	-	Dry	"	-	1921	
4				OSTO	100	-	-	Dry	"	-	1921	
5				OSTO	100	-	-	Dry	"	-	1921	
6				OSTO	100	-	-	Dry	"	-	1920	
7				OSTO	100	-	-	Dry	"	-	1921	
8				OSTO	100	-	-	Dry	"	-	1920	
9				OSTO	100	-	-	Dry	"	-	1923	
10				OSTO	100	-	-	Dry	"	-	1922	
11				OSTO	100	-	-	Dry	"	-	1923	
12				OSTO	100	-	-	Dry	"	-	1922	
13				OSTO	100	-	-	Dry	"	-	1924	
14				OSTO	100	-	-	Dry	"	-	1922	
15				OSTO	100	-	-	Dry	"	-	1924	
16				OSTO	100	-	-	Dry	"	-	1924	
17				PCFR	100	-	-	Dry	"	-	1927	
18				PCFR	100	-	-	Dry	"	-	1925	
19				PCFR	100	-	-	Dry	"	-	1927	
20				PCFR	100	-	-	Dry	"	-	1925	
21				PCFR	100	-	-	Dry	"	-	1927	
22				PCFR	100	-	-	Dry	"	-	1925	
	262.5	16	9.40		100							

des
s s p. coal

* Cold Reserve, not included in plant total

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
PITTSBURGH SMSA cont'd													
3. Phillips (Dusquesne Lgt. Co.)													
Boiler 1				PCFR	100	-	-	Dry	C	90	1942		20
2				PCFR	100	-	-	Dry	C	90	1942		
3				PCFR	100	-	-	Dry	C	90	1949		
4				PCFR	100	-	-	Dry	C	90	1950		
5				PCFR	100	-	-	Dry	C	90	1950		
6				PCFR	100	-	-	Dry	C	92	1956		
	411.2	58	24.69		100							1050	
					des.p.coal								
8. Seward-Indiana Co. (Penn. Electric Co.)													
Boiler 9				Rear fired				None	-	-	1942		40
12				PCFR				Dry	C	98	1942		
14				PCFR				Dry	C	97	1950		
15				PCTA				Dry	C	98	1957		
	268.2	63	16.27		97	3	-					685	
					des.p.coal oil								
17. Homer City-Indiana Co. (Penn.Elec.Co.)													
Boiler 1	659.7			PCOP				Dry	E	94.5	1969	925	30
2	659.7			PCOP				Dry	E	94.5	1969	925	
	1319.4	37	43.26		98	2	-						
					des.p. coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Pittsburgh SMSA - Cont'd</u>													
2. Elrama Duquesne Lgt. Co.													
Boiler 1				PCFR	100	-	-	Dry	C	92	1952		15
2				PCFR	100	-	-	Dry	C	92	1953		
3				PCFR	100	-	-	Dry	C	92	1954		
4				PCFR	100	-	-	Dry	C	92	1960		
	510.3	64	30.86		100	-	-						
					des.p.coal							1304	

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>PITTSBURGH SMSA - Cont'd</u>													
34. Reed (Duquesne Lgt. Co.)													
Boiler 1				OSTO	100	-	-	Dry	None	-	1930		5
2				OSTO	100	-	-	Dry	"	-	1938		
3				OSTO	100	-	-	Dry	"	-	1930		
4				OSTO	100	-	-	Dry	"	-	1938		
5				OSTO	100	-	-	Dry	"	-	1930		
6				OSTO	100	-	-	Dry	"	-	1941		
	180	35	10.37		100	-	-					440	
					des.p.coal								
7. Cheswick Duquesne Lgt. Co.													
Boiler 1	565.3	59	27.87	PCTA	99	1	-	Dry	E	99	1970	1175	5
					des.p.coal								
28. Springdale (West Penn Power Co.)													
2				PCFR	100	-	-	Wet	E	81	1937	270	5
4				PCFR	100	-	-	Wet	E	70	1937		
6				PCFR	100	-	-	Wet	E	82	1938	175	
77				PCFR	100	-	-	Dry	E	83	1945	285	
88				PCFR	100	-	-	Dry	E	81.6	1954		
	416.13	37	17.25		100	-	-						
					des.p.coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
Pittsburgh SMSA - Cont'd													
11. New Castle- Lawrence Co. Penn Power Co.													
Boiler 1	42.5			PCFR	100	-	-	Dry	E	98	1939	90	40
2	42.5			PCFR	100	-	-	Dry	E	98	1947	90	
3	103			PCFR	100	-	-	Dry	E	98	1952	220	
4	105			PCFR	100	-	-	Dry	E	95	1958	225	
5	132.8			PCFR	100	-	-	Dry	E	98	1964	285	
	425.8	49	22.35		100	-	-						
					des.p.coal								
32. Armstrong- Armstrong Co. West Penn Power Co.													
Boiler 1				PCOP	100	-	-	Dry	MCAX/E	96	1947		35
2				PCOP	100	-	-	Dry	MCAX/E	96	1948		
	326.4	70	22.40		100	-	-					955	
					des.p.coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE miles
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	
<u>PITTSBURGH SMSA- Cont'd</u>													
33. Mitchell West Penn Power Co.													
Boiler 1				PCFR	100	-	-	Dry	E	92	1948		15
2				PCFR	100	-	-	Dry	E	92	1948		
3				PCFR	100	-	-	Dry	E	92	1949		
33				PCTA	100	-	-	Dry	E	92	1963		
	448.7	64	26.43		100	-	-					1125	
					des.p.coal		gas						
36. Hatfields Ferry- Greene Co. West Penn Power Co.													
Boiler 1	576			PCOP	100	-	-	Dry	E	95	1969	795	40
2	576			PCOP	100	-	-	Dry	E	87	1970	795	
3	576			PCOP	100	-	-	Dry	E	90	1971	795	
	1728	38	58.85		100	-	-						
					des.p.coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Pittsburgh SMSA -Con't.</u>													
31. Keystone - Armstrong Co. (Penn. Power & Light)													
Boiler 1	936			PCTA				Wet	E	99.5	1967	1720	25
2	936			PCTA				Wet	E	99.5	1968	1720	
	1872	50	80.46		99	1	-						
					des. p. coal								
18. Conemaugh (Penn Power & Light)													
Boiler 1	842			PCTA				Dry	E	94	1970	1480	40
2	842			PCTA				Dry	E	94	1971	1480	
	1684	51	70.06		98	2	-						
					des.p.coal.								
AREA TOTAL	10417.9		460.51										

267

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Franklin County</u>													
43. Chambersburg (Chambersburg Elec. Dept.)	19.1	43	0.86		52	-	48	*	*	*		35	5
					des. p. coal and gas								
													Harrisburg 48
AREA TOTAL	19.1		0.86										

* No FPC-67 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	miles	
Union-Snyder-Montour- Northumberland Counties													
16. Sunbury													
(Penn. Power & Light)													
Boiler 1 (A,B)	} 150 103.5 156.3 409.8	69	31.35	PCOP	100	-	-	Dry	E	91	1949	} 490 335 510	10
2 (A,B)				PCOP	100	-	-	Dry	E	91	1949		
3				PCFR	100	-	-	Dry	E	93	1951		
4				PCFR	100	-	-	Dry	E	93(t)	1953		
					100	-	-						
					des. p. coal							Harrisburg 4 Wilkes-Barre	
AREA TOTAL	409.8		31.35										

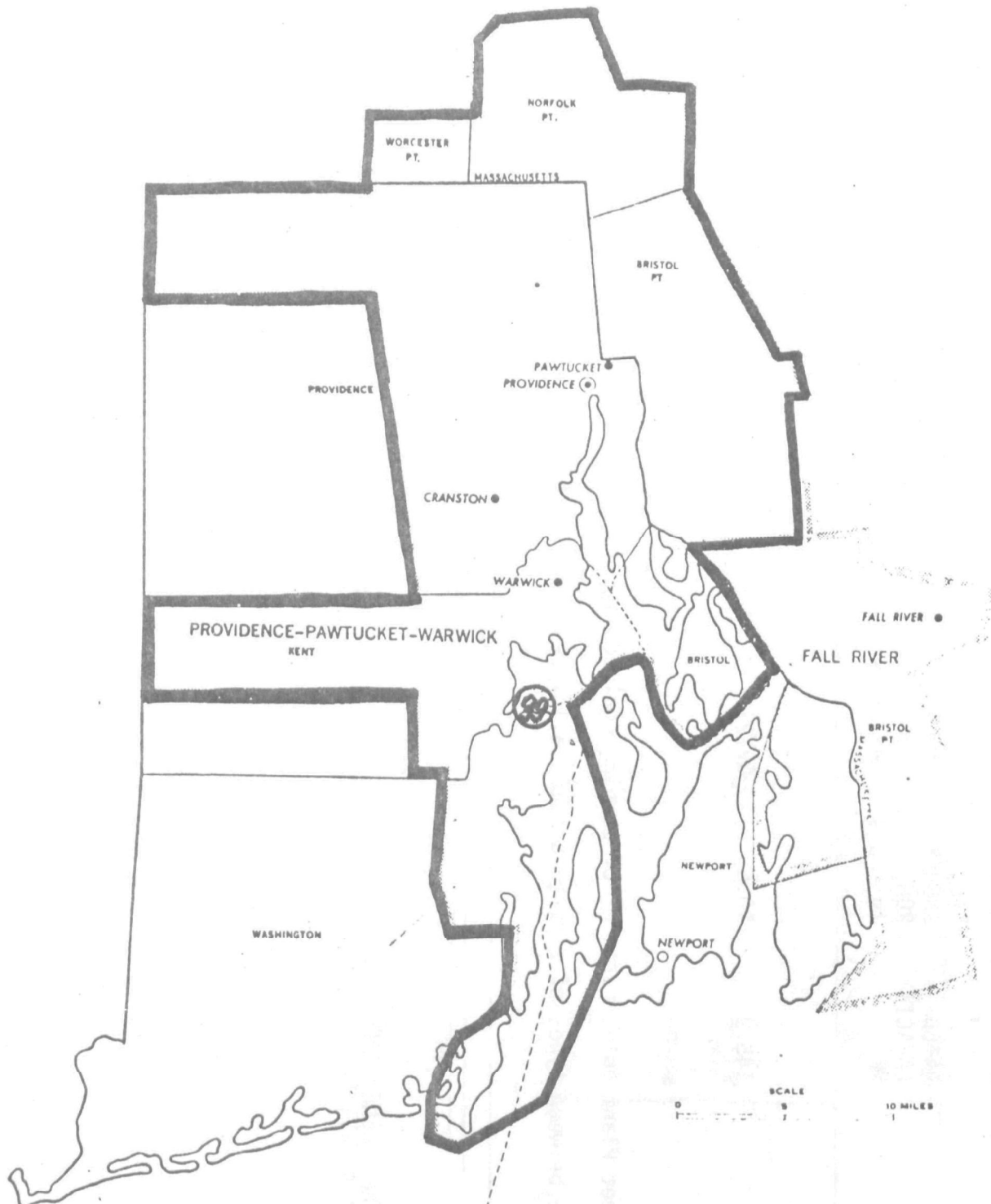
698

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: PENNSYLVANIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
York SMSA													
12. Brunner Island													
Boiler 1	363.3			PCTA	100	-	-	Dry	E	97(t)	1961	830	15
2	405.0			PCTA	100	-	-	Dry	E	97(t)	1965	930	
3	790.4			PCTA	100	-	-	Dry	E	99	1969	1815	
	1558.7	62	84.08		100	-	-						
AREA TOTAL	1558.7		84.08		des. p. coal								

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PLANTS:

○ EXISTING 1971

☒ "REFUSE GENERATION" AREAS

LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's

☒ Standard Metropolitan Statistical Areas (SMSA's)

REFUSE COMBUSTION FOR POWER GENERATION
Rhode Island, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)	TYPICAL TRANS. DISTANCE miles
Providence-Pawtucket- Warwick SMSA	145.9	10.6	0.781	0.51	4.62	43.4	10

Data includes South Street Plant only; capable* of burning coal (design fuel and/or current fuel).

