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Interim Report on the Performance of 400-Megawatt and Larger Nuclear and Coal-Fired Generating Units

Performance Through 1976

Published November, 1979

U.S. Department of Energy
Economic Regulatory Administration
Division of Power Supply and Reliability

MASTER

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UPDATE REPORT ON THE PERFORMANCE OF 400 MEGAWATT
AND LARGER NUCLEAR AND COAL-FIRED GENERATING
UNITS — PERFORMANCE THROUGH 1976

I. INTRODUCTION

This report is an update of DOE/ERA-0007, "Interim Report on the Performance of 400 Megawatt and Larger Nuclear and Coal-Fired Generating Units - Performance Through 1975." It differs from DOE/ERA-0007 in two respects. First, the scope of data is larger - through 1976, with the addition of seven more nuclear units and sixteen more coal-fired units. Second, this report contains a brief discussion of anomalies noted in DOE/ERA-0007. Although EEI has published data for 600 MW and larger coal units for 1977 and although data for nuclear units for 1977 and 1978 are available from the Nuclear Regulatory Commission (NRC) Gray Book (NUREG-0020), this report includes data only through 1976. That is the most recent year for which EEI data is available for nuclear units and for coal units less than 600 MW(e).

Anomalies in the EEI data base noted in the previous report have been investigated during the past year by DOE and by NERC. The results of that investigation are summarized in this report. Errors in data reporting and data handling were found, one of which necessitated a change in the computation of availability factor and equivalent availability factor for this report (see Appendix A). The revised computational method, although inconsistent with the official EEI definition, is the same as is used by EEI in the annual report of the Equipment Availability Task Force. The revised computation method is believed to provide a more accurate result; however, its use precludes a meaningful comparison between the results in this and the previous report (DOE/ERA-0007).

Effective January 1, 1979, responsibility for the EEI data was transferred to the National Electric Reliability Council (NERC). NERC is developing additional computer software designed to scan "raw" outage data submitted by utilities for the types of errors found by DOE and NERC in their analyses of the historical EEI data. It is believed this verification process, before data is introduced into NERC's data files, will result in a more accurate data base in future years. Meanwhile, the validity of the EEI data on forced outages, planned outages, and deratings through 1978 remains suspect. Consequently, the availability factor, equivalent availability factor and to a lesser extent the forced outage rate statistics as reported herein also are suspect. Data related to capacity factor are not affected by the errors found; hence capacity factor statistics are believed to be accurate.

Despite the many deficiencies in the EEI data base, it is believed that publication of these plant performance statistics is useful if for no other reason than focus more attention on powerplant performance in general and on the need for accurate, complete, and timely reporting and analysis of plant performance.

II. SUMMARY

The generating units included in this analysis are those nuclear and coal-fired units with nameplate ratings above 400 MW(e) and having at least one full year of commercial operation. These units are listed in Table 1.

Table 1

Nuclear Units (47 total)

Arkansas No. 1	Kewaunee No. 1	Prairie Island No. 1
Duane Arnold	Maine Yankee	Prairie Island No. 2
Browns Ferry No. 1	Millstone No. 1	Quad Cities No. 1
Browns Ferry No. 2	Millstone No. 2	Quad Cities No. 2
Brunswick No. 2	Monticello	Rancho Seco No. 1
Calvert Cliffs No. 1	Nine Mile Point No. 1	Robinson No. 2
Conn. Yankee (Haddam)	Oconee No. 1	San Onofre No. 1
Cook No. 1.	Oconee No. 2	Surry No. 1
Cooper Nuclear Station	Oconee No. 3	Surry No. 2
Dresden No. 2	Oyster Creek No. 1	Three Mile Isl. No. 1
Dresden No. 3	Palisades Nuclear Plant	Turkey Point No. 3
Fitzpatrick	Peach Bottom No. 2	Turkey Point No. 4
Fort Calhoun No. 1	Peach Bottom No. 3	Vermont Yankee
Ginna Station No. 1	Pilgrim No. 1	Zion No. 1
Hatch No. 1	Point Beach No. 1	Zion No. 2
Indian Point No.2	Point Beach No. 2	

Coal Units (125 total)

Amos No. 1	Brown No. 3	Four Corners No. 4
Amos No. 2	Brunner Island No. 2	Four Corners No. 5
Amos No. 3	Brunner Island No. 3	Gannon No. 6
Avon Lake No. 9	Bull Run No. 1	Gaston No. 5
Bailly No. 8	Cardinal No. 1	Gavin No. 1
Baldwin No. 1	Cardinal No. 2	Gavin No. 2
Baldwin No. 2	Cayuga No. 1	Ghent No. 1
Baldwin No. 3	Cayuga No. 2	Gibson No. 2
Barry No. 4	Centralia No. 1	Gorgas No. 10
Barry No. 5	Centralia No. 2	Hammond No. 4
Beckjord No. 6	Chesterfield No. 6	Harlee Branch No. 3
Belews Creek No. 1	Cheswick No. 1	Harlee Branch No. 4
Belews Creek No. 2	Cliffside No. 5	Harrison No. 1
Big Bend No. 1	Coffeen No. 2	Harrison No. 2
Big Bend No. 2	Colbert No. 5	Harrison No. 3
Big Sandy No. 2	Columbia No. 1	Hatfield No. 1
Bowen No. 1	Conemaugh No. 1	Hatfield No. 2
Bowen No. 2	Conemaugh No. 2	Hatfield No. 3
Bowen No. 3	Conesville No. 4	Hawthorn No. 5
Bowen No. 4	Cumberland No. 1	Homer City No. 1
Breed No. 1	Cumberland No. 2	Homer City No. 2
Bridger No. 1	Eastlake No. 5	Hudson No. 2
Bridger No. 2	Fort Martin No. 1	Keystone No. 1
Bridger No. 3	Fort Martin No. 2	Keystone No. 2

(con't)

Coal Units (con't)

Kincaid No. 1	Monroe No. 3	Sioux No. 1
Kincaid No. 2	Monroe No. 4	Sioux No. 2
King No. 1	Montour No. 1	Sporn No. 5
Labadie No. 1	Montour No. 2	St. Clair No. 7
Labadie No. 2	Mount Storm No. 1	Stout No. 7
Labadie No. 3	Mount Storm No. 2	Stuart No. 1
Labadie No. 4	Mount Storm No. 3	Stuart No. 2
La Cygne No. 1	Muskingum No. 5	Stuart No. 3
Marshall No. 3	Neal No. 3	Stuart No. 4
Marshall No. 4	Paradise No. 1	Tanners Creek No. 4
Miami Fort No. 7	Paradise No. 2	Trenton Channel No. 9
Michigan City No. 12	Paradise No. 3	Watson No. 5
Mitchell No. 1	Petersburg No. 2	Widows Creek No. 7
Mitchell No. 2	Roxboro No. 1	Widows Creek No. 8
Mohave No. 1	Roxboro No. 2	Will County No. 4
Mohave No. 2	Roxboro No. 3	Yates No. 6
Monroe No. 1	Sammis No. 6	Yates No. 7
Monroe No. 2	Sammis No. 7	

These units may be characterized by the four indices most commonly utilized to evaluate the performance of powerplants; i.e., capacity factor, availability factor, equivalent availability, and forced outage rate. These indices tell much about the performance of powerplants, but no single index is a fully sufficient measure of a powerplant's overall performance. The capacity factor measures the power generated by the unit as a percentage of its maximum dependable capability to produce power. The availability factor establishes only the percentage of time the unit was capable of producing power. The equivalent availability adjusts the availability factor for partial outages or deratings of the

unit. The forced outage rate defines that percentage of time the unit was forced out of service due to equipment or operational malfunction. Collective review of these four indices is often taken as the measure of a unit's performance.

Unfortunately, anomalies exist in the availability factors, equivalent availabilities, and forced outage rates obtained from the Edison Electric Institute (EEI) for this analysis, as explained in Appendix A. The scope of these anomalies is not fully understood at this time so the results, especially individual unit availabilities, should be used with some caution. As explained in Appendix A, EEI reports the performance of powerplants on a calendar year basis and it was in this format that the data were received. Beginning with the commercial operating dates furnished by EEI, the data were analyzed to provide unit life years of service and cumulative life years of service as well as calendar year summaries. EEI associates the unit performance data with the unit's operating utility or in some cases the holding company of a group of operating utilities: e.g. American Electric Power, Southern Services, Northeast Utilities, etc. This association has been continued in the report. This is pointed out because in other data bases currently available (NRC, Atomic Industrial Forum, etc), a given unit might be listed under a different operating utility. Comparisons between data bases of individual units or utilities should therefore be adjusted to account for these differences.