* Does not differentiate between types of firing--assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

Rhode Island, 1971 - All Fossil Fuel Plants - Identical to table above.

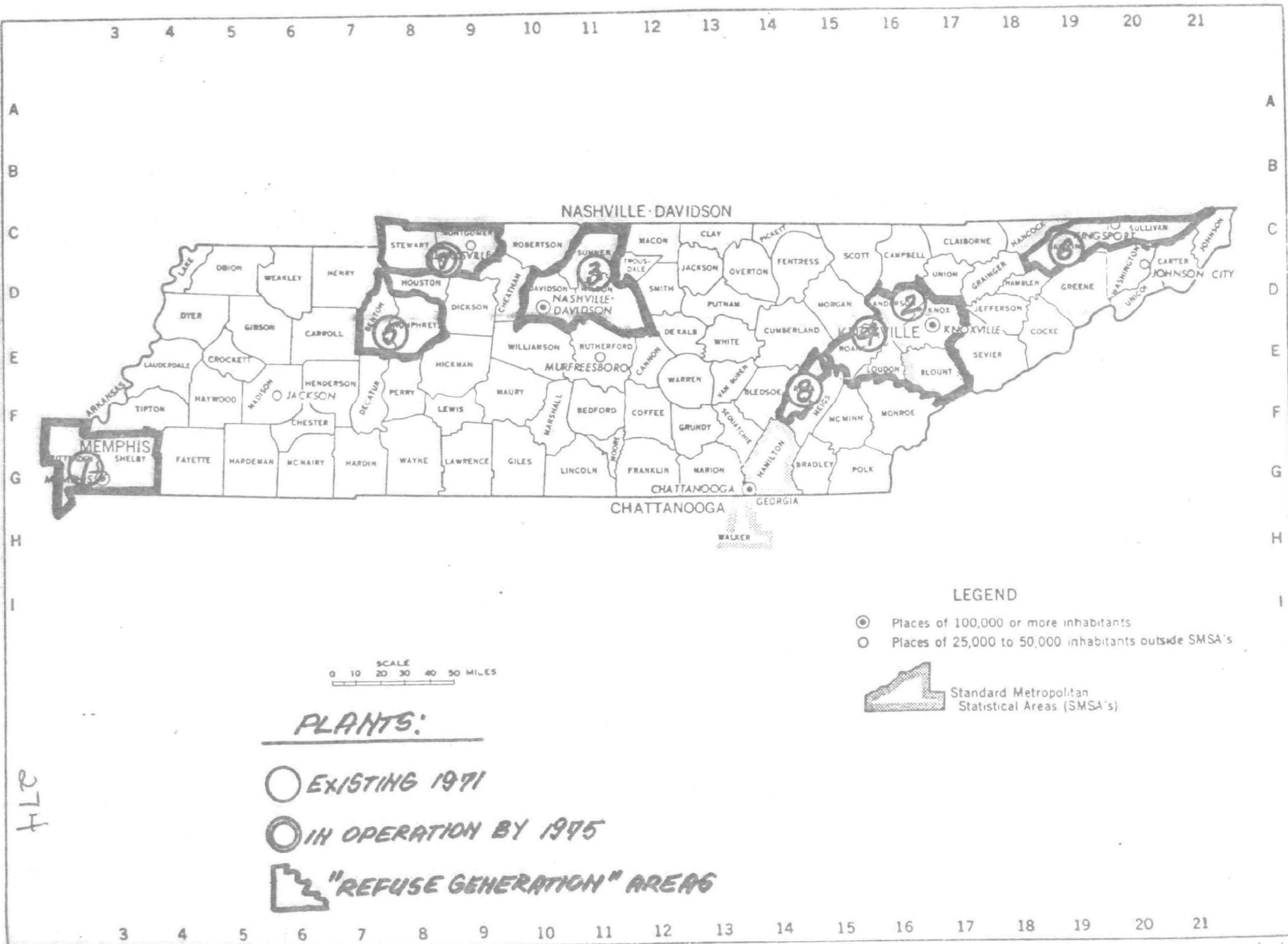
272

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: RHODE ISLAND

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Providence - Pawtucket													
-Warwick SMSA													
South Street (Narragansett Elec. Co.)													
Boiler 121	} 110 Boilers in range 2-13 MW			RFRO	-	100	-	None	MCAX/E 86/90(d)	-	1953	} 257	10
122				RFRO	-	100	-	None	MCAX/E 86/90(d)	-	1953		
15				RFRO	-	100	-	None	None	-	1916		
17				RFRO	-	100	-	None	None	-	1917		
22				RFRO	-	100	-	None	None	-	1918		
24				RFRO	-	100	-	None	None	-	1918		
33				TOP	-	-	-	None	None	-	-		
34				FIRE	-	100	-	None	None	-	1925	} Boiler capacities from 5 to 30 tons/day	
35				TOP	-	100	-	None	None	-	1925		
36				FIRE	-	100	-	None	None	-	1925		
				TOP	-	100	-	None	None	-	1925		
	145.9	44	10.64										
AREA TOTAL	145.9		10.64		des. p. coal	oil							

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TENNESSEE

REFUSE COMBUSTION FOR POWER GENERATION
Tennessee, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. $10^{12} \frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
				$10^6 \frac{\text{tons}}{\text{yr}}$	$10^{12} \frac{\text{BTU}}{\text{yr}}$		
Knoxville SMSA (incl. Roane and Loudon Counties)	2650	131.2	0.471	0.30	2.79	2.1	18
Memphis SMSA	990	43.9	0.782	0.51	4.63	10.5	< 5
Nashville-Davidson SMSA	1255.2	61.1	0.553	0.36	3.27	5.3	25
Benton-Humphreys Counties	1485.2	65.3	0.026	0.01	0.13	0.2	10
Rhea County	240.0	1.8	0.017	0.01	0.09	4.9	< 5
Sullivan-Hawkins Counties	823.3	36.9	0.163	0.09	0.87	2.4	34
TENNESSEE STATE TOTALS	7443.7	340.5	2.010	1.31	12.52	3.7	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

Tennessee, 1971 - All Fossil Fuel Plants - Identical to above table

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Tennessee

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Rhea County													
8. Watts Bar TVA													
Boiler A	60			*	100	-	-	Wet &	E	95	1969	25	< 5
B	60			*	100	-	-	Dry	E	95	1969	25	
C	60			*	100	-	-	Wet &	E	95	1969	25	
D	60			*	100	-	-	Dry	E	95	1969	25	
	240	10	1.86		100	-	-	Wet &	E	95	1969	25	Knoxville 50 Chattanooga 50
					des.p.coal								
* P-coal multiple intertube vertical firing													
AREA TOTAL	240		1.86										
Memphis SMSA													
1. Allen TVA													
Boiler 1	330												
2	330			CYCL				Wet	E	70	1958	620	< 5
3	330			CYCL				Wet	E	98.7(t)	1959	620	
	990	52	43.92	CYCL				Wet	E	98.7	1959	620	
					59	-	41						
					des.coal gas								
AREA TOTAL	990		43.92										

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Tennessee

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Sullivan-Hawkins Counties													
6. Sevier (TVA)													
Boiler 1 *	205.8			PCTA	100	-	-	Dry	MCTA	50	1955	385	34
2	205.8			PCTA	100	-	-	Dry	MCTA	50	1955	385	
3	205.8			PCTA	100	-	-	Dry	MCTA	50	1956	385	
4	205.8			PCTA	100	-	-	Dry	MCTA	50	1957	385	
	823.2	53	36.96		100	-	-						Knoxville 60 Asheville, NC
					des.p.coal								
AREA TOTAL	823.3		36.96										
Nashville-Davidson SMSA													
3. Gallatin (TVA)													
Boiler 1				PCTA	100	-	-	Dry	MCTA/E	60/92	1956		25
2				PCTA	100	-	-	Dry	MCTA/E	60/92	1957		
3				PCTA	100	-	-	Dry	MCTA/E	40/90	1959		
4				PCTA	100	-	-	Dry	MCTA/E	40/90	1959		
	1255.2	60	61.17		100	-	-						
					des.p.coal						3810		
AREA TOTAL	1255.2		61.17										

* Boiler capacities prorated to give plant total.

YEAR: 1971
STATE: Tennessee

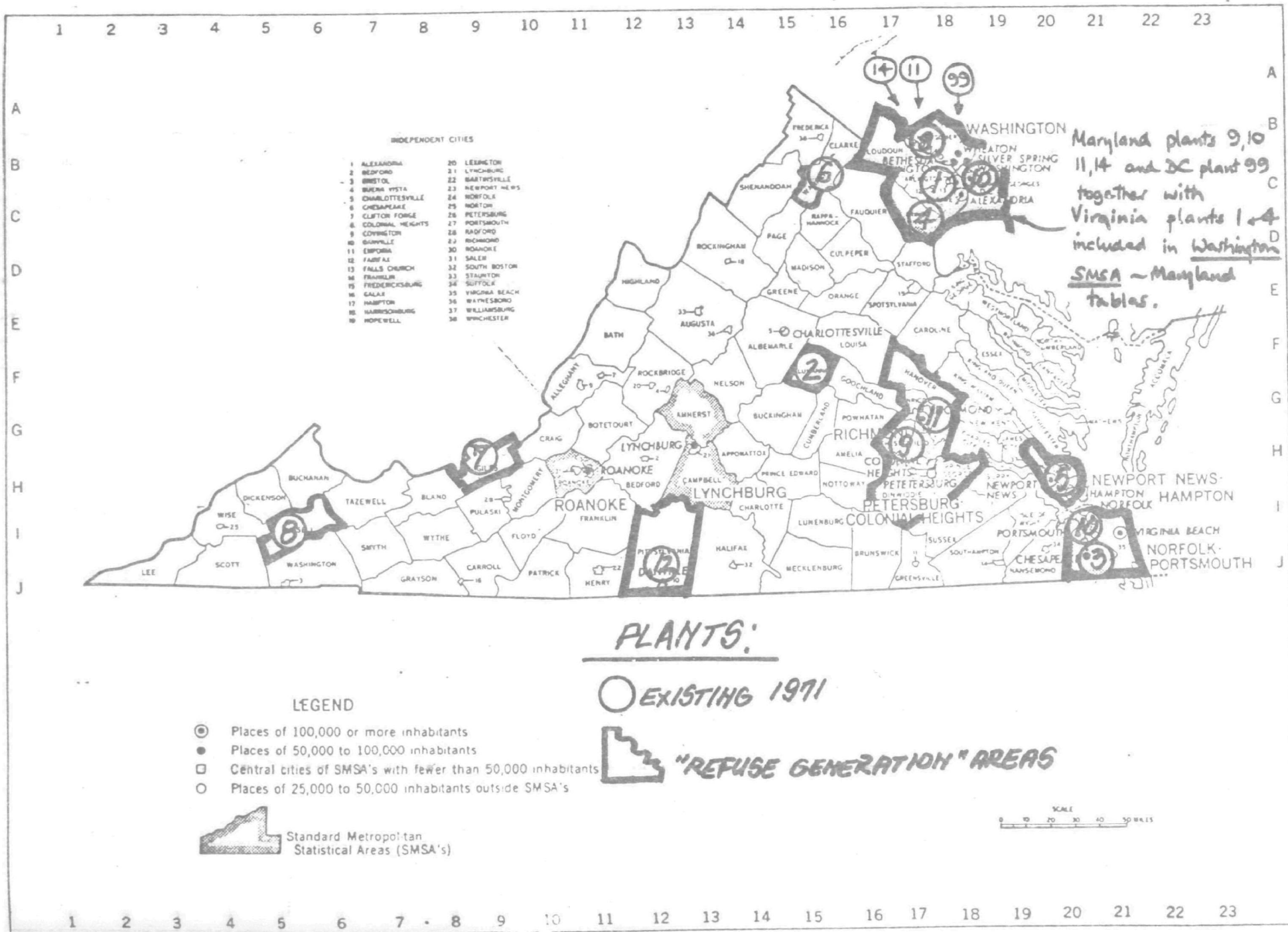
* P. coal forced draft, circular, horizontal firing
** Boiler capacities prorated to give plant total.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: Tennessee

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Knoxville SMSA-Roane and Loudon Counties cont'd													
4. Kingston (TVA)													
Boiler 1				PCTA	100	-	-	Dry	MCTA/E	60/80	1954		20
2				PCTA	100	-	-	Dry	MCTA/E	60/80	1954		
3				PCTA	100	-	-	Dry	MCTA/E	60/80	1954		
4				PCTA	100	-	-	Dry	MCTA/E	60/80	1954		
5				PCTA	100	-	-	Dry	MCTA/E	60/80	1954		
6				PCTA	100	-	-	Dry	MCTA/E	50/85	1954		
7				PCTA	100	-	-	Dry	MCTA/E	50/85	1955		
8				PCTA	100	-	-	Dry	MCTA/E	50/85	1955		
9				PCTA	100	-	-	Dry	MCTA/E	50/85	1955		
	1700	60	85.62		100	-	-	Dry	MCTA/E	50/85	1955		
					des.p.coal								
AREA TOTAL	2650		131.28									3650	

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REFUSE COMBUSTION FOR POWER GENERATION
Virginia, 1971 - All Fossil Fuel Plants

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
Newport News-Hampton SMSA	375.0	18.8	0.296	0.19	1.75	9.3	15
Norfolk-Portsmouth SMSA	749.6	35.3	0.684	0.44	4.04	11.4	15
Richmond-Petersburg-Colonial Heights SMSA's	1586.9	79.8	0.660	0.43	3.90	4.9	5
Warren County	34.5	1.7	0.016	0.00	0.09	5.3	5
Fluvanna County	284.3	13.6	0.008	0.00	0.04	0.3	<5
Pittsylvania County	29	1.9	0.060	0.03	0.32	16.2	<5
Giles County	402.5	20.5	0.017	0.01	0.09	0.4	<5
Russell County	712.5	45.9	0.025	0.01	0.13	0.3	5
VIRGINIA STATE TOTALS	4174.3	217.7	1.766	1.15	10.36	4.8	

Includes all plants detailed on attached data sheets.

REFUSE COMBUSTION FOR POWER GENERATION
Virginia, 1971 - "Coal Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. $10^{12}\frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		$10^6\frac{\text{tons}}{\text{yr}}$		$10^{12}\frac{\text{BTU}}{\text{yr}}$	miles		
Newport News-Hampton SMSA	375.0	18.8	0.296	0.19	1.75	9.3	15
Norfolk-Portsmouth SMSA	749.6	35.3	0.684	0.44	4.04	11.4	15
Richmond-Petersburg-Colonial Heights SMSA's	1586.9	79.8	0.660	0.43	3.90	4.9	5
Warren County	34.5	1.7	0.016	0.00	0.09	5.3	5
Fluvanna County	284.3	13.6	0.008	0.00	0.04	0.3	< 5
Pittsylvania County	29	1.9	0.060	0.03	0.32	16.2	< 5
Giles County	402.5	20.5	0.017	0.01	0.09	0.4	< 5
Russell County	712.5	45.9	0.025	0.01	0.13	0.3	5
VIRGINIA STATE TOTALS	4174.3	217.7	1.766	1.15	10.36	4.8	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Russell County													
8. Clinch River Appalachia Power Company													
Boiler 1 *	237.5			PCFR	100	-	-	Dry	MCTA	85	1958	650	
2	237.5			PCFR	100	-	-	Dry	MCTA	85	1958	650	5
3	237.5			PCFR	100	-	-	Dry	MCTA	85	1961	650	
	712.5	81	45.90		100	-	-						Kingsport, Tenn
					des p coal								
AREA TOTAL	712.5		45.9										
Pittsylvania County													
12. Brantly Danville Water, Gas & Electric													
Boiler 1	6			PCFR/GFRO									<5
2	11.5			PCFR/GFRO				Dry	MCAX	84	1949	15	
3	11.5			PCFR/GFRO				Dry	MCAX	84.7	1952	30	
	29	70	1.97		31	69	-	Dry	MCAX	84.7	1953	30	Roanoke 52 Lynchburg 56
					des p coal oil gas								
AREA TOTAL	29		1.97										

* Boiler capacities prorated to plant total.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Richmond-Petersburg- Colonial Heights SMSA's (combined)													
9. Chesterfield Virginia Electric & Power Co.													
Boiler 1	62.5			PCTA				Dry	MECH	80	1944	140	5
2	69			PCTA				Dry	E	72	1949	155	
3	112.5			PCTA				Dry	C	72	1952	250	
4	187.5			PCTA				Dry	E	72	1960	420	
5	359			PCTA				Dry	E	72	1964	810	
6	693.9			PCTA				Dry	E	72	1969	1565	
	1484.4	58	79.07		17	83	-						
					des p coal oil								
11. Richmond-12th St. Virginia Electric & Power Co.													
Boiler 17	52.5			PCTA				Wet	E	90	1936	20	5
18	50			PCTA				Wet	E	90	1939	20	
	102.5	8	0.80		96	4	-						
					des p coal								
AREA TOTAL	1586.9		79.87										
Warren County													
6. Riverton Potomac Edison Co. of Virginia													
Boiler 1	34.5	39	1.71	PCFR	100	-	-	Dry	MCAX	80	1949	70	5
					des.p. coal								
AREA TOTAL	34.5		1.71										
Charlottesville Washington 60													

Charlottesville 65
Washington 60

REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971
STATE:Virginia

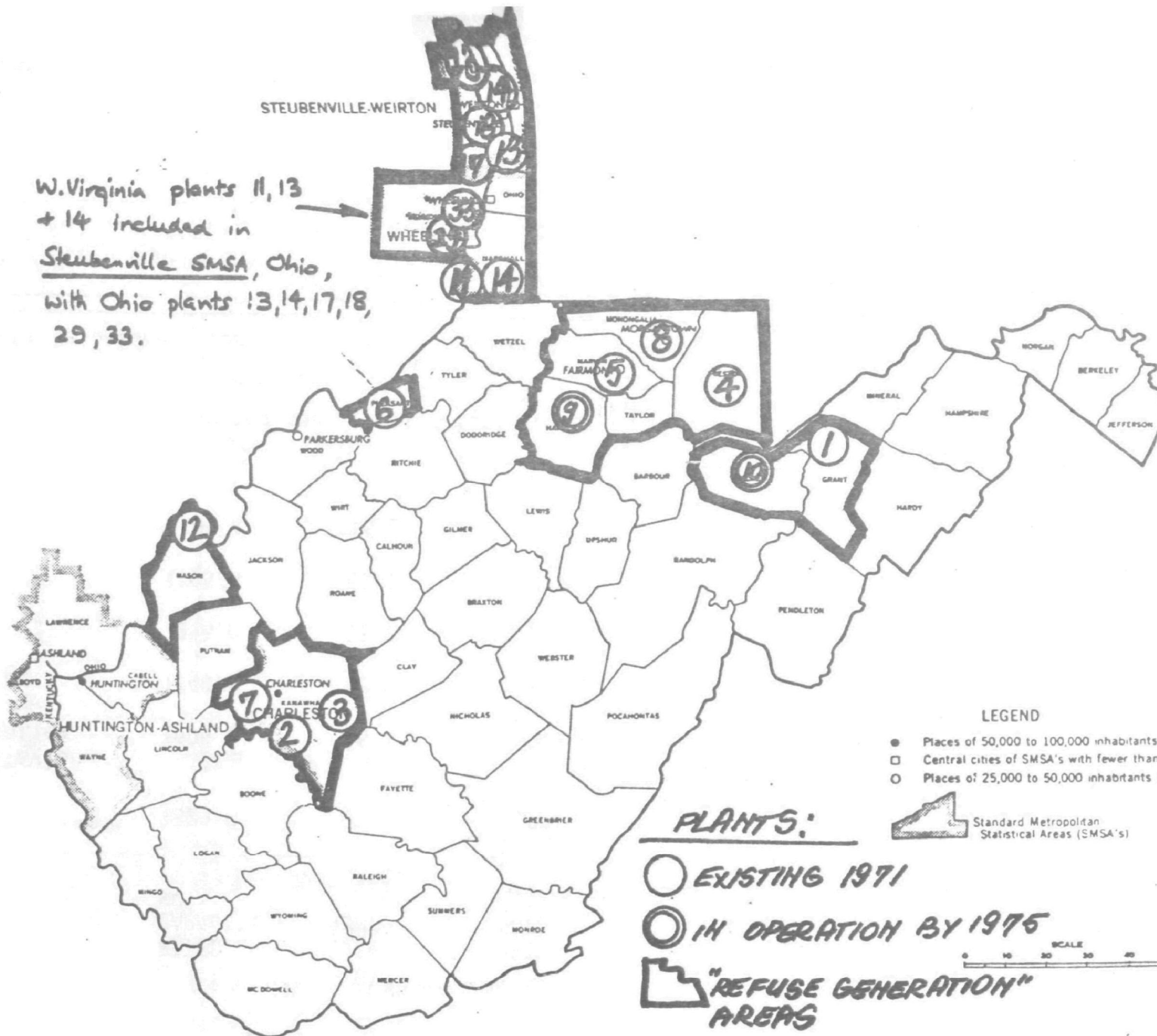
SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU/yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Fluvanna County</u>													
2. Bremo Virginia Electric & Power Co.													
Boiler 1	15			PCFR			-	Wet	None	-	1931	25	<5
2	15			PCFR			-	Wet	"	-	1931	25	
3	69			PCFR			-	Dry	MCAX	70	1950	135	Richmond 45
4	185.3			PCFR			-	Dry	MCAX	70	1958	370	Lynchburg 52
AREA TOTAL	284.3	52	13.6		99	1	-						
	284.3		13.6										
<u>Giles County</u>													
7. Glen Lyn Appalachia Power Co.													
Boiler 5				-				None	None	-	1922		<5
6				-				None	None	-	1922		
8				-				None	None	-	1922		
9				-				None	None	-	1923		
10				-				None	None	-	1923		
12				-				None	None	-	1923		
11 reserve				-				None	None	-	1923		
13				OSTO				Dry	None	-	1928		
51				PCFR				Dry	MCTA	85 (d)	1931		
52				PCTA				Dry	MCTA	85 (d)	1944	20	Roanoke 50
6				PCTA				Dry	MCTA	85 (d)	1944		
	225			PCFR				Dry	C	95 (d)	1957	490	
AREA TOTAL	402.5	59	20.53		97	3	-						
	402.5		20.53		des p,s coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Norfolk-Portsmouth SMSA</u>													
3. Portsmouth Virginia Electric & Power Co.													
Boiler 1	112.5			PCTA				Dry	MCAX	65	1953	245	15
2	112.5			PCTA				Dry	MCAX	65	1954	245	
3	185.2			PCFR				Dry	MCAX	65	1959	405	
4	239.4			PCTA				Dry	E	70	1962	525	
	649.6	57	33.75		10	90	-						
					des. p coal	oil							
10. Reeves Avenue Virginia Electric & Power Co.													
Boiler 21	50.0			PCTA				Wet	E	70	1941	35	15
22	50.0			PCTA				Wet	E	70	1947	35	
AREA TOTAL	100.0	17	1.60		96	-	4						
	749.6		35.35		des p coal								
<u>Newport News-Hampton SMSA</u>													
5. Yorktown Virginia Electric & Power Co.													
Boiler 1	187.5			PCTA				Dry	C	98	1957	400	15
2	187.5			PCTA				Dry	MCAX	84	1958	400	
	375.0	56	18.85		100	-	-						
AREA TOTAL	375		18.85		des p coal	gas							