The EEI data presented in this report have been distilled to provide information on the following basis in an easily referenced fashion:

- COAL AND NUCLEAR UNITS
- 400 MW NAMEPLATE AND LARGER
- HISTORICAL DATA THROUGH 1976
- FOUR INDUSTRY-RECOGNIZED PERFORMANCE INDICES
 - CAPACITY FACTOR (CF)
 - AVAILABILITY FACTOR (AF)
 - EQUIVALENT AVAILABILITY (EA)
 - FORCED OUTAGE RATE (FOR)
- FOUR TYPES OF GEOGRAPHICAL ANALYSIS
 - NATIONAL
 - INDIVIDUAL
 - INDIVIDUAL UTILITIES
 - INDIVIDUAL UTILITIES BY STATES
- RANKINGS OF STATES AND UTILITIES BY PERFORMANCE INDICES

III. THE DATA BASE

A. Source of Data

The primary source of the performance data used in this report was the EEI data base, obtained as explained in Appendix A. This data was merged with DOE unit characteristic data, taken from the FPC "383" data files. The resulting merged data base allowed analysis based upon various locations, fuel types, performance factors, age of units, and sizes.

B. Selection of Units

For the purposes of this analysis, the 47 nuclear units and 125 coal-fired units were selected on the basis of having nameplate ratings greater than 400 MW and having available at least one full calendar year of performance data. Nuclear units such as Dresden No. 1, which is less than 400 MW were excluded. Also omitted are units having both coal and oil firing capability but which were not burning coal as the primary fuel in 1976. Finally, oil units which have been converted to coal after 1976 are not included in this report.

C. Nameplate Rating

Unit nameplate capacity ratings rather than unit maximum dependable capacity (MDC) ratings were utilized to identify the size of the units. This was done because of the wide yearly variation in MDC ratings reported for many units. It should be noted, however, that significant discrepancies were found in the nameplate ratings of identical units

between the DOE (FPC) and EEI data bases. Examples of these discrepancies are shown in Table 2. The DOE (FPC) nameplate ratings were used to classify the size of each unit since these are taken directly from the nameplate ratings affixed to the units.

Table 2

<u>Unit</u>	<u>Nameplate Rating</u>	
	<u>DOE(FPC)</u>	<u>EEI</u>
Conn. Yankee (Haddam)	600 MW	616 MW
Three Mile Island No. 1	871 MW	837 MW
H. B. Robinson No. 2	769 MW	702 MW
Ginna	517 MW	496 MW
Peach Bottom No. 2 & 3	1152 MW	1098 MW
Turkey Point No. 3 & 4	760 MW	728 MW
Surry No. 1 & 2	848 MW	822 MW

D. Commercial Operating Date

The commercial operating dates were used to define unit vintage and age. Here again, inconsistencies were found between the DOE (FPC) and EEI data bases. Examples of these differences are shown in Table 3.

The EEI designated commercial operating dates were used since these dates define the beginning of the performance data supplied by EEI. As defined by EEI, the commercial operating date of a unit is that date the unit was "first paralleled for load."

Table 3

	<u>Commercial Operating Dates</u>	
	<u>DOE(FPC)</u>	<u>EEI</u>
Conn. Yankee (Haddam)	1/68	7/67
Colbert No. 5	10/62	11/65
Widows Creek No. 7	9/60	2/61
Ghent	12/73	4/74
Paradise No. 3	5/69	2/70

E. Performance Indices

Four industry recognized performance indices were used in the study. These indices are capacity factor (CF), availability factor (AF), equivalent availability factor (EAF), and forced outage rate (FOR). Each index is calculated, as shown in Figure 1, according to the definitions published in EEI Publication No. 77-64, "Report on Equipment Availability for the Ten-Year Period 1967-1976." Definitions of each of the terms used in these calculations are provided in Appendix B.

Figure 1

Powerplant Performance Indices

$$\begin{array}{lcl} \text{Capacity} & & \text{Total Gross Generation in MW-hr} \\ \text{Factor} & = & \frac{(\text{Period Hours}) \times (\text{Maximum Dependable Capacity})}{\text{Period Hours}} \\ \\ \text{Availability} & = & \frac{\text{Available Hours}}{\text{Period Hours}} \\ \text{Factor} & & \\ \\ \text{Equivalent} & = & \frac{(\text{Available Hours}) - (\text{Equivalent Forced and Scheduled Outage Hours})}{\text{Period Hours}} \\ \text{Availability} & & \\ \\ \text{Forced} & & \\ \text{Outage} & = & \frac{\text{Forced Outage Hours}}{(\text{Service Hours}) + (\text{Forced Outage Hours})} \\ \text{Rate} & & \end{array}$$

Each index measures a specific performance aspect for a generating unit; however no one index adequately describes the overall performance of a unit. The annual availability factor measures only the percentage of time during the year the unit was capable of producing power, including time when the unit was capable of producing power only at partial load and including time when the unit was not in service because more economical units were being utilized. The equivalent availability provides an adjustment of the availability factor by factoring in the

effect of partial deratings (losses in MW output capability) due to partial forced and partial scheduled outages. The equivalent availability is essentially "equivalent to" the fraction of the year during which the unit was available for operation at full capacity. Although the equivalent availability provides a measure of the time the unit is incapable of producing power, it does not distinguish between forced and scheduled outages, nor does it measure the actual megawatts generated. Downtime due to forced outages and actual megawatt generation is measured by the forced outage rate and capacity factor. To summarize, each performance index is limited to defining a specific aspect of powerplant performance. To evaluate the overall performance of a powerplant, a subjective collective review of all four indices is required.

IV. ANALYSIS METHODS

A. Data Aggregation

The 47 nuclear and 125 coal units analyzed in this study were selected on the basis of their primary fuel type (i.e., coal or nuclear), nameplate rating (i.e., 400 MW or larger), and minimum operating life of one full calendar year. The unit performance data were aggregated as a function of service life. The four performance factors (capacity factor, availability factor, equivalent availability, and forced outage rate) were averaged to provide the following service life histories:

- lifetime averages (i.e., the cumulative average of the lifetime performance of a unit as a function of life year)
- life year averages (i.e., the average of all units during their first, second, ..., tenth year of life)
- calendar year averages (i.e., the average of all unit data in 1967, 1968, ..., 1976).

Each of these three averages was then aggregated by operating utility and by site location and compiled as follows:

- by individual units (translated to a national average)
- by units in each state
- by units operated by each utility
- by units operated by each utility in a given state.

B. Lifetime Averages (Through 1976)

Lifetime averages were calculated by averaging the annual factors for all the years of data for a given unit, beginning with its first full calendar year of operation. The performance data for the first partial year of calendar operation (from startup to December 31) were not included in the analysis since they were believed to be heavily influenced by startup testing and inspection procedures and therefore would distort the picture. All lifetime averages were calculated through the year 1976.

In several cases, the EEI data did not cover all the years a unit was in operation. This occurred because membership in EEI and the submittal of data to EEI is voluntary, and some utilities dropped in and out of the data base. In some cases EEI may have rejected data because of inconsistencies and the utility may not have resolved these problems and resubmitted the data. In these cases, lifetime averages were calculated only up to the first year of missing data rather than over the unit lifetime. Thus the "lifetime" average for a unit in commercial operation since 1968, but missing 1971 data, would cover only 1968-1970. And a unit missing data from its first full year of commercial operation would not appear at all in the lifetime average tables in this report.

C. Life Year Averages

Life year averages were calculated by aligning the first, second, third, etc. years of service for each unit and then averaging all the unit data for each full calendar year of operation. Among the nuclear (coal) units in the sample, there were 47 (125) having data for the

first year of operation but only 2 (22) having data for the ninth year of operation.

D. Calendar Year Averages

The calendar year averages were obtained by averaging the individual unit data for each unit operating during a given calendar year, excluding partial first years of operation.

E. Regional Analysis

The merging of the DOE data base with the EEI data base allowed the aggregation of units by state and utility. The three types of averages explained above were then calculated for all units

- nationally
- within each state
- within each utility
- within each utility in a given state.

F. Rankings

The calendar year averages were then ordered to allow ranking of states and utilities by the four performance factors. This ranking is admittedly a crude measure (for example, many states contain only a single nuclear unit) and differences among states and utilities most often reflect random statistical variations. But it was hoped that some broad indications of actual, discrete, differences in procedure or design might become apparent from such a ranking and provide direction to productivity improvement studies.

V. DATA TABLES

A. National Data (See V-B.)

- B-1: National Average Performance Factor by Calendar Year
- B-2: National Average Performance Factor by Life Year

State Data (See V-C.)

- C-1: Lifetime Performance Factors
- C-2: Availability Factors for Calendar Years
- C-3: Capacity Factors for Calendar Years
- C-4: Equivalent Availability for Calendar Years
- C-5: Forced Outage Rates for Calendar Years
- C-6: Availability Factors for Life Years of Service
- C-7: Capacity Factors for Life Years of Service
- C-8: Equivalent Availability for Life Years of Service
- C-9: Forced Outage Rates for Life Years of Service

Utility by State Data (See V-D.)