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REFUSE COMBUSTION FOR POWER GENERATION
West Virginia, 1971 - "Coal fired Plants" Only

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. $10^{12} \frac{\text{BTU}}{\text{yr}}$	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE
		$10^6 \frac{\text{tons}}{\text{yr}}$		$10^{12} \frac{\text{BTU}}{\text{yr}}$	miles		
Charleston SMSA	1529.2	73.3	0.231	0.15	1.37	1.9	12
Monongalia-Preston-Taylor- Harrison-Marion Counties	1605.1	96.4	0.238	0.14	1.27	1.3	15
Tucker-Grant Counties	1140.5	68.9	0.016	0.00	0.08	0.1	10
Pleasants County	215.0	15.7	0.007	0.00	0.03	0.2	<5
Mason County	1105.6	62.1	0.024	0.01	0.12	0.2	15
WEST VIRGINIA STATE TOTALS	5595.4	316.8	0.516	0.32	2.89	0.9	

Includes all plants capable* of burning coal (design fuel and/or current fuel). Includes all plants in attached data sheets.

* Does not differentiate between types of firing -- assumes all types capable of refuse burning.

REFUSE COMBUSTION FOR POWER GENERATION

West Virginia 1971 - All Fossil Fuel Plants - Identical to table above.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WEST VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Charleston SMSA													
2. Cabin Creek Appalachia Power Company Boiler 1				OSTO				DRY	GRAV/ SCTA	15	1927		15
3		*		OSTO				DRY	GRAV/ SCTA	15	1927		
4				OSTO				DRY	GRAV	15	1929		
5				PCFR				DRY	MCAX	85	1931		
6				PCFR				DRY	MCAX	85	1931		
81		**		PCFR				DRY	MCAX	85	1942		
82				PCFR				DRY	MCAX	85	1942		
91				PCFR				DRY	MCAX	85	1943		
92				PCFR				DRY	MCAX	85	1943		
	273.5	33	9.22		99 des.s & p coal	1	-					390	
3. Kanawha River Appalachia Power Company Boiler 1	219.7			PCFR				DRY	E	95	1953	630	
2 -	219.7			PCFR				DRY	E	95	1953	630	15
	439.4	84	29.65		100 des.p.coal								
7. Amos Appalachian Power Company Boiler 1	816.3	53	34.49 ***	PCOP	98	2	-	DRY	E	95.3	1971	1470	8
AREA TOTAL	1529.2		73.36										

* Boilers on deactivated reserve.

** Boiler capacity breakdown not available

*** This plant was started up in 1971. The actual load factor for this year was 24%. The energy requirement is based on the average state load factor (53%) for calculation purposes.

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WEST VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
Mason County													
12. Philip Sporn Appalachia Power Company				PCFR				DRY	MCTA	79.3(t)	1950	1555	15
Boiler 1	}	*		PCFR				DRY	MCTA	85 (t)	1950		
2				PCFR				DRY	MCTA	85 (t)	1951		
3				PCFR				DRY	MCTA	65.1(t)	1952		
4				PCFR				DRY	MCTA	70.4(t)	1960		
5	450			PCOP				DRY	E			1070	
AREA TOTAL	1105.6	69	62.10		99	1	-						
	1105.6		62.10		des.p.coal								
Pleasants County													
6. Willow Island Monongalia Power Company				PCFR	100	-	-	DRY	MCAX	59	1949	665	<5
Boiler 1				CYCL	100	-	-	WET	E	73	1960		
2	215	78	15.77		100	-	-						
AREA TOTAL	215		15.77		des.p.coal								

*. No breakdown available.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WEST VIRGINIA

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Monongalia-Preston-Taylor-Harrison- Marion Counties</u>													
8. Fort Martin Monongalia Power Company Boiler 1 2	576 576 1152	 69	 63.29	PCTA PCOP	100 100 100	- - -	- - -	DRY DRY	E E	99.4 99	1967 1968	1345 1345	15
					des.p.coal								
167 4. Albright Monongalia Power Company Boiler 1 2 3	69 209.3 278.3	 79	 21.41	PCFR PCFR PCTA	100 100 100 100	- - - -	- - - -	DRY DRY DRY	MCAX MCAX C	83 83 93	1952 1952 1952	250 680	25
					des.p.coal								

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WEST VIRGINIA

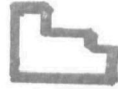
SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Monongalia-Preston-Taylor-Harrison- Marion Counties cont'd</u>													
5. Rivesville Monongalia Power Company Boiler 5				PCFR	100	-	-	WET	SCTA/ MULT. FILLER CONES	65	1936		<5
6				PCFR	100	-	-	WET	SCTA/ MULT. FILLER CONES	65	1936		
7				PCFR	100	-	-	DRY	SCTA/ IMPE	70	1944		
8				PCFR	100	-	-	DRY	SCTA/ IMPE	56	1951		
	174.8	53	11.72		100	-	-					495	
	100				des.p.coal								
AREA TOTAL	1605.1		96.42										
<u>Tucker-Grant Counties</u>													
1. Mt. Storm Virginia Electric & Power Co.				PCTA				DRY	E	85	1965	1460	10
Boiler 1	570.25			PCTA				DRY	E	90	1966	1460	
2	570.25												
	1140.5	70	68.90		99	1	-						
					des.p.coal								
AREA TOTAL	1140.5		68.90										

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PLANTS:

○ EXISTING 1971

⊙ IN OPERATION - BY 1975



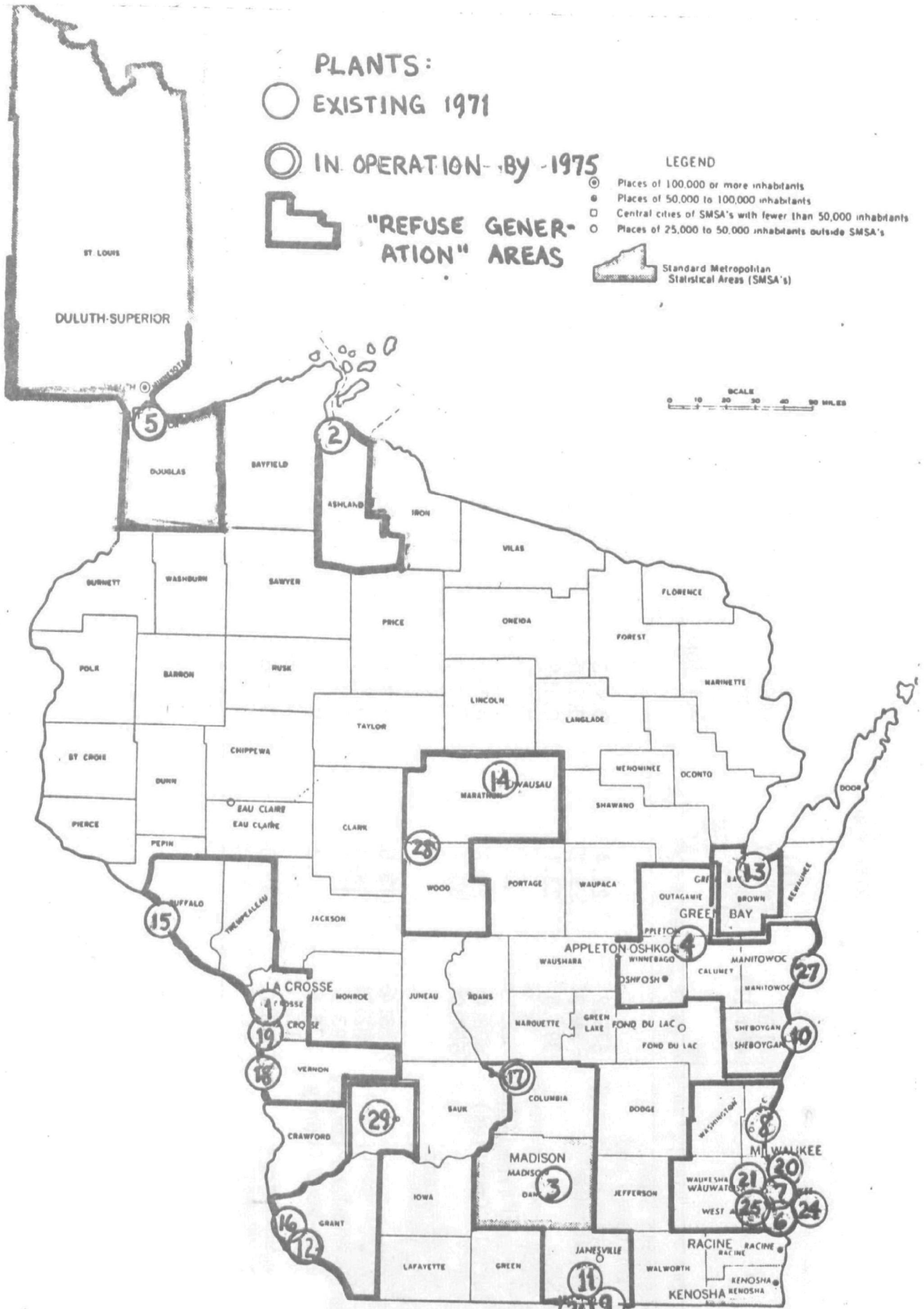
"REFUSE GENERATION" AREAS

LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Central cities of SMSA's with fewer than 50,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan Statistical Areas (SMSA's)



REFUSE COMBUSTION FOR POWER GENERATION
Wisconsin, 1971 - All Fossil Fuel Plants

	RATED CAPACITY	(b) ENERGY REQMT. 10 ¹² BTU yr	AREA POP. millions	(a) REFUSE GENERATION 10 ⁶ tons yr	10 ¹² BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
	MW						
Appleton-Oshkosh SMSA (includes Manitowac and Sheboygan Counties)	575.2	24.4	0.463	0.30	2.73	11.2	45
Duluth-Superior SMSA	25.2	1.7	0.270	0.17	1.60	89.4	5
Green Bay SMSA	392.5	23.1	0.159	0.10	0.94	4.1	<5
La Crosse SMSA (includes Vernon, Trempealeau and Buffalo Counties)	603.4	26.7	0.145	0.09	0.85	3.2	32
Madison SMSA (includes Columbia and Rock Counties)	554.9	30.7	0.473	0.31	2.79	9.1	25
Milwaukee SMSA	2725.4	113.0	1.429	0.93	8.45	7.5	9
Ashland County	82.2	4.8	0.017	0.01	0.09	1.9	<5
Grant County-Richland County	293.3	15.1	0.148	0.08	0.79	5.2	10
Marathon County-Wood County	176.5	8.2	0.165	0.09	0.88	10.7	5
WISCONSIN STATE TOTALS	5428.6	248.0	3.269	2.12	19.14	7.7	

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REFUSE COMBUSTION FOR POWER GENERATION
Wisconsin, 1971 - Coal Plants Only*

AREA	RATED CAPACITY MW	(b) ENERGY RQMT. 10 ¹² <u>BTU</u> <u>yr</u>	AREA POP. millions	(a) REFUSE GENERATION		POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b %)	TYPICAL TRANS. DISTANCE miles
		10 ⁶ <u>tons</u> <u>yr</u>		10 ¹² <u>BTU</u> <u>yr</u>			
Appleton-Oshkosh SMSA (includes Manitowac and Sheboygan Counties)	575.2	24.4	0.463	0.30	2.73	11.2	45
Duluth-Superior SMSA	25.2	1.7	0.270	0.17	1.60	89.4	5
Green Bay SMSA	392.5	23.1	0.159	0.10	0.94	4.1	<5
La Crosse SMSA (includes Vernon, Trempean- leau and Buffalo Counties)	603.4	26.7	0.145	0.09	0.85	3.2	32
Madison SMSA (includes Columbia and Rock Counties)	554.9	30.7	0.473	0.31	2.79	9.1	25
Milwaukee SMSA	2380.3	101.6	1.429	0.93	8.45	8.3	10
Ashland County	82.2	4.8	0.017	0.01	0.09	1.9	<5
Grant County-Richland County	293.3	15.1	0.148	0.08	0.79	5.2	10
Marathon County-Wood County	176.5	8.2	0.165	0.09	0.88	10.7	5
WISCONSIN STATE TOTALS	5083.5	237.3	3.269	2.12	19.14	8.1	

*Includes all plants in the Data Tables except 20, 24.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE	
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles	
<u>APPLETON-OSHKOSH SMSA</u>													
4. Menasha Menasha Electric & Water Utility	29.2	44	1.52		100	-	-	*	*	*	1949	60	10
					des. s. coal								
10. Edgewater Wisconsin Power & Light Boiler 1	32			PCFR	100	-	-	Dry	E	95.6	1931	75	47
2	33			PCFR	100	-	-	Dry	E	95.5	1931	80	
3	81			CYCL	100	-	-	Wet	E	99.7	1951	200	
4	331			CYCL	100	-	-	Wet	E	99	1969	820	
	477	71	20.62		100 des.p.coal								
27. Manitowoc Manitowoc Public Utility	69	34	2.26		100	-	-	*	*	*		95	45
AREA TOTAL	575.2		24.40										
<u>DULUTH-SUPERIOR SMSA</u>													
5. Winslow Superior Water Light & Power Co.	25.2	54	1.79		48	-	52	*	*	*		75	5
					des.p.coal/oil/gas								
AREA TOTAL	25.2		1.79										

* No FPC 67 filed

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>GREEN BAY SMSA</u>													
13. Pulliam Wisconsin Public Service Boiler 1	10			PCFR				Wet	None	-	1927	20	<5
2	10			PCFR				Wet	None	-	1927	20	
3	30			PCFR				Wet	E	92	1943	70	
4	30			PCFR				Wet	E	89.9	1947	70	
5	50			PCFR				Wet	E	90	1949	120	
6	62.2			PCFR				Wet	E	87.9	1951	150	
7	75			PCFR				Wet	E	96.3	1958	185	
8	125			PCFR				Wet	E	92	1964	310	
	392.5	60	23.10		100	-	-						
					des.p.coal/oil/gas								
AREA TOTAL	392.5		23.10										
<u>LA CROSSE SMSA</u>													
1. French Island Northern States Power Co. Boiler 1	12.5			SPRE	100	-	-	Dry					
2	12.5			SPRE	100	-	-	Dry					
	25.0	17	0.73		100	-	-	Dry	CYCL	86.5	1948	15	<5
					des.s-coal								
15. Alma Dairyland Power Coop. Boiler 1	17.3			PCFR	100	-	-	Dry	MCTA		1947	40	50
2	17.3			PCFR	100	-	-	Dry	MCTA		1947	40	
3	17.3			PCFR	100	-	-	Dry	MCTA		1950	40	
4	54.4			PCFR	100	-	-	Dry	MCTA		1957	140	
5	81.6			PCFR	100	-	-	Dry	MCTA		1959	210	
	187.9	67	11.54		100	-	-						
					des.p.coal								
18. New Genoa Dairyland Power Coop. Boiler 1	384			PCTA	99	1	-	Dry	E	88	1969	690	19
	384	55	14.50		des.p.coal								
19. Edison Northern States Power Co.	6.5	.005	0.003		100	-	-	*	*	*			10
					des.s.coal								
AREA TOTAL	603.4		26.77										

* No FPC 67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>MADISON SMSA</u>													
3. Blount Street Madison Gas & Electric Co. Boiler 1	5			RFRO/ GFRO				None	None	-	1968	10	45
2	5			RFRO/ GFRO				None	None	-	1968	10	
3	21			RFRO/ GFRO				None	None	-	1968	50	
11	7.5			RFRO/ GFRO				None	None	-	1964	15	
5	21			PCFR				Wet	CYCL	85	1938	50	
6	21			PCFR/ GFRO				Wet	CYCL	85	1943	50	
7	27			PCFR/ GFRO				Dry	CYCL	85	1949	60	
8	44			PCFR/ GFRO				Dry	CYCL	85	1957	105	
9	44			PCFR/ GFRO				Dry	CYCL	85	1961	105	
	<u>195.5</u>	54	<u>11.14</u>		31	-	69						
					des.s.coal/gas								
11. Rock River (Rock Co.) Wisconsin Power & Light Boiler 1	79.7			CYCL	100	-	-	Wet	E	99.6	1954	190	34
2	79.7			CYCL	100	-	-	Wet	E	99.6	1955	190	
	<u>159.4</u>	61	<u>8.49</u>		100	-	-						
					des.p.coal								

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>MADISON SMSA - cont'd</u>													
9. Black Hawk (Rock Co.) Wisconsin Power & Light Boiler 3	25			PCFR				Dry	SCTA	80	1947	55	40
4	25			PCFR/ GFRO				Dry	SCTA	80	1949	55	
	50	50	2.73		6	-	94						
					des.p.coal/gas								
26. Rock River Wisconsin Power & Light Boiler 1	150			CYCL	100	-	-	Wet	None	-	1954		40
2	150	61	8.35	CYCL	100	-	-	Wet	None	-	1955		
					100	-	-					350	
					des.p.coal								
AREA TOTAL	554.9		30.71										
<u>MILWAUKEE SMSA</u>													
6. North Oak Creek Wisconsin Electric Power Co. Boiler 1	120			*	100	-	-	Dry	E	90	1953	190	10
2	120				100	-	-	Dry	E	90	1954	190	
3	130				100	-	-	Dry	E	93	1955	205	
4	130				190	-	-	Dry	E	92	1957	205	
	500	42	18.97		100	-	-						
					des.p.coal								

* Front Wall Vertical Downward

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
<u>MILWAUKEE SMSA - cont'd</u>													
7. South Oak Creek Wisconsin Electric Power Co.													
Boiler 5	280.3			*				Dry	E	45	1959	530	6
6	280.3							Dry	E	50	1961	530	
7	316.0							Dry	E	92	1965	600	
8	316.0							Dry	E	92	1967	600	
	1192.6	54	53.18		99	1	-						
					des.p.coal								
25. Valley Wisconsin Electric Power Co.													
Boiler 1	68			PCFR				Dry	E	96	1968	140	<5
2	68			PCFR				Dry	E	96	1968	140	
3	68			PCFR				Dry	E	97	1969	140	
4	68			PCFR				Dry	E	97	1969	140	
	272	47	13.17		99	-	1						
					des.p.coal/gas								

* Front Wall Vertical Downward

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Milwaukee SMSA cont'd</u>													
8. Port Washington Wisconsin Electric Power Co.													
Boiler 1	80			**	100	-	-	Dry	E	98.8	1935	135	25
2	80				100	-	-	Dry	E	99.1	1943	135	
3	80				100	-	-	Dry	E	99.2	1948	135	
4	80				100	-	-	Dry	E	99.1	1949	135	
5	80				100	-	-	Dry	E	99.0	1950	135	
	400	39	16.03		100	-	-						
					des. p. coal								
20. Commerce Street Wisconsin Electric Power Co.													
Boiler 1	35	50	2.28	-	-	6	94	None	None	-		70	<5
					des. oil/gas								
21. East Wells Street Wisconsin Electric Power Company	15	21	0.31	*	100	-	-	*	*	*		10	<5
					des s & p coal								

* No FPC-67 filed

** Front wall fired vertical downward

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU YR		COAL	OIL	GAS		TYPE	EFF. %		tons/day	Miles
MILWAUKEE SMSA - cont'd													
24. Lakeside Wisconsin Electric Power Co. Boiler 1				GOPP/									
2				ROPP				None	None	-	1920		5
3				GOPP/				None	None	-	1920		
4				ROPP				None	None	-	1920		
5				GOPP/				None	None	-	1920		
6				ROPP				None	None	-	1921		
7				GOPP/				None	None	-	1921		
8				ROPP				None	None	-	1921		
9				GOPP/				None	None	-	1921		
10				ROPP				None	None	-	1923		
11				GOPP/				None	None	-	1923		
12				ROPP				None	None	-	1923		
13				GOPP/				None	None	-	1923		
14				ROPP				None	None	-	1924		
15				GOPP/				None	None	-	1924		
16				ROPP				None	None	-	1924		
17				GOPP/				None	None	-	1924		
18				RFRO				None	None	-	1926		
19				GFRQ/				None	None	-	1929		
20				RFRO				None	None	-	1930		
	310.8	21	9.08			31	91						
						des. oil/gas						380	
AREA TOTAL	2725.4		113.02										

* complete plant header system

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL	INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %	tons/day	Miles
<u>MARATHON COUNTY-WOOD COUNTY</u>												
14. Weston Weston Public Service Boiler 1	60			PCFR				Wet	E	99.6	150	5
Boiler 2	75			PCFR/ GFRO				Wet	E	99.2	185	
	135.0	61	7.99		61	-	39					
					des.p.coal/gas							
28. Wildwood Marshfield Electric & Water Dept.	41.5	37	0.24	*	100	-	-	*	*	*	60	15
<u>AREA TOTAL</u>												Appleton 85
	176.5		8.23									

* No FPC 67 filed

REFUSE COMBUSTION FOR POWER GENERATION

YEAR: 1971
STATE: WISCONSIN

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY REQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles
<u>Ashland County</u>													
2. Bay Front Lake Superior District Power Company	82.2	49	4.83	*	59	-	41	*	*	*	1917	205	<5
					des s. coal/gas								
AREA TOTAL	82.2		4.83										Duluth 60
<u>Grant County-Richland County</u>													
12. Nelson Dewey Wisconsin Power and Light													
Boiler 1	119.4			CYCL	100	-	-	Wet	None	-	1960	280	10
2	116.6			CYCL	100	-	-	Wet	None	-	1962	270	
	227.2	65	12.48		100	-	-						
					des p. coal								
16. Stoneman Dairyland Power Corp.													
Boiler 1	17.3				100	-	-		C			30	10
2	34.5				100	-	-		C			65	
	51.8	45	2.44		100	-	-						
					des. p. coal								

*No. FPC-67 filed.