- D-1: Lifetime Performance Factors
- D-2: Availability Factors for Calendar Years
- D-3: Capacity Factors for Calendar Years
- D-4: Equivalent Availability for Calendar Years
- D-5: Forced Outage Rates for Calendar Years
- D-6: Availability Factor by Life Years of Service
- D-7: Capacity Factors by Life Years of Service
- D-8: Equivalent Availability by Life Years of Service
- D-9: Forced Outage Rates by Life Years of Service

Utility Data (See V-E.)

- E-1: Availability Factor for Calendar Years
- E-2: Capacity Factors for Calendar Years
- E-3: Equivalent Availability for Calendar Years
- E-4: Forced Outage Rates for Calendar Years
- E-5: Availability Factors by Life Years of Service
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- E-8: Forced Outage Rates by Life Years of Service

State and Utility Rankings (See V-F.)

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- F-14: Utility - Coal Unit Capacity Factors for Calendar Years
- F-15: Utility - Coal Unit Equivalent Availability for Calendar Years
- F-16: Utility - Coal Unit Forced Outage Rates for Calendar Years

Units in Study (See V-G.)

- G-1: Nameplate Rating and Commercial Operating Dates

B. National Data

- B-1: National Average Performance Factor by Calendar Year
- B-2: National Average Performance Factor by Life Year

TABLE B-1: NATIONAL AVERAGE PERFORMANCE FACTORS BY CALENDAR YEAR

<u>FACTOR</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
AVAILABILITY										
NUCLEAR	--	73.2	81.1	77.3	81.8	76.7	76.7	67.3	69.3	67.6
COAL	81.5	73.6	76.2	73.9	75.5	72.4	77.6	72.7	74.2	72.0
CAPACITY										
NUCLEAR	--	53.2	70.3	65.9	63.4	63.7	62.8	54.6	61.7	61.2
COAL	79.7	70.0	69.5	61.9	61.5	60.4	63.9	56.7	57.2	58.5
EQUIVALENT AVAILABILITY										
NUCLEAR		74.9	79.6	82.9	76.6	71.9	78.2	63.4	64.3	62.3
COAL	79.0	75.1	73.9	68.5	72.1	67.9	72.3	66.7	67.9	65.5
FORCED OUTAGE										
NUCLEAR	--	37.3	7.0	13.5	10.0	5.0	9.3	20.4	17.1	14.5
COAL	11.5	9.5	10.6	13.7	14.2	16.1	12.9	16.1	13.7	14.4
<u>NUMBER OF UNITS</u>										
NUCLEAR	0	2	2	5	8	12	20	29	41	47
COAL	14	18	30	46	60	77	89	106	116	125

TABLE B-2: NATIONAL AVERAGE PERFORMANCE FACTORS BY LIFE YEAR

<u>FACTOR</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
AVAILABILITY										
NUCLEAR	75.3	66.5	64.3	74.0	72.9	72.7	79.4	86.8	76.4	--
COAL	74.6	75.3	75.3	76.4	74.1	73.1	74.5	74.5	69.9	73.3
CAPACITY										
NUCLEAR	56.2	58.5	58.5	66.9	65.7	66.1	74.9	85.2	73.1	--
COAL	60.2	63.2	62.5	61.6	60.5	59.4	60.1	62.2	58.8	64.1
EQUIVALENT AVAILABILITY										
NUCLEAR	70.4	64.5	60.1	64.7	66.7	71.1	76.7	84.3	81.6	--
COAL	70.4	70.3	69.5	71.1	68.4	68.1	68.0	69.1	65.2	68.4
FORCED OUTAGE										
NUCLEAR	19.2	18.0	15.0	9.8	12.0	7.1	11.0	0.5	2.3	--
COAL	13.3	13.6	13.9	13.1	14.5	12.6	14.4	13.3	14.2	16.4
<u>NUMBER OF UNITS</u>										
NUCLEAR	47	41	29	20	12	8	5	2	2	0
COAL	125	118	104	89	78	63	49	32	22	14

C. State Data

- C-1: Lifetime Performance Factors
- C-2: Availability Factors for Calendar Years
- C-3: Capacity Factors for Calendar Years
- C-4: Equivalent Availability for Calendar Years
- C-5: Forced Outage Rates for Calendar Years
- C-6: Availability Factors for Life Years of Service
- C-7: Capacity Factors for Life Years of Service
- C-8: Equivalent Availability for Life Years of Service
- C-9: Forced Outage Rate for Life Years of Service

TABLE C-1: LIFETIME PERFORMANCE FACTORS(BY STATE)

STATE	NUCLEAR				COAL			
	A.P.	C.F.	E.A.	P.O.R.	A.P.	C.F.	E.A.	P.O.R.
ALABAMA	32.4	15.3	31.9	69.1	71.9	56.7	65.2	15.7
ARKANSAS	66.9	59.4	66.8	14.1	--	--	--	--
CALIFORNIA	53.8	50.0	79.0	71.1	--	--	--	--
CONNECTICUT	85.2	70.9	68.9	8.3	--	--	--	--
FLORIDA	49.3	65.3	44.9	--	75.9	63.8	73.9	4.8
GEORGIA	83.8	59.9	--	9.0	72.8	56.3	67.3	17.7
ILLINOIS	69.0	53.2	60.9	18.6	71.4	59.2	66.6	12.9
INDIANA	--	--	--	--	77.0	62.0	76.4	6.8
IOWA	78.3	55.8	68.1	4.9	92.1	70.9	62.1	3.9
KANSAS	--	--	--	--	57.7	33.7	57.7	32.3
KENTUCKY	--	--	--	--	75.8	58.8	71.0	11.1
MAINE	83.5	70.2	--	3.4	--	--	--	--
MARYLAND	95.0	92.8	90.7	1.6	--	--	--	--
MASSACHUSETTS	65.2	49.0	50.1	19.7	--	--	--	--
MICHIGAN	52.6	55.5	46.0	32.6	76.8	64.6	67.4	13.0
MINNESOTA	77.8	66.4	74.2	12.4	--	--	--	--
MISSISSIPPI	--	--	--	--	57.6	53.9	53.0	17.4
MISSOURI	--	--	--	--	72.9	53.7	64.4	15.0
NEBRASKA	78.4	57.0	73.7	7.8	--	--	--	--
NEVADA	--	--	--	--	71.9	54.6	65.4	21.7
NEW JERSEY	78.9	71.2	74.1	8.2	--	--	--	--
NEW MEXICO	--	--	--	--	71.3	61.6	61.4	18.0
NEW YORK	71.9	59.1	65.1	10.9	--	--	--	--
NO. CAROLINA	56.0	36.4	53.6	30.2	82.4	68.3	78.7	5.9
OHIO	--	--	--	--	75.9	60.9	72.0	14.2
PENNSYLVANIA	75.8	66.1	64.7	12.3	75.6	64.4	70.4	11.6
SO. CAROLINA	70.6	65.8	68.2	17.5	--	--	--	--
TENNESSEE	--	--	--	--	74.6	57.7	68.2	18.9
VERMONT	75.3	65.3	--	--	--	--	--	--

Table C-1 (continued)

<u>STATE</u>	<u>A.F.</u>	<u>C.F.</u>	<u>NUCLEAR</u>		<u>P.O.R.</u>	<u>A.F.</u>	<u>COAL</u>		<u>P.O.R.</u>
			<u>E.A.</u>				<u>C.F.</u>	<u>E.A.</u>	
VIRGINIA	62.5	58.4	58.4		22.7	--	--	--	--
WASHINGTON	--	--	--		--	57.3	46.0	56.3	15.1
W. VIRGINIA	--	--	--		--	78.7	65.1	74.2	13.2
WISCONSIN	84.8	71.9	83.3		5.7	84.7	61.3	75.0	0.4
WYOMING	--	--	--		--	81.3	51.8	76.4	2.3