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REFUSE COMBUSTION FOR POWER GENERATION

YEAR:1971
STATE:Wisconsin

SMSA-COUNTY/PLANT	RATED CAPACITY	LOAD FACTOR	ENERGY RQMT.	TYPE OF FIRING	CURRENT FUEL DISTRIBUTION BY BTU %			BOTTOM ASH HANDLING	AIR POLLUTION CONTROL		INITIAL YEAR OF OPERATION	REFUSE COMBUSTION "CAPACITY"	TYPICAL TRANS. DISTANCE
	MW	%	10 ¹² BTU yr		COAL	OIL	GAS		TYPE	EFF. %		tons/day	miles

Grant County - Richland County cont'd

29. Richland Center Richland Center Municipal Utility	14.3	18	0.24	*	100 des s. coal	-	-	*	*	*		10	<5
AREA TOTAL	293.3		15.15										LaCrosse 6

* No FPC-67 filed

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DATA FOR 1975

Note: Calculations of energy requirements in the 1975 tables are based on 1971 average load factors and heat rates.

SUMMARY OF RESULTS
REFUSE COMBUSTION FOR POWER GENERATION
ALL FOSSIL FUEL PLANTS 1975

	RATED CAPACITY MW	(b) ENERGY RQMT. 10^{12} BTU yr	AREA POP. Millions	(a) REFUSE GENERATION 10^6 tons yr	10^{12} BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)
ALABAMA	9560.3	458.2	1.82	1.29	11.66	2.5
CALIFORNIA	22509.6	919.6	16.82	11.97	107.75	11.7
CONNECTICUT	3881.3	210.7	2.63	1.87	16.89	8.0
DELAWARE (Wilmington)	827.5	53.5	0.55	0.39	3.53	6.6
FLORIDA	17134.65	738.1	6.09	4.32	38.91	5.3
GEORGIA	10068.0	516.8	2.37	1.66	15.01	2.9
ILLINOIS	16428.3	887.8	9.43	6.68	60.12	6.8
INDIANA	12239.7	630.6	3.76	2.64	23.78	3.8
KANSAS (Kansas City)	2395.8	91.3	1.38	0.98	8.84	9.7
KENTUCKY	11653.2	581.3	1.48	1.03	9.35	1.6
MAINE (Portland)	213.6	14.5	0.21	0.14	1.34	9.2
MARYLAND	7216.3	481.0	5.68	4.04	36.42	7.6
MASSACHUSETTS	7157.7	385.2	6.29	4.47	40.29	10.5
MICHIGAN	13372.0	757.3	6.89	4.87	43.90	5.8
MINNESOTA (Mpls.-St. Paul)	2048.8	106.8	1.99	1.42	12.80	12.0
MISSOURI	11873.7	547.7	4.62	3.29	29.61	5.4
NEBRASKA (Omaha)	794.2	39.2	0.58	0.41	3.70	9.4
NEW HAMPSHIRE (Manchester)	638.0	36.3	0.40	0.28	2.57	7.1
NEW JERSEY	6297.8	319.1	4.84	3.46	31.15	9.8
NEW YORK	19434.2	921.4	17.33	12.34	111.08	12.1
NORTH CAROLINA	11462.0	703.0	1.69	1.16	10.47	1.5
OHIO	28364.4	1399.9	9.89	6.95	62.58	4.5
PENNSYLVANIA	22681.3	1152.9	11.11	7.88	70.97	6.2
RHODE ISLAND (Providence- Pawtucket, Warwick)	145.9	10.6	0.82	0.58	5.27	49.5
TENNESSEE	10043.7	459.4	2.22	1.57	14.15	3.1
VIRGINIA	5019.3	261.8	1.85	1.31	11.80	4.5
WEST VIRGINIA	10583.3	599.3	0.54	0.36	3.29	0.5
WISCONSIN	5955.6	272.8	3.47	2.45	22.08	8.1
TOTALS	267604.35	13557.3	126.75	89.92	809.30	6.0

(also included in
Mo. total)

SUMMARY OF RESULTS
REFUSE COMBUSTION FOR POWER GENERATION
COAL-BURNING PLANTS ONLY: 1975

	RATED CAPACITY	(b) ENERGY REQMT. 10^{12} BTU yr	AREA POP. Millions	(a) REFUSE GENERATION 10^6 tons yr	10^{12} BTU yr	POTENTIAL ENERGY SUPPLY FROM REFUSE (a/b%)
ALABAMA	9560.3	458.2	1.82	1.29	11.66	2.5
CALIFORNIA	-	-	16.82	11.97	107.75	-
CONNECTICUT	3002.0	164.5	2.63	1.87	16.89	10.3
DELAWARE (Wilmington)	827.5	53.5	0.55	0.39	3.53	6.6
FLORIDA	5449.7	187.0	6.09	4.32	38.91	20.8
GEORGIA	9662.0	497.4	2.37	1.66	15.01	3.0
ILLINOIS	16228.3	877.0	9.43	6.68	60.12	6.9
INDIANA	12239.7	630.6	3.76	2.64	23.78	3.8
KANSAS (Kansas City)	2262.8	89.3	1.38	0.98	8.84	9.9
KENTUCKY	11653.2	581.3	1.48	1.03	9.35	1.6
MAINE (Portland)	-	-	0.21	0.14	1.34	-
MARYLAND	5541.3	369.4	5.68	4.04	36.42	9.9
MASSACHUSETTS	3533.3	188.2	6.29	4.47	40.29	21.4
MICHIGAN	11875.5	676.0	6.89	4.87	43.90	6.5
MINNESOTA (Mpls.-St. Paul)	2018.8	106.1	1.99	1.42	12.80	12.1
MISSOURI	11366.5	532.6	4.62	3.29	29.61	5.6
NEBRASKA (Omaha)	774.2	38.9	0.58	0.41	3.70	9.5
NEW HAMPSHIRE (Manchester)	638.0	36.3	0.40	0.28	2.57	7.1
NEW JERSEY	5194.9	263.8	4.84	3.46	31.15	11.8
NEW YORK	10134.5	503.9	17.33	12.34	111.08	22.0
NORTH CAROLINA	11462.0	703.0	1.69	1.16	10.47	1.5
OHIO	28145.1	1263.6	9.89	6.95	62.58	5.0
PENNSYLVANIA	21555.9	1093.7	11.11	7.88	70.97	6.5
RHODE ISLAND (Providence- Pawtucket, Warwick)	145.9	10.6	0.82	0.58	5.27	49.5
TENNESSEE	10043.7	459.4	2.22	1.57	14.15	3.1
VIRGINIA	4174.3	217.7	1.85	1.31	11.80	5.4
WEST VIRGINIA	10583.3	599.3	0.54	0.36	3.29	0.5
WISCONSIN	5609.8	262.6	3.47	2.45	22.08	8.4
TOTALS:	211419.7	10775.6	125.37	88.93	800.45	7.4

(also included in
Mo. total)

PROBABLE NEW PLANTS - 1972 TO 1975
(Excluding Nuclear)

	<u>Generating Cap.</u> <u>MW</u>	<u>Fuel Type</u>	<u>Year</u>
ALABAMA			
6. Gaston 5 (Alabama Power Co.)	910	p. coal	1974
11. Gorgas 10 (Alabama Power Co.)	<u>788.8</u>	<u>p. coal</u>	1972
TOTAL	1698.8	p. coal	
CALIFORNIA			
15. Scattergood 3 (L.A. Dept. of Water & Power)	309	gas	1974
22. Huntington Beach 6 (So. Cal. Edison)	750	oil/gas	--
22. Huntington Beach 7 (So. Cal. Edison)	790	oil/gas	--
16. Encina 4 (San Diego Gas & Electric)	287	oil/gas	1973
16. Encina 5 (San Diego Gas & Electric)	297	oil/gas	1975
26. Ormond Beach 2 (So. Cal. Edison)	<u>750</u>	<u>oil/gas</u>	1973
TOTAL	3183	oil & gas	
CONNECTICUT			
4. Middleton 4 (Hartford Electric Light Co.)	400	oil	1973
9. Cokeworks 1 (United Illuminating Co.)	<u>445</u>	<u>oil</u>	1975
TOTAL	845	oil	
FLORIDA			
43. Port Manatee 1 (Florida Power & Light)	850	oil	1975
14. Sanford 4 (Florida Power & Light)	383	oil	1972
14. Sanford 5 (Florida Power & Light)	420	oil	1973
30. Anclota 1 (Florida Power Corp.)	510	oil	1974
30. Anclota 2 (Florida Power Corp.)	510	oil	1975
32. Ft. Pierce-King 8 (Ft. Pierce Munic.)	58	oil/gas	1974
31. Municipal 4 (Vero Beach Municipal)	62	oil/gas	1975
25. Northside 2 (Jacksonville Municipal)	297	oil	1972
33. Indian River 3 (Orlando Util. Comm.)	345	oil/gas	1973
34. Big Bend 2 (Tampa Electric)	425	coal	1973
34. Big Bend 3 (Tampa Electric)	446	coal	1975
17. Crist 7 (Gulf Power Company)	<u>505</u>	<u>coal/oil</u>	1973
TOTAL	1376	coal plants	
	<u>3435</u>	oil & gas	
	4811		

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	<u>Generating Cap.</u>	<u>Fuel Type</u>	<u>Year</u>
GEORGIA			
9. Port Wentworth 4 (Savannah Electric & Power Company)	120	oil/gas	1972
10. Bowen 2 (Georgia Power Company)	806	coal	1972
10. Bowen 3 (Georgia Power Company)	880	coal	1974
10. Bowen 4 (Georgia Power Company)	880	coal	1975
11. Yates 6 (Georgia Power Company)	350	coal	1974
11. Yates 7 (Georgia Power Company)	350	coal	1974
13. Effingham (Savannah Electric & Power Company)	175	oil	1975
TOTAL	3266	coal plants	
	295	oil & gas	
	<u>3561</u>		
ILLINOIS			
6. Meredosia (Central Ill. Public Serv.)	200	oil	1975
11. Powerton 5 (Commonwealth Edison)	840	coal	1972
11. Powerton 6 (Commonwealth Edison)	840	coal	1975
29. Baldwin 2 (Illinois Power Company)	600	coal	1973
29. Baldwin 3 (Illinois Power Company)	600	coal	1975
18. Dallman 2 (Springfield Water, Light & Power Dept.)	80	coal	1972
1. Edwards 3 (Central Illinois P.C.)	350	coal	1972
3. Coffeen 2 (Central Illinois P.S.C.)	600	p. coal	1972
TOTAL	3910	coal plants	
	200	oil	
	<u>4110</u>		
INDIANA			
19. Lawton Park (Bd. of Public Works, Fort Wayne)	20	coal	--
9. Stout 7 (Indianapolis Power & Light)	450	coal	1973
20. Kankakee 14 (No. Ind. Public Service)	520	coal	1975
13. Michigan City 12, No. 5 (No. Ind. Public Service)	520	coal	1973
21. Gibson 1 (Public Service of Indiana)	650	coal	1975
14. Cayuga 2 (Public Service of Indiana)	500	p. coal	1973
22. Culley 3 (So. Ind. Gas & Electric)	250	coal	1973
10. Whietwater Valley (Richmond Municipal Lighting & Power)	60	coal	1973
TOTAL	2970	coal plants	