TABLE C-2: AVERAGE AVAILABILITY FACTORS FOR CALENDAR YEARS (BY STATE)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
NUCLEAR	--	--	--	--	--	--	--	74.0	20.1	27.9
COAL	87.3	75.3	78.3	76.1	82.3	54.1	73.5	72.0	69.5	64.1
ARKANSAS										
NUCLEAR	--	--	--	--	--	--	--	--	77.1	56.6
CALIFORNIA										
NUCLEAR	--	79.6	75.8	83.0	93.4	78.9	62.8	86.1	57.4	49.2
CONNECTICUT										
NUCLEAR	--	76.8	86.3	77.7	86.6	73.4	48.0	85.2	80.9	82.8
FLORIDA										
NUCLEAR	--	--	--	--	--	--	81.5	72.5	32.6	30.0
COAL	--	--	--	63.3	69.9	80.7	76.5	79.0	72.1	61.1
GEORGIA										
NUCLEAR	--	--	--	--	--	--	--	--	--	83.8
COAL	--	--	--	--	--	69.8	71.6	66.9	69.8	61.7
ILLINOIS										
NUCLEAR	--	--	--	--	65.0	64.7	95.0	62.5	60.7	71.0
COAL	88.4	67.4	64.3	71.4	73.8	70.6	72.2	75.2	65.4	63.3
INDIANA										
COAL	73.6	72.2	72.6	70.8	72.8	62.9	81.4	79.7	77.0	75.6
ICWA										
NUCLEAR	--	--	--	--	--	--	--	--	79.5	77.0
COAL	--	--	--	--	--	--	--	--	--	92.1
KANSAS										
COAL	--	--	--	--	--	--	--	48.3	59.1	65.8
KENTUCKY										
COAL	79.9	83.1	73.6	73.2	75.4	75.3	71.5	69.9	75.2	73.3
MAINE										
NUCLEAR	--	--	--	--	--	--	89.4	68.7	79.9	96.0
MARYLAND										
NUCLEAR	--	--	--	--	--	--	--	--	--	95.0
MASSACHUSETTS										
NUCLEAR	--	--	--	--	--	--	86.6	39.2	74.3	60.8
MICHIGAN										
NUCLEAR	--	--	--	--	--	100.	12.9	5.5	64.5	56.4
COAL	--	81.8	89.8	82.8	87.8	79.3	79.4	79.6	76.0	60.7
MINNESOTA										
NUCLEAR	--	--	--	--	--	82.9	95.5	61.8	80.3	81.6
COAL	--	--	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9
MISSISSIPPI										
COAL	--	--	--	--	--	--	--	70.6	74.3	28.0
MISSOURI										
COAL	--	73.3	70.8	74.0	78.4	57.2	70.2	67.8	77.6	74.1
NEBRASKA										
NUCLEAR	--	--	--	--	--	--	--	92.6	76.3	72.5
NEVADA										
COAL	--	--	--	--	48.9	70.4	70.0	77.0	75.1	77.4
NEW JERSEY										
NUCLEAR	--	--	--	77.0	96.5	82.4	73.2	70.4	73.3	79.3
COAL	--	--	--	71.8	65.9	--	75.7	64.1	53.5	77.0

Table C-2 (continued)

[illegible]

TABLE C-3: AVERAGE CAPACITY FACTORS FOR CALENDAR YEARS (BY STATE)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
NUCLEAR	--	--	--	--	--	--	--	29.1	10.3	15.4
COAL	85.3	64.5	65.5	62.5	61.5	43.1	62.3	50.7	48.8	50.7
ARKANSAS										
NUCLEAR	--	--	--	--	--	--	--	--	66.4	52.5
CALIFORNIA										
NUCLEAR	--	34.3	69.8	81.3	92.1	78.5	62.8	84.0	56.3	46.8
CONNECTICUT										
NUCLEAR	--	72.1	71.9	69.6	83.9	70.4	41.0	75.8	76.2	70.9
FLORIDA										
NUCLEAR	--	--	--	--	--	--	57.4	63.4	69.1	66.9
COAL	--	--	--	46.0	46.7	61.4	57.4	63.2	61.0	48.1
GEORGIA										
NUCLEAR	--	--	--	--	--	--	--	--	--	59.9
COAL	--	--	--	--	--	55.4	48.3	50.2	50.7	49.4
ILLINOIS										
NUCLEAR	--	--	--	--	39.6	60.2	67.0	44.3	50.7	56.6
COAL	86.7	52.5	50.8	55.5	56.9	55.7	54.8	60.4	53.8	52.7
INDIANA										
COAL	71.2	67.7	80.7	64.1	55.4	52.8	69.9	63.5	59.6	60.3
IOWA										
NUCLEAR	--	--	--	--	--	--	--	--	52.2	59.3
COAL	--	--	--	--	--	--	--	--	--	70.9
KANSAS										
COAL	--	--	--	--	--	--	--	23.3	35.3	42.4
KENTUCKY										
COAL	77.5	81.3	79.4	61.9	67.4	67.3	66.4	61.4	52.0	63.8
MAINE										
NUCLEAR	--	--	--	--	--	--	57.8	62.7	71.4	88.8
MARYLAND										
NUCLEAR	--	--	--	--	--	--	--	--	--	92.8
MASSACHUSETTS										
NUCLEAR	--	--	--	--	--	--	72.2	34.9	46.0	42.8
MICHIGAN										
NUCLEAR	--	--	--	--	--	37.0	41.0	1.5	44.0	62.3
COAL	--	75.0	83.0	74.9	80.3	69.5	72.5	66.5	64.3	52.7
MINNESOTA										
NUCLEAR	--	--	--	--	--	69.9	67.2	47.7	73.4	71.1
COAL	--	--	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7
MISSISSIPPI										
COAL	--	--	--	--	--	--	--	49.3	53.8	58.5
MISSOURI										
COAL	--	54.6	58.3	55.8	54.0	36.3	51.5	48.5	58.7	55.9
NEBRASKA										
NUCLEAR	--	--	--	--	--	--	--	61.0	56.1	55.8
NEVADA										
COAL	--	--	--	--	22.5	51.0	53.7	60.9	59.0	62.4
NEW JERSEY										
NUCLEAR	--	--	--	73.2	78.2	81.3	67.9	66.8	57.6	73.1
COAL	--	--	--	53.1	46.9	--	61.1	43.5	28.9	58.5

Table C-3 (continued)

[illegible]

TABLE C-4: AVERAGE EQUIVALENT AVAILABILITY FOR CALENDAR YEARS (BY STATE)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
NUCLEAR	--	--	--	--	--	--	--	71.3	20.0	27.6
COAL	86.1	73.0	76.6	74.8	80.1	50.4	69.0	64.3	61.8	53.8
ARKANSAS										
NUCLEAR	--	--	--	--	--	--	--	--	77.0	56.6
CALIFORNIA										
NUCLEAR	--	77.1	74.4	81.4	91.0	76.0	61.4	84.3	79.3	15.3
CONNECTICUT										
NUCLEAR	--	72.6	84.8	73.4	--	--	--	45.8	75.7	72.3
FLORIDA										
NUCLEAR	--	--	--	--	--	--	--	68.3	37.8	30.0
COAL	--	--	--	62.4	69.1	76.4	73.6	77.0	68.9	56.8
GEORGIA										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
COAL	--	--	--	--	--	62.7	66.4	57.3	62.3	56.2
ILLINOIS										
NUCLEAR	--	--	--	--	36.8	32.1	92.3	55.8	51.8	60.9
COAL	85.3	59.3	57.4	62.0	62.7	60.0	64.5	68.0	61.1	59.2
INDIANA										
COAL	69.4	68.2	75.1	65.5	69.9	61.2	80.8	75.7	75.3	71.5
ICWA										
NUCLEAR	--	--	--	--	--	--	--	--	62.0	74.2
COAL	--	--	--	--	--	--	--	--	--	62.1
KANSAS										
COAL	--	--	--	--	--	--	--	48.3	59.1	65.8
KENTUCKY										
COAL	79.5	80.7	72.8	59.5	66.9	72.4	67.2	65.9	69.0	62.2
MAINE										
NUCLEAR	--	--	--	--	--	--	--	55.1	66.8	92.9
MARYLAND										
NUCLEAR	--	--	--	--	--	--	--	--	--	90.7
MASSACHUSETTS										
NUCLEAR	--	--	--	--	--	--	71.7	37.4	49.6	41.7
MICHIGAN										
NUCLEAR	--	--	--	--	--	81.3	11.2	1.9	41.2	51.8
COAL	--	81.8	89.5	79.4	85.6	74.5	73.6	70.2	65.2	56.3
MINNESOTA										
NUCLEAR	--	--	--	--	--	--	95.5	61.5	79.7	80.9
COAL	--	--	66.0	--	--	86.4	--	79.8	78.0	79.7
MISSISSIPPI										
COAL	--	--	--	--	--	--	--	69.2	67.5	22.3
MISSOURI										
COAL	--	--	--	66.9	69.1	49.8	63.5	59.8	68.4	65.6
NEBRASKA										
NUCLEAR	--	--	--	--	--	--	--	92.6	69.6	68.8
NEVADA										
COAL	--	--	--	--	44.4	67.5	65.1	69.1	66.8	68.2
NEW JERSEY										
NUCLEAR	--	--	--	77.0	96.3	82.2	67.2	66.1	59.2	70.7
COAL	--	--	--	62.9	63.7	--	67.3	55.3	37.9	72.7

Table C-4 (continued)

[illegible]

TABLE C-5: AVERAGE FORCED OUTAGE RATES FOR CALENDAR YEARS (BY STATE)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
NUCLEAR	--	--	--	--	--	--	--	25.6	27.4	67.6
COAL	9.1	11.8	8.8	9.0	12.0	33.1	16.9	21.0	22.4	24.8
ARKANSAS										
NUCLEAR	--	--	--	--	--	--	--	--	6.7	21.6
CALIFORNIA										
NUCLEAR	--	57.8	9.9	--	2.1	1.5	23.7	7.2	36.3	36.1
CONNECTICUT										
NUCLEAR	--	16.7	4.1	3.3	--	--	--	5.6	9.9	6.4
FLORIDA										
NUCLEAR	--	--	--	--	--	--	--	7.7	2.1	3.0
COAL	--	--	--	16.5	6.2	5.6	12.9	8.2	7.5	13.7
GEORGIA										
NUCLEAR	--	--	--	--	--	--	--	--	--	9.0
COAL	--	--	--	--	--	24.1	16.0	23.2	21.5	21.2
ILLINOIS										
NUCLEAR	--	--	--	--	14.2	15.3	2.9	25.2	20.6	12.5
COAL	9.3	8.9	16.9	12.6	12.4	13.0	10.3	13.1	15.0	17.8
INDIANA										
COAL	14.6	13.2	10.3	11.6	21.6	19.1	7.2	7.0	7.3	8.8
IOWA										
NUCLEAR	--	--	--	--	--	--	--	--	6.1	3.7
COAL	--	--	--	--	--	--	--	--	--	3.9
KANSAS										
COAL	--	--	--	--	--	--	--	39.8	29.8	27.2
KENTUCKY										
COAL	3.6	3.9	11.1	17.0	11.3	9.1	16.3	10.5	15.1	12.4
MAINE										
NUCLEAR	--	--	--	--	--	--	6.4	2.6	3.7	0.7
MARYLAND										
NUCLEAR	--	--	--	--	--	--	--	--	--	1.6
MASSACHUSETTS										
NUCLEAR	--	--	--	--	--	--	3.0	48.1	18.3	9.4
MICHIGAN										
NUCLEAR	--	--	--	--	--	0.0	54.9	94.3	31.8	19.5
COAL	--	4.6	1.1	4.6	3.7	12.2	5.9	14.0	14.2	10.5
MINNESOTA										
NUCLEAR	--	--	--	--	--	14.2	5.1	24.9	7.6	5.8
COAL	--	--	5.1	3.3	7.0	5.8	--	10.4	11.6	6.4
MISSISSIPPI										
COAL	--	--	--	--	--	--	--	29.9	12.3	9.9
MISSOURI										
COAL	--	16.3	13.4	14.6	16.8	33.5	19.5	14.1	10.6	12.4
NEBRASKA										
NUCLEAR	--	--	--	--	--	--	--	3.7	8.0	8.9
NEVADA										
COAL	--	--	--	--	50.1	23.6	21.8	18.5	20.0	11.0
NEW JERSEY										
NUCLEAR	--	--	--	7.4	1.4	4.9	14.4	16.3	11.4	1.8
COAL	--	--	--	23.8	25.3	--	19.8	15.5	17.0	11.2

Table C-5 (continued)

[illegible]

TABLE C-6: AVAILABILITY FACTORS FOR LIFE YEARS OF SERVICE (BY STATE)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
NUCLEAR	46.8	25.3	25.8	--	--	--	--	--	--	--
COAL	67.3	76.3	80.5	77.9	73.2	85.3	82.0	71.1	71.9	62.1
ARKANSAS										
NUCLEAR	77.1	56.6	--	--	--	--	--	--	--	--
CALIFORNIA										
NUCLEAR	53.6	52.0	83.0	93.4	78.9	62.8	86.1	87.4	70.2	--
CONNECTICUT										
NUCLEAR	83.3	72.7	61.6	82.9	81.7	63.3	91.2	86.1	82.5	--
FLORIDA										
NUCLEAR	79.4	47.8	29.9	37.7	--	--	--	--	--	--
COAL	82.2	66.6	73.9	79.8	83.9	62.8	52.9	76.8	52.4	--
GEORGIA										
NUCLEAR	83.8	--	--	--	--	--	--	--	--	--
COAL	82.4	72.6	57.4	56.4	59.0	66.0	64.2	65.7	--	--
ILLINOIS										
NUCLEAR	74.7	71.0	65.5	65.3	68.8	73.3	--	--	--	--
COAL	69.9	69.1	76.7	72.9	73.2	74.3	60.6	56.5	44.1	88.5
INDIANA										
COAL	75.5	81.5	77.7	67.2	85.9	70.4	80.2	72.8	73.9	78.4
IOWA										
NUCLEAR	79.5	77.0	--	--	--	--	--	--	--	--
COAL	92.1	--	--	--	--	--	--	--	--	--
KANSAS										
COAL	48.3	59.1	65.8	--	--	--	--	--	--	--
KENTUCKY										
COAL	70.1	77.0	82.2	80.1	74.2	70.5	78.9	77.2	75.9	62.0
MAINE										
NUCLEAR	89.4	68.7	79.9	96.0	--	--	--	--	--	--
MARYLAND										
NUCLEAR	95.0	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
NUCLEAR	86.6	39.2	74.3	60.8	--	--	--	--	--	--
MICHIGAN										
NUCLEAR	78.8	12.9	5.5	64.5	55.2	--	--	--	--	--
COAL	79.0	79.4	72.3	79.3	78.3	77.2	80.8	85.7	--	--
MINNESOTA										
NUCLEAR	71.3	85.9	76.1	72.2	91.5	--	--	--	--	--
COAL	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9	--	--
MISSISSIPPI										
COAL	70.6	74.3	28.0	--	--	--	--	--	--	--
MISSOURI										
COAL	73.6	67.3	83.1	71.0	70.5	67.1	59.3	64.6	72.0	--
NEBRASKA										
NUCLEAR	88.9	71.4	69.5	--	--	--	--	--	--	--
NEVADA										
COAL	60.9	64.7	80.9	68.9	82.7	72.8	--	--	--	--
NEW JERSEY										
NUCLEAR	77.0	96.5	82.4	73.2	70.4	73.3	79.3	--	--	--
COAL	--	71.8	65.9	--	75.7	64.1	53.5	77.0	--	--

Table C-6 (continued)

<u>STATE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NEW MEXICO COAL	69.5	77.6	81.6	76.1	60.5	61.8	74.8	--	--	--
NEW YORK NUCLEAR	77.5	78.1	58.1	85.7	66.4	75.6	70.2	--	--	--
NO. CAROLINA NUCLEAR COAL	56.0 75.9	-- 86.4	-- 86.8	-- 89.7	-- 80.6	-- 85.2	-- 87.3	-- 83.9	-- 88.9	-- 91.3
OHIO COAL	81.8	71.8	74.2	79.3	67.6	74.5	75.1	69.5	74.8	--
PENNSYLVANIA NUCLEAR COAL	81.1 72.2	70.4 73.4	-- 74.9	-- 75.2	-- 71.0	-- 72.2	-- 71.4	-- 87.6	-- 79.6	-- 83.6
SO. CAROLINA NUCLEAR	66.8	74.1	66.3	82.4	72.7	84.7	--	--	--	--
TENNESSEE COAL	82.3	70.7	67.2	79.1	85.2	74.4	94.2	92.0	72.0	86.7
VERMONT NUCLEAR	61.1	74.1	87.8	78.0	--	--	--	--	--	--
VIRGINIA NUCLEAR COAL	65.9 63.5	53.0 77.5	74.1 72.2	52.3 74.7	-- --	-- 55.3	-- 71.9	-- --	-- --	-- --
WASHINGTON COAL	61.1	52.0	38.5	69.7	70.6	--	--	--	--	--
W. VIRGINIA COAL	71.8	82.5	79.4	82.7	82.4	76.6	80.4	75.8	67.4	69.5
WISCONSIN NUCLEAR COAL	93.5 84.7	77.4 --	86.1 --	86.1 --	72.2 --	82.7 --	-- --	-- --	-- --	-- --
WYOMING COAL	78.3	88.5	--	--	--	--	--	--	--	--