	<u>Generating Cap.</u>	<u>Fuel Type</u>	<u>Year</u>
KENTUCKY			
11. Coleman 3 (Big River Rural Elec. Coop)	170	p. coal	1972
13. Ghent 1 (Ky. Utility Company)	511	coal	1973
14. Millcreek 1 (Louisville Gas & Elec.)	355	coal	1972
14. Millcreek 2 (Louisville Gas & Elec.)	330	coal	1974
15. Elmer Smith 2 (Owensboro Municipal)	265	coal	1973
16. Station 2 No.1 (Henderson)	185	coal	1973
No.2 (Henderson)	<u>185</u>	<u>coal</u>	1973
TOTAL	2001	coal plants	
MARYLAND			
4. Wagner 4 (Baltimore Gas & Elec. Co.)	415	oil	1972
13. Chalk Point 3 (Potomac Elec. Power)	630	oil	1974
13. Chalk Point 4 (Potomac Elec. Power)	<u>630</u>	<u>oil</u>	1975
TOTAL	1675	oil	
MASSACHUSETTS			
12. Salem Harbor 4 (New Eng. Power Co.)	437	oil	1972
2. Mystic 7 (Boston Edison)	600	oil	1975
5. Canal 2 (Canal Electric Company)	560	oil	1975
11. Brayton Point 4 (New Eng. Elec. Power Company)	465	oil	1975
13. Cleary 2 (Taunton Municipal)	<u>90</u>	<u>oil</u>	1973
TOTAL	2152	oil	
MICHIGAN			
2. Karn 3 (Consumer Power Company)	660	oil	1974
2. Karn 4 (Consumer Power Company)	660	oil	1975
18. Monroe 2 (Detroit Edison)	800	coal	1973
18. Monroe 3 (Detroit Edison)	800	coal	1973
18. Monroe 4 (Detroit Edison)	800	coal	1974
21. Erickson 1 (Lansing Bd. of Water & Light)	160	coal	1972
14. Presque Isle 5 (Upper Peninsula Generating Co.)	85	coal	1974
14. Presque Isle 6 (Upper Peninsula Generating Co.)	<u>85</u>	<u>coal</u>	1974
TOTAL	2730	coal plants	
	<u>1320</u>	oil	
	4050		

	<u>Generating Cap.</u>	<u>Fuel Type</u>	<u>Year</u>
MISSOURI			
15. Labadie 3 (Union Electric Company)	580	coal	1972
15. Labadie 4 (Union Electric Company)	600	p. coal	1973
10. Rush Island 1 (Union Electric Co.)	600	coal	1975
16. New Madrid (Assoc. Elec. Coop)	<u>600</u>	<u>coal</u>	1972
TOTAL	2380	coal plants	

NEW JERSEY

16. Linden 4 (Public Service Elec. & Gas Company)	93.5	oil	1972
1. England 3 (Atlantic City Elec.)	160	oil	1974
13. Gilbert Street 4, 5, 6 (Gen. Public Util.)	<u>330</u>	<u>oil/gas</u>	1974
TOTAL	583.5	oil & gas	

NEW YORK

14. Northport 3 (Long Island Lighting)	387	oil	1972
24. Bowline 1 (Orange & Rockland Util.)	621	oil/gas	1972
24. Bowline 2 (Orange & Rockland Util.)	600	oil	1974
32. Roseton 1 (Central Hudson Gas & Elec. Corp.)	600	oil	1972
32. Roseton 2 (Central Hudson Gas & Elec. Corp.)	600	oil	1973
5. Astoria 6 (Con Edison)	800	oil/gas	1974
23. Oswego 5 (Niag. Mohawk)	<u>850</u>	<u>oil</u>	1974
TOTAL	4458	oil & gas	

NORTH CAROLINA

5. Sutton 3 (Carolina Power & Light)	420	p. coal/oil	1972
9. Cliff side 5 (Duke Power Company)	570	p. coal	1972
4. Roxboro 3 (Carolina Power & Light)	720	coal	1973
12. Belews Creek 1 (Duke Power Company)	1144	coal	1974
12. Belews Creek 2 (Duke Power Company)	<u>1144</u>	<u>coal</u>	1975
TOTAL	3998	coal plants	

	<u>Generating Cap.</u>	<u>Fuel Type</u>	<u>Year</u>
OHIO			
5. Eastlake 5 (Cleveland Elec. Illum. Co.)	680	p. coal	1972
24. Conesville 4 (Columbus & So. Ohio)	800	coal	1973
26. Gen. Gavin 1 (Ohio Power Company)	1300	coal	1974
26. Gen. Gavin 2 (Ohio Power Company)	1300	coal	1975
45. Painesville (Painesville Municipal)	25	oil/coal	1974
27. Shelby 6 (Shelby Municipal)	12.5	coal	1973
28. Miami Fort 7 (Cincinnati Gas & Elec. Company)	550	coal	1975
25. Stuart 3 (Columbus & So. Ohio Elec. Company)	610	p. coal	1972
25. Stuart 4 (Columbus & So. Ohio Elec. Company)	610	p. coal	1974
Stuart 5 (Dayton Power & Light)	<u>580</u>	<u>coal</u>	1974
TOTAL	6467.5	coal plants	

PENNSYLVANIA

14. Martins Creek 3 (Penn. Power & Light)	800	oil	1975
35. Montour 1 (Penn. Power & Light)	790	coal	1972
35. Montour 2 (Penn. Power & Light)	750	coal	1973
23. Eddystone 3 (Philadelphia Elec. Co.)	400	coal	1974
23. Eddystone 4 (Philadelphia Elec. Co.)	400	coal	1975
29. Mansfield 1 (Ohio Edison)	<u>880</u>	<u>coal</u>	1975
TOTAL	3220	coal plants	
	<u>800</u>	oil	
	4020		

TENNESSEE

7. Cumberland 1 (TVA)	1300	coal	1972
7. Cumberland 2 (TVA)	<u>1300</u>	<u>coal</u>	1973
TOTAL	2600	coal plants	

VIRGINIA

5. Yorktown 3 (Va. Elec. & Power Co.)	<u>845</u>	<u>oil</u>	1974
TOTAL	845	oil	

	<u>Generating Cap.</u>	<u>Fuel Type</u>	<u>Year</u>
WEST VIRGINIA			
7. Amos 2 (Ohio Power Company)	816.3	coal	1972
7. Amos 3 (Ohio Power Company)	1632.6	coal	1973
9. Harrison 1 (Monongalia Power Co.)	684	coal	1972
9. Harrison 2 (Monongalia Power Co.)	650	coal	1973
9. Harrison 3 (Monongalia Power Co.)	650	coal	1975
10. Mt. Storm 3 (Va. Electric & Power Co.)	<u>555</u>	<u>coal</u>	1973
TOTAL	4987.9	coal plants	

WISCONSIN

17. Columbia 1 (Wisc. Power & Light)	<u>527</u>	coal	1975
TOTAL	527	coal plants	

APPENDIX I

ASPECT OF WASTE COMBUSTION OUTSIDE THE SCOPE OF THIS STUDY

The following factors will have the most significant impact on a utility's decision on whether to burn waste as a supplementary fuel. While the data presented in this report are intended to assist in selecting potentially promising situations, a detailed evaluation of these factors is outside the scope of this study:

1. Capital Investments

Cost of modifying the boiler itself

Cost of ancillary equipment for receiving refuse, handling, shredding, metal removal, etc.

Cost of additional air pollution control equipment

2. Operating Costs

Cost of waste gathering and transportation

Cost of shredding and other waste processing operations

Cost of transfer of fuel to firing point

Cost of disposal of noncombustible material

Cost of incremental ash disposal

3. Feasibility of Boiler Modification

Apart from the cost itself, there may be physical problems associated with the modification of any particular boiler (age of equipment, for example).

4. Technical Reliability

All utilities are concerned with keeping their power generating equipment in operating condition. Corrosion of boiler tubes, for example, can

be caused by burning any fuel and can require that equipment be taken out of service so that repairs can be made. All utilities are concerned about corrosion. Some utilities are apprehensive to the extent that they do not want to expose their boiler to the possible additional risk attributed to burning solid waste. Other utilities are not apprehensive about the corrosion potential of burning solid waste.

5. Load Factor of Boiler

Modifying a peakload unit would mean that fuel storage and firing equipment would have to be large, capable of disposing of the daily solid waste load in a short time. This would involve a higher capital cost for fuel storage and firing than the modification of a baseload boiler, in which the solid waste could be burned over a longer period of time.

6. Introduction of Nuclear Plants

The introduction of nuclear generating capacity in a system will cause the fossil fuel plants to be cut back somewhat; i.e., their load factor will fall. This then has the same effect as described in item 5 above.

7. Fuel Rider and Electricity Rate Structure

The utility company may have to pass any fuel savings through to the customer if solid waste were to be a significantly cheaper fuel. There would therefore be no direct economic incentive to pursue the concept of using waste as supplementary fuel.

8. Marketability of Fly Ash After Introduction of Solid Waste Fuel

9. Ash Disposal Site

While benefits will be gained from the reduction in landfill disposal requirements for the raw garbage, there must be available means to dispose of the ash generated from the waste-derived fuel.

10. Public Relations

Because a utility is concerned with public approval of rate increases and new plant sites and is aware of its public service role, it may consider solid waste as a fuel in order to achieve a favorable image with the public as a good corporate citizen.

12. Air Pollution

Air emission tests have been conducted at only one location: the Union Electric Company's Meramec Plant, where solid waste is burned with coal as part of EPA's energy recovery demonstration grant to the City of St. Louis.

Based on those tests, conducted in late 1973, it appears that:

1. Particulate emissions increase slightly when solid waste is fired with coal, probably because of decreases in the efficiency of the electrostatic precipitation (ESP). There was no discernable change in particulate particle size or resistivity. Decrease in ESP performance may result from increases in gas velocity and changes in ESP electrical conditions (spark rate).
2. Gaseous emissions (sulfur oxides, nitrogen oxides, hydrogen chloride, and mercury vapor) are not significantly affected by combined firing of waste and coal.
3. Uncontrolled particulate emissions per cubic foot of exhaust gas are not changed by combined firing; however, total uncontrolled particulate emission do increase because of increases in the gas flowrate.
4. Additional air pollution testing is required to complete the characterization of particulate emissions resulting from combined firing.

Additional tests were conducted late in 1974. The test results will be available in the Spring, 1975. If preliminary indications of increased particulate emissions are confirmed, an increase in the capacity of the pollution control devices will be required.

APPENDIX II

DETAILS OF HOW THE WORK WAS DONE

The work performed for this study may be divided into a number of discrete parts:

A. Plant Locations and Capacities

Information for plants existing in 1971 was obtained from National Coal Association and Federal Power Commission (FPC) publications.^{1,2} For projected plants, two surveys were consulted.^{3,4}

For data on individual boilers, FPC form 67 or the annual summaries derived from the form were used.⁵ The 1969 survey as reported in the original form 67's, filed by the utility companies with the FPC in Washington, D.C., was used most frequently.

In some cases, the individual boiler capacities from form 67 did not add to give the total plant capacity as quoted in the other references. Where the discrepancy represented less than 5 percent of the plant capacity, the boiler figures were prorated to the total plant figure; these changes are noted in the detailed data tables.

B. Energy Requirements

Load factors, net electricity generation (KWH), and plant heat rates (Btu per KWH) for 1971 were obtained from FPC data.² Data is given on a plant basis and no breakdown was obtained for individual boilers. In some cases, plant heat rates were not reported; statewide averages were used in such cases. In some plants, new units were started up in 1971, giving rise to unrealistically low load factors for that year. Again, statewide average factors were used to compute a more representative plant energy requirement

with which to relate refuse combustion energy. Use of State averages is noted in the detailed data tables.

For the 1975 calculations of energy requirements, the 1971 average load factors and heat rates were used for each State in the absence of other information.

C. Fuel Distribution

The distribution of fuels within plants for 1971, by Btu supplied, was obtained on a percentage basis from National Coal Association data.¹ The same source was used to establish the plant design fuels.