TABLE C-7: CAPACITY FACTORS FOR LIFE YEARS OF SERVICE (BY STATE)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
NUCLEAR	17.5	15.7	14.0	--	--	--	--	--	--	--
COAL	57.4	63.8	67.3	64.6	60.4	71.9	71.6	56.7	56.4	49.5
ARKANSAS										
NUCLEAR	66.4	52.5	--	--	--	--	--	--	--	--
CALIFORNIA										
NUCLEAR	30.3	49.0	81.3	92.1	78.5	62.8	84.0	86.5	65.5	--
CONNECTICUT										
NUCLEAR	68.9	63.4	51.6	73.5	77.3	57.3	88.4	83.8	80.7	--
FLORIDA										
NUCLEAR	63.2	61.9	67.2	71.8	--	--	--	--	--	--
COAL	63.4	58.6	58.1	60.8	67.6	47.3	34.6	53.2	36.3	--
GEORGIA										
NUCLEAR	59.9	--	--	--	--	--	--	--	--	--
COAL	60.4	58.0	44.3	45.5	38.5	44.5	53.2	52.0	--	--
ILLINOIS										
NUCLEAR	51.7	57.7	53.8	48.7	50.3	62.9	--	--	--	--
COAL	60.6	61.0	65.5	62.3	57.9	57.7	46.0	45.5	30.1	58.2
INDIANA										
COAL	65.8	69.2	65.2	54.3	71.4	60.2	61.4	61.3	73.8	66.3
ICWA										
NUCLEAR	52.2	59.3	--	--	--	--	--	--	--	--
COAL	70.9	--	--	--	--	--	--	--	--	--
KANSAS										
COAL	23.3	35.3	42.4	--	--	--	--	--	--	--
KENTUCKY										
COAL	52.7	66.7	70.1	65.8	67.3	64.9	71.0	72.1	72.6	74.2
MAINE										
NUCLEAR	57.8	62.7	71.4	88.8	--	--	--	--	--	--
MARYLAND										
NUCLEAR	92.8	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
NUCLEAR	72.2	34.9	46.0	42.8	--	--	--	--	--	--
MICHIGAN										
NUCLEAR	56.8	41.0	1.5	44.0	47.8	--	--	--	--	--
COAL	67.1	68.4	58.9	70.3	69.3	67.6	67.7	79.0	--	--
MINNESOTA										
NUCLEAR	59.8	70.9	66.2	59.4	81.9	--	--	--	--	--
COAL	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7	--	--
MISSISSIPPI										
COAL	49.3	53.8	58.5	--	--	--	--	--	--	--
MISSOURI										
COAL	55.0	50.1	61.0	51.8	47.6	47.0	39.6	52.2	63.3	--
NEBRASKA										
NUCLEAR	60.3	53.7	56.7	--	--	--	--	--	--	--
NEVADA										
COAL	37.4	49.1	61.9	54.8	68.1	53.9	--	--	--	--
NEW JERSEY										
NUCLEAR	73.2	78.2	81.3	67.9	66.8	57.6	73.1	--	--	--
COAL	--	53.1	46.9	--	61.1	43.5	28.9	58.5	--	--

Table C-7 (continued)

<u>STATE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NEW MEXICO COAL	49.8	69.7	74.4	66.8	54.5	52.4	66.3	--	--	--
NEW YORK NUCLEAR	52.9	65.7	49.5	80.4	58.7	67.8	64.5	--	--	--
NC. CAROLINA NUCLEAR	36.4	--	--	--	--	--	--	--	--	--
COAL	64.6	76.1	72.9	76.2	65.2	63.9	66.7	63.9	66.9	74.1
OHIO COAL	65.1	63.9	63.6	57.0	54.2	59.8	56.0	54.5	58.3	--
PENNSYLVANIA NUCLEAR	66.8	65.4	--	--	--	--	--	--	--	--
COAL	63.7	63.0	62.9	62.4	60.9	61.4	60.9	80.8	71.8	71.6
SO. CAROLINA NUCLEAR	58.8	69.7	60.2	82.6	71.7	83.4	--	--	--	--
TENNESSEE COAL	65.5	58.2	46.6	65.4	73.2	69.1	73.1	83.6	62.3	79.5
VERMONT NUCLEAR	43.5	59.8	85.1	72.6	--	--	--	--	--	--
VIRGINIA NUCLEAR	58.8	50.0	70.3	50.9	--	--	--	--	--	--
COAL	42.3	58.8	60.0	59.6	--	36.0	43.2	--	--	--
WASHINGTON COAL	35.8	44.0	46.7	54.4	51.4	--	--	--	--	--
W. VIRGINIA COAL	61.5	70.2	65.8	68.1	67.9	65.5	70.4	63.6	56.1	61.4
WISCONSIN NUCLEAR	60.8	63.5	78.8	81.1	69.2	78.4	--	--	--	--
COAL	61.3	--	--	--	--	--	--	--	--	--
WYOMING COAL	47.9	46.8	--	--	--	--	--	--	--	--

TABLE C-8: EQUIVALENT AVAILABILITY FOR LIFE YEARS OF SERVICE (BY STATE)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
NUCLEAR	45.4	25.3	25.3	--	--	--	--	--	--	--
COAL	64.7	73.6	74.0	70.1	66.8	81.2	78.8	68.4	68.9	59.8
ARKANSAS										
NUCLEAR	77.0	56.6	--	--	--	--	--	--	--	--
CALIFORNIA										
NUCLEAR	77.1	51.3	81.4	91.0	76.0	61.4	84.3	86.1	--	--
CONNECTICUT										
NUCLEAR	70.8	84.8	73.4	--	68.9	66.4	89.3	82.5	81.6	--
FLORIDA										
NUCLEAR	73.9	51.1	28.7	38.5	--	--	--	--	--	--
COAL	81.1	64.4	72.5	78.1	78.9	59.5	50.9	72.7	43.7	--
GEORGIA										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
COAL	77.4	62.9	51.2	49.2	54.2	58.7	56.2	58.5	--	--
ILLINOIS										
NUCLEAR	64.2	66.4	58.7	51.0	53.7	65.8	--	--	--	--
COAL	66.9	65.7	71.1	66.8	65.9	66.6	52.6	47.2	34.3	67.6
INDIANA										
COAL	75.2	79.7	75.2	65.9	82.1	67.8	76.4	68.8	71.9	66.9
IOWA										
NUCLEAR	62.0	74.2	--	--	--	--	--	--	--	--
COAL	62.1	--	--	--	--	--	--	--	--	--
KANSAS										
COAL	48.3	59.1	65.8	--	--	--	--	--	--	--
KENTUCKY										
COAL	64.0	73.9	79.7	76.3	70.5	64.4	61.4	68.0	73.6	60.3
MAINE										
NUCLEAR	--	55.1	66.8	92.9	--	--	--	--	--	--
MARYLAND										
NUCLEAR	90.7	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
NUCLEAR	71.7	37.4	49.6	41.7	--	--	--	--	--	--
MICHIGAN										
NUCLEAR	68.2	11.2	1.9	41.2	48.4	--	--	--	--	--
COAL	71.3	70.2	62.9	73.3	72.1	69.9	74.1	81.8	--	--
MINNESOTA										
NUCLEAR	65.3	85.2	75.2	72.2	91.5	--	--	--	--	--
COAL	66.0	--	--	86.4	--	79.8	78.0	79.7	--	--
MISSISSIPPI										
COAL	69.2	67.5	22.3	--	--	--	--	--	--	--
MISSOURI										
COAL	66.3	59.1	72.0	61.7	62.9	61.1	54.6	56.4	67.3	--
NEBRASKA										
NUCLEAR	82.3	70.4	64.3	--	--	--	--	--	--	--
NEVADA										
COAL	57.6	60.3	73.8	62.1	73.2	63.7	--	--	--	--
NEW JERSEY										
NUCLEAR	77.0	96.3	82.2	67.2	66.1	59.2	70.7	--	--	--
COAL	--	62.9	63.7	--	67.3	55.3	37.9	72.7	--	--

Table C-8 (continued)

<u>STATE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NEW MEXICO COAL	56.8	68.5	73.8	65.7	46.0	56.0	68.0	--	--	--
NEW YORK NUCLEAR	94.7	76.5	32.6	95.0	66.4	75.4	69.6	--	--	--
NO. CAROLINA NUCLEAR	53.6	--	--	--	--	--	--	--	--	--
COAL	70.9	83.2	84.1	88.2	79.7	83.9	84.6	81.1	88.2	88.9
OHIO COAL	79.1	68.0	71.3	75.7	64.6	69.1	67.4	59.4	62.5	--
PENNSYLVANIA NUCLEAR	63.6	65.8	--	--	--	--	--	--	--	--
COAL	66.1	67.0	66.2	69.4	64.6	66.0	64.7	62.8	74.0	80.7
SC. CAROLINA NUCLEAR	64.3	72.1	65.2	81.1	70.9	83.1	--	--	--	--
TENNESSEE COAL	79.5	60.0	62.0	73.3	77.9	73.4	94.0	91.8	70.8	85.9
VERMONT NUCLEAR	--	62.1	81.9	78.0	--	--	--	--	--	--
VIRGINIA NUCLEAR	54.8	53.0	79.6	52.3	--	--	--	--	--	--
COAL	60.9	69.8	62.3	66.8	--	48.8	59.3	--	--	--
WASHINGTON COAL	61.1	52.0	38.5	67.3	66.4	--	--	--	--	--
W. VIRGINIA COAL	67.3	83.5	73.4	75.9	75.7	73.9	76.4	72.2	64.9	67.0
WISCONSIN NUCLEAR	91.5	76.8	86.1	80.8	71.8	82.3	--	--	--	--
COAL	75.0	--	--	--	--	--	--	--	--	--
WYOMING COAL	74.9	81.9	--	--	--	--	--	--	--	--

TABLE C-9: FORCED OUTAGE RATES FOR LIFE YEARS OF SERVICE (BY STATE)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
NUCLEAR	59.4	73.1	70.9	--	--	--	--	--	--	--
COAL	12.3	16.3	11.1	12.4	16.6	9.7	9.3	4.8	14.2	33.0
ARKANSAS										
NUCLEAR	6.7	21.6	--	--	--	--	--	--	--	--
CALIFORNIA										
NUCLEAR	65.2	39.8	--	2.1	1.5	23.7	7.2	0.2	2.5	--
CONNECTICUT										
NUCLEAR	12.5	4.1	3.3	2.2	19.1	8.9	8.9	0.8	2.1	--
FLORIDA										
NUCLEAR	6.3	9.1	4.0	0.1	--	--	--	--	--	--
COAL	3.7	4.9	8.8	5.1	4.7	16.4	19.4	14.6	24.1	--
GEORGIA										
NUCLEAR	9.0	--	--	--	--	--	--	--	--	--
COAL	14.2	13.1	32.9	23.3	36.9	17.4	18.3	13.2	--	--
ILLINOIS										
NUCLEAR	18.3	17.4	18.7	17.0	5.3	4.0	--	--	--	--
COAL	9.6	13.3	9.7	16.4	11.3	7.2	17.4	26.3	19.2	11.1
INDIANA										
COAL	6.1	6.1	10.8	11.7	9.4	8.4	14.1	13.6	13.4	12.3
IOWA										
NUCLEAR	6.1	3.7	--	--	--	--	--	--	--	--
COAL	3.9	--	--	--	--	--	--	--	--	--
KANSAS										
COAL	39.8	29.8	27.2	--	--	--	--	--	--	--
KENTUCKY										
COAL	12.2	13.3	10.6	10.3	8.2	14.6	10.4	10.2	12.8	17.0
MAINE										
NUCLEAR	6.4	2.6	3.7	0.7	--	--	--	--	--	--
MARYLAND										
NUCLEAR	1.6	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
NUCLEAR	3.0	48.1	18.3	9.4	--	--	--	--	--	--
MICHIGAN										
NUCLEAR	13.2	54.9	94.3	31.8	12.5	--	--	--	--	--
COAL	13.1	9.4	12.9	8.8	13.9	11.6	12.8	7.5	--	--
MINNESOTA										
NUCLEAR	25.7	6.0	5.5	0.5	2.5	--	--	--	--	--
COAL	5.1	3.3	7.0	5.8	--	10.4	11.6	6.4	--	--
MISSISSIPPI										
COAL	29.9	12.3	9.9	--	--	--	--	--	--	--
MISSOURI										
COAL	16.8	20.7	11.0	12.1	12.1	23.4	25.8	19.8	14.5	--
NEBRASKA										
NUCLEAR	8.6	3.5	13.1	--	--	--	--	--	--	--
NEVADA										
COAL	37.3	23.4	16.8	26.0	10.1	12.8	--	--	--	--
NEW JERSEY										
NUCLEAR	7.4	1.4	4.9	14.4	16.3	11.4	1.8	--	--	--
COAL	--	23.8	25.3	--	19.8	15.5	17.0	11.2	--	--

Table C-9 (continued)

<u>STATE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
NEW MEXICO COAL	12.4	15.1	11.3	19.5	27.2	22.1	18.9	--	--	--
NEW YORK NUCLEAR	16.7	4.3	3.6	4.2	19.9	3.0	18.6	--	--	--
NO. CAROLINA NUCLEAR COAL	30.2 7.5	-- 5.0	-- 2.4	-- 5.8	-- 5.5	-- 4.5	-- 7.3	-- 11.0	-- 7.4	-- 5.2
OHIO COAL	10.8	16.2	15.1	16.4	19.2	11.6	15.7	17.6	13.8	--
PENNSYLVANIA NUCLEAR COAL	13.0 13.2	11.6 15.6	-- 20.5	-- 14.3	-- 16.5	-- 13.9	-- 18.0	-- 9.8	-- 12.6	-- 4.9
SU. CAROLINA NUCLEAR	24.1	17.2	13.2	0.9	14.0	2.7	--	--	--	--
TENNESSEE COAL	15.1	25.5	21.0	11.0	2.4	7.3	4.8	2.7	11.4	13.2
VERMONT NUCLEAR	--	3.6	4.4	3.5	--	--	--	--	--	--
VIRGINIA NUCLEAR COAL	22.8 35.3	28.1 10.0	10.2 5.7	39.8 12.2	-- --	-- 10.5	-- 19.5	-- --	-- --	-- --
WASHINGTON COAL	13.0	19.9	11.5	9.3	26.4	--	--	--	--	--
W. VIRGINIA COAL	21.6	11.9	12.0	9.4	7.9	11.9	9.1	12.9	13.5	12.3
WISCONSIN NUCLEAR COAL	5.5 0.4	2.8 --	2.1 --	2.8 --	16.3 --	0.1 --	-- --	-- --	-- --	-- --
WYOMING COAL	1.7	9.7	--	--	--	--	--	--	--	--

D. Utility by State Data

- D-1: Lifetime Performance Factors
- D-2: Availability Factors for Calendar Years
- D-3: Capacity Factors for Calendar Years
- D-4: Equivalent Availability for Calendar Years
- D-5: Forced Outage Rates for Calendar Years
- D-6: Availability Factor by Life Years of Service
- D-7: Capacity Factors by Life Years of Service
- D-8: Equivalent Availability by Life Years of Service
- D-9: Forced Outage Rates by Life Years of Service

TABLE D-1 LIFETIME PERFORMANCE FACTORS (BY STATE & UTILITY)

STATE	NUCLEAR				COAL			
	A.F.	C.F.	E.A.	P.O.R.	A.F.	C.F.	E.A.	P.O.R.
ALABAMA								
ALABAMA POWER COMPANY	--	--	--	--	75.7	58.0	67.7	13.9
SOUTHERN ELECTRIC GENERATING CO	--	--	--	--	60.2	52.8	57.5	21.0
TENNESSEE VALLEY AUTHORITY	32.4	15.3	31.9	69.1	--	--	--	--
ARKANSAS								
ARKANSAS POWER & LIGHT COMPANY	66.9	59.4	66.8	14.1	--	--	--	--
CALIFORNIA								
SACRAMENTO MUNICIPAL UTILITY DIST	27.8	27.2	--	71.1	--	--	--	--
SOUTHERN CALIFORNIA EDISON CO	79.7	72.8	79.0	--	--	--	--	--
CONNECTICUT								
NORTHEAST UTILITIES SERVICE CO	85.2	70.9	68.9	8.3	--	--	--	--
FLORIDA								
FLORIDA POWER & LIGHT COMPANY	49.3	65.3	44.9	--	--	--	--	--
SOUTHERN SERVICES, INCORPORATED	--	--	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY	--	--	--	--	75.9	63.8	73.9	4.8
GEORGIA								
GEORGIA POWER CO.	83.8	59.9	--	9.0	72.8	56.3	67.3	17.7
ILLINOIS								
CENTRAL ILLINOIS PUBLIC SERVICE	--	--	--	--	69.6	56.2	68.9	17.7
COMMONWEALTH EDISON COMPANY	69.0	53.2	60.9	18.6	65.6	51.6	56.3	15.0
ILLINOIS POWER COMPANY	--	--	--	--	77.8	67.9	76.2	9.2
INDIANA								
AMERICAN ELEC POWER SER CORP	--	--	--	--	73.8	67.6	--	15.6
INDIANAPOLIS POWER & LIGHT CO	--	--	--	--	83.7	68.8	81.3	3.3
NORTHERN INDIANA PUBLIC SERVICE	--	--	--	--	71.9	56.3	72.2	8.4
PUBLIC SERVICE CO OF INDIANA	--	--	--	--	79.3	61.7	76.2	3.9
IOWA								
IOWA ELECTRIC LIGHT & POWER CO	78.3	55.8	68.1	4.9	--	--	--	--
IOWA PUBLIC SERVICE COMPANY	--	--	--	--	92.1	70.9	62.1	3.9
KANSAS								
KANSAS CITY POWER & LIGHT CO	--	--	--	--	57.7	33.7	57.7	32.3
KENTUCKY								
AMERICAN ELECTRIC POWER SER CORP	--	--	--	--	78.7	63.7	70.8	15.9
KENTUCKY UTILITIES CO	--	--	--	--	81.4	52.7	78.4	2.3
TENNESSEE VALLEY AUTHORITY	--	--	--	--	67.4	59.9	56.5	15.0
MAINE								
YANKEE ATOMIC ELECTRIC CO	83.5	70.2	--	3.4	--	--	--	--
MARYLAND								
BALTIMORE GAS & ELECTRIC CO	95.0	92.8	90.7	1.6	--	--	--	--
MASSACHUSETTS								
BOSTON EDISON CO	65.2	49.0	50.1	19.7	--	--	--	--
MICHIGAN								
CONSUMERS POWER CO	47.6	34.3	36.8	38.7	--	--	--	--
DETROIT EDISON CO	--	--	--	--	76.8	64.6	67.4	13.0
MINNESOTA								
NORTHERN STATES POWER CO	77.8	66.4	74.2	12.4	--	--	--	--
MISSISSIPPI								
SOUTHERN SERVICES, INCORPORATED	--	--	--	--	57.6	53.9	53.0	17.4
MISSOURI								
KANSAS CITY POWER & LIGHT CO	--	--	--	--	80.2	44.7	--	10.4
UNION ELECTRIC CO	--	--	--	--	71.7	55.3	64.4	15.8
NEBRASKA								
NEBRASKA PUBLIC POWER DISTRICT	80.4	57.3	72.6	9.1	--	--	--	--
OMAHA PUBLIC POWER DISTRICT	76.5	56.7	74.8	6.4	--	--	--	--
NEVADA								
SOUTHERN CALIFORNIA EDISON CO	--	--	--	--	71.9	54.6	65.4	21.7
NEW JERSEY								
CENTRAL JERSEY POWER & LIGHT CO	78.9	71.2	74.1	8.2	--	--	--	--
PUBLIC SERVICE ELECTRIC & GAS CO	--	--	--	--	--	--	--	--