D. Equipment Details

Boiler-by-boiler data on type of firing, bottom and fly ash handling equipment and operability was obtained from the relevant FPC form 67. Figures for the efficiency of air pollution control equipment refer to performance when burning coal during average operating conditions unless marked (t), for test conditions, or (d), for design calculations. "NR" indicates data was not reported in FPC 67 nor supplied by the utilities themselves.

A key to abbreviations is given in the section "Presentation of Results" and a number of terms are defined in the glossary, Appendix III.

E. Data Confirmation by Utility Companies

Sections A, B, C, and D above explain how most of the boiler data was gathered. When data had been assembled in a consistent format, all the utility companies were contacted for verification. According to the Edison Electric Institute who assisted in the confirmation, no changes have been requested by the companies to date. Any changes subsequently notified will be published as an addendum.

F. Waste Generation Areas

For the States under study, all the power plants were marked on maps showing SMSA's and counties. Each State was then split into "waste generation areas" according to the distribution of plants, with the emphasis on matching plants to the most populated areas, as represented by SMSA's. In some cases, counties adjacent to SMSA's were included in the "areas"; in other cases, plants outside SMSA's were matched to the county in which they were situated.

The boundaries of the "waste generation areas," within which solid waste is assumed most likely to be transported to the power plants, were thus drawn without formal investigation to define possible transportation methods and routes to those plants, nor was consideration given in this study to the optimum economic distance from the plants.

The maps presented with the study results indicate plant locations and the "waste generation areas" for which population data was developed.

G. Population Estimates

The basic data for most of the population figures was obtained from a report by EPA and HUD, Population and Economic Activity in the U.S. and Standard Metropolitan Statistical Areas,⁶ were those for 1970 (actual) and as predicted for 1975 based on a fertility rate C. It was decided to amend the predictions to the lower rate E (12 percent lower than C in the year 2000) by multiplying the prediction figures for 1975 by 0.997, a number obtained by interpolating data in the above report comparing growth rates based on C and E.

Having assembled population figures for each SMSA for 1970 and 1975, the figures for 1971 were obtained by linear interpolation between 1970 and 1975.

Since a number of the waste generation calculations require inclusion of counties outside the SMSA's, county population figures from the 1970 Census were obtained.⁷ Estimates for 1971 and 1975 were made by using the growth rates for adjacent SMSA's which were deduced from the figures already calculated.

H. Waste Generation and Energy Content

The following figures were used to calculate the quantity of raw refuse generated in each year and the corresponding potential energy obtainable by combustion:⁸

<u>Waste Generation (lb/person/day)</u>	<u>1971</u>	<u>1975</u>
SMSA's/urbanized areas	3.60	3.91 ✓
Counties (assumed same as national average)	3.25	3.53 ✓
Solid waste heating value, Btu/lb	4,500	4,500

I. Typical Transportation Distances

For each "waste generation area," the center of population was estimated on the maps. This point was deemed the center of waste generation. Distances from there to each plant in the area were determined and are recorded as typical transportation distances in the plant data tabulations. Where more than one plant was located in an area, a weighted average of the distances was used as the typical transportation distance for the area, and these distances were recorded in the State summary tables. The averages were weighted according to the plant energy requirements, on the assumption that solid waste would be distributed to the plants according to their fuel demand. In practice this may not take place since all waste may be sent to one particular plant for processing. The distances reported in this study are therefore intended only as a general guide.

For many plants, distances from major urban centers outside the immediate area are also quoted for informational purposes since it may prove desirable to arrange rail or barge transportation from the most populated areas to certain distant plants which are particularly suitable for utilizing solid waste combustion.

J. Boiler Capacity for Solid Waste Combustion

It is probable that at least 10 percent of the fuel used by any boiler could in principal be replaced by solid waste, provided the necessary ash-handling equipment were available and operable. A column is included in the data tables which presents the energy requirement of each boiler in terms of the equivalent tonnage of waste, assuming (1) 10 percent replacement of fuel by solid waste and (2) the average plant heat rate and load factor apply to each boiler in the plant.

These figures were calculated using the nomograph described earlier in this report. It was decided to perform the calculations for all boilers, with or without the necessary ash-handling equipment, to indicate the potential waste-burning capacity of those boilers that might be converted to handle refuse if economic conditions were favorable. The quantities calculated were rounded to the nearest 5 tons per day.

APPENDIX III

DEVELOPMENT OF THE NOMOGRAPH

The nomograph is based on the following steps:

- A. Define MW as unit (plant or boiler) capacity, in megawatts
 PC as the unit load factor, in percent
 H as the unit heat rate, in Btu/KWH
- B. The unit daily energy requirement is $(1,000 \cdot MW \cdot \frac{PC}{100} \cdot H \cdot 24)$ Btu/day
- C. Assume the refuse-burning capability of the unit is 10 percent of the total fuel being fired. The energy to be supplied by refuse is thus $(24 \cdot MW \cdot PC \cdot H)$ Btu/day.
- D. Assuming a heating value for refuse of 4,500 Btu/lb, the energy is equivalent to

$$\frac{24 \cdot MW \cdot PC \cdot H}{4,500 \cdot 2,000} \text{ tons of refuse per day}$$
- E. The above quantity is essentially a "year-round" daily figure, provided the average load factor for a long period of time is used. The equivalent quantity of refuse (R) to be transported to a plant or boiler on a "5 working days per week" basis is therefore found:

$$R = \frac{24 \cdot MW \cdot PC \cdot H}{4,500 \cdot 2,000} \cdot \frac{7}{5} = (3.733 \times 10^{-6}) MW \cdot PC \cdot H$$

Tons of refuse/working day

APPENDIX IV

GLOSSARY

Air Classifier -- a device which uses a jet of air to separate light particles, such as shredded paper and plastics, from heavy particles, such as pieces of metal and glass. Shredded waste is dropped vertically down into a chute, as a jet of air is blown up from the bottom of the chute. Heavy materials drop down while the air catches the light materials and carries them out of the top of the chute.

Baffle -- a simple air pollution control device which is used to change direction of a dust-laden gas, causing the coarser particles to impinge on a wall and drop out of suspension. Primarily used to reduce dust loading ahead of more efficient dust collection devices.

Baghouse (fabric collector) -- a simple air pollution control device utilizing the principle of filtration. Dust-laden gas is passed through fabric bags or envelopes which remove a large percentage of the dust.

Baseload boiler -- a boiler that operates all the time (except for downtime for maintenance), including evenings and winter months. Baseload boilers are generally the most efficient boilers and are less costly to operate than peakload boilers. (See Peakload boilers)

Boiler -- equipment in which fuel is burned and the heat released by combustion is used to raise steam. The steam is subsequently used to power turbines driving electrical generators. A power plant may have one or several boilers: each boiler may be used to raise steam for specific generating equipment or several boilers may be tied into a common steam header.

Bottom ash -- ash that drops to the bottom of a boiler and consists of heavy noncombustible particles.

"Wet systems" operate where the firebox temperature is high enough to cause particles to fuse together into a liquid slag which is tapped from the bottom of the boiler and, after water quenching and cooling, is subsequently removed from the plant as lumps of clinker. This system is most frequently associated with cyclone-fired boilers.

"Dry systems" operate by dropping the hot ash particles directly into bins for water quenching and removal. The particles do not reach high enough temperatures in the boiler to fuse together.

Btu (British Thermal Unit) -- a standard unit of energy, equivalent to the heat required to raise one pound of water by one degree Fahrenheit at sea level. For example, the heat released by the combustion of coal is its heating (or calorific) value and is expressed in Btu per pound of coal.

Cyclone -- an air pollution control device, consisting of a structure without moving parts in which the velocity of an inlet gas stream is transformed into a confined vortex from which centrifugal forces tend to drive the suspended particles to the wall of the cyclone body. The particles drop out of the bottom of the cyclone and the gas leaves the top.

Cyclone-fired boiler -- a boiler in which combustion takes place in an adjoining cylinder; only heated gases enter the boiler firebox itself. The combustion of fuel is accomplished by inducing a swirling motion to the fuel and air, hence the name "cyclone."

Electrostatic precipitator -- an air pollution control device which removes particles, solid or liquid, from gaseous streams by the use of an electric potential between electrodes. Under the influence of the electric field, the particles in a gas become charged and move towards the electrodes, where they are deposited.

Federal Power Commission -- a government agency with the authority to regulate wholesale electric rates in interstate commerce, to regulate certain aspects of finance and accounting with respect to utility companies, and to encourage interconnection and coordination of electricity supplies.

FPC 67 -- a form issued annually by the Federal Power Commission to all utility companies operating plants with capacities exceeding 25 MW and systems exceeding 100 MW. When completed by the utility company, the form gives a comprehensive listing of equipment characteristics, air pollution control capabilities, cooling facilities, water sources and disposition, etc. The 1969 copy of FPC 67 contains all this information filled in by the utility company but in subsequent years, only changes to the parameters are noted. The "full" form is to be completed every 5 years.

Fluidized bed -- a bed of solid particles in which the particles are suspended in an upflowing stream of gas (or liquid). The particles are kept in a constant state of motion.

Fly ash -- ash from the fuel which leaves the boiler in the form of fine particles which are suspended in the exit combustion gases (compare with "bottom ash"). Fly ash is recovered by devices such as electrostatic precipitators.

Front-fired boiler -- in which fuel enters from a row of firing ports along the front of the boiler. Such boilers commonly have two or three chambers.

Generating capacity -- the maximum amount of electrical energy that can be generated by the steam raised in the corresponding boiler or plant.
(See also Load factor)

Hammermill -- a machine used to shred solid waste in its raw, heterogeneous state, producing a more homogeneous material of small particle size. It consists of a number of large hammers mounted on a horizontal shaft which spin round and grind the solid waste against an iron grating until the material is shredded into particles small enough to drop through the openings in the grating.

Load factor -- the ratio of the average load (amount of power) supplied during a designated period to the maximum amount of electrical power that could have been supplied by the plant.

Megawatt (MW) -- one thousand kilowatts, a measure of the rate of energy generation or transfer.

Nomograph -- a chart which may be used to perform calculations by lining up the desired values of variables on a number of scales. Such charts are often used to perform a large number of calculations of the same type and can substantially reduce the working time required.

Opposed-fired boiler -- similar to a front fired boiler except fuel enters from ports in the back as well as the front.

Peakload boiler -- a boiler that operates only when the demand for electric power is high, such as during the day or during the summer. Peak-load boilers are generally more costly to operate than baseload boilers. (See Baseload boilers)

Plant heat rate -- a measure of generating station thermal efficiency, usually expressed as the total Btu content of fuel burned or heat released from a nuclear reactor for the generation of 1 kilowatt hour.

Power plant -- a plant generating electricity for export to consumers, consisting of one or more boilers and one or more sets of generating equipment.

Pulverized coal -- coal that has been ground to a fine powder to ensure efficient combustion when "sprayed" into the combustion air and ignited. "Pulverized coal" may be compared with "crushed coal," which is a term usually used to signify coal that has been broken down into small pieces, around 1/4-inch in diameter.

Stoker-fired boiler -- in which coal is introduced onto a moving grate near the bottom of the boiler. The coal is in the form of crushed coal or bulk coal and it burns until the pieces are small enough to drop through the grate into the ash disposal system.

Suspension-fired boiler -- in which fuel enters and burns midway between the top and the bottom of the boiler and the heavy noncombustibles fall down into the bottom. Fuel is usually pulverized coal, oil, or gas. Some examples of a suspension-fired boiler are cyclone-fired, front fired, opposed-fired, and tangentially-fired boilers.

Tangentially-fired boiler -- in which fuel enters from each of the four corners of the boiler.

Wet collector -- an air pollution control device in which contact of the dust-laden gaseous stream with a liquid, specifically introduced for such contact, is used to remove dust particles.

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