Table D-1 (continued)

STATE	NUCLEAR				COAL			
	A.P.	C.P.	E.A.	F.O.B.	A.P.	C.P.	E.A.	F.O.R.
NEW MEXICO								
ARIZONA PUBLIC SERVICE CO	--	--	--	--	71.3	61.6	61.4	18.0
NEW YORK								
CONSOLIDATED EDISON CO	67.1	46.6	65.1	7.5	--	--	--	--
NIAGARA MOHAWK POWER CORP	71.3	61.1	--	8.6	--	--	--	--
ROCHESTER G&E	77.4	67.3	--	12.0	--	--	--	--
NO. CAROLINA								
CAROLINA POWER & LIGHT CO	56.0	36.4	53.6	30.2	85.6	67.4	80.5	6.5
DUKE POWER CO	--	--	--	--	80.5	68.7	77.6	5.5
OHIO								
AMERICAN ELECTRIC POWER SER CORP	--	--	--	--	83.4	65.0	78.5	10.6
CINCINNATI GAS & ELECTRIC CO	--	--	--	--	67.9	54.3	67.9	16.5
CLEVELAND ELECTRIC ILLUMINATING	--	--	--	--	77.4	63.0	72.3	6.9
COLUMBUS & SOUTHERN OHIO ELEC CO	--	--	--	--	60.8	50.7	51.2	21.0
DAYTON POWER & LIGHT CO	--	--	--	--	78.3	64.4	75.7	12.2
PENNSYLVANIA								
ALLEGHENY POWER SERVICE CORP	--	--	--	--	75.8	63.7	71.4	13.3
DUQUESNE LIGHT CO	--	--	--	--	80.1	66.4	67.9	5.5
METROPOLITAN EDISON CO	73.8	73.3	71.5	10.9	--	--	--	--
PENNSYLVANIA ELECTRIC CO	--	--	--	--	65.0	58.1	58.6	22.6
PENNSYLVANIA POWER & LIGHT CO	--	--	--	--	81.1	68.6	74.1	8.4
PHILADELPHIA ELECTRIC CO	76.8	62.5	61.3	13.0	--	--	--	--
SO. CAROLINA								
CAROLINA POWER & LIGHT CO	76.7	71.1	75.6	12.6	--	--	--	--
DUKE POWER CO	68.5	64.0	65.8	19.2	--	--	--	--
TENNESSEE								
TENNESSEE VALLEY AUTHORITY	--	--	--	--	74.6	57.7	68.2	18.9
VERMONT								
YANKEE ATOMIC ELECTRIC CO	75.3	65.3	--	--	--	--	--	--
VIRGINIA								
VIRGINIA ELECTRIC & POWER CO	62.5	58.4	58.4	22.7	--	--	--	--
WASHINGTON								
PACIFIC POWER & LIGHT CO	--	--	--	--	57.3	46.0	56.3	15.1
W. VIRGINIA								
ALLEGHENY POWER SERVICE CORP	--	--	--	--	85.1	72.9	82.3	7.1
AMERICAN ELECTRIC POWER SER CORP	--	--	--	--	80.5	63.8	75.3	12.2
VIRGINIA ELECTRIC & POWER CO	--	--	--	--	58.1	48.8	40.7	31.1
WISCONSIN								
WISCONSIN ELECTRIC POWER CO	85.4	71.5	84.8	4.0	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY	--	--	--	--	84.7	61.3	75.0	0.4
WISCONSIN PUBLIC SERVICE CORP	83.5	72.8	80.5	7.4	--	--	--	--
WYOMING								
PACIFIC POWER & LIGHT	--	--	--	--	81.3	51.8	76.4	2.3

TABLE D-2: AVAILABILITY FACTORS FOR CALENDAR YEARS (BY STATE & UTILITY)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
ALABAMA POWER COMPANY										
COAL	--	--	--	66.1	90.6	64.7	72.9	80.6	82.6	69.5
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	--	--	--	--	--	--	--	--	69.3	51.0
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	--	--	--	--	--	--	--	74.0	20.1	27.9
COAL	87.3	75.3	78.3	79.4	79.5	43.4	74.2	63.3	56.5	63.1
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	77.1	56.6
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	27.5	28.1
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	--	79.6	75.8	83.0	93.4	78.9	62.8	86.1	87.4	70.2
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	--	76.8	86.3	77.7	86.6	73.4	48.0	85.2	80.9	82.8
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	81.5	72.5	32.6	30.0
TAMPA ELECTRIC COMPANY										
COAL	--	--	--	63.3	69.9	80.7	76.5	79.0	72.1	61.1
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	--	--	--	--	--	--	--	--	--	83.8
COAL	--	--	--	--	--	69.8	71.6	66.9	69.8	61.7
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	64.4	74.9	78.6	60.6
COMMONWEALTH EDISON COMPANY										
NUCLEAR	--	--	--	--	65.0	64.7	95.0	62.5	60.7	71.0
COAL	88.4	67.4	64.3	71.4	74.8	68.1	71.2	67.6	58.7	49.2
ILLINOIS POWER COMPANY										
COAL	--	--	--	--	70.6	77.9	82.8	86.6	68.9	78.4
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	73.6	72.2	79.9	65.4	70.4	47.4	79.2	80.1	70.7	73.2
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	--	--	--	82.1	92.6	87.1	--	81.6	77.5	88.8
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	--	--	57.9	70.3	59.9	60.0	84.6	63.8	73.1	79.5
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	--	--	--	--	71.0	72.7	82.1	85.5	87.0	70.3
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	79.5	77.0
IOWA PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	--	--	--	92.1
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	--	--	--	--	48.3	59.1	65.8
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	--	--	66.6	81.7	87.2	65.3	90.8	69.8	89.4
KENTUCKY UTILIZING COMPANY										
COAL	--	--	--	--	--	58.6	90.6	89.0	85.4	68.1
TENNESSEE VALLEY AUTHORITY										
COAL	79.9	83.1	73.6	75.3	73.2	76.8	87.3	50.1	70.2	69.7
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	89.4	68.7	79.9	96.0
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	95.0
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	86.6	39.2	74.3	60.8
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	--	--	--	--	--	--	--	--	--	57.6
CONSUMERS POWER COMPANY										
NUCLEAR	--	--	--	--	--	100.	12.9	5.5	64.5	55.2
DETROIT EDISON COMPANY										
COAL	--	81.8	89.8	82.8	87.8	79.3	79.4	79.6	76.0	68.7

Table D-2 (continued)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	--	--	--	--	--	82.9	95.5	61.8	80.3	81.6
COAL	--	--	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	--	--	--	--	--	--	--	70.6	74.3	28.0
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	62.6	84.6	89.3	79.0	86.9	81.4	77.9
UNION ELECTRIC COMPANY										
COAL	--	73.3	70.8	79.7	76.3	49.2	68.4	64.7	76.9	73.4
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	85.2	75.5
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	92.6	67.4	69.5
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	--	--	--	--	48.9	70.4	70.0	77.0	75.1	77.4
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	77.0	96.5	82.4	73.2	70.4	73.3	79.3
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	--	--	71.8	65.9	--	75.7	64.1	53.5	77.0
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	--	--	--	69.3	71.6	81.6	80.5	72.3	56.0	67.8
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	--	--	--	--	--	--	--	89.4	77.0	34.8
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	--	--	--	48.9	68.9	70.3	76.3	70.5	73.4	90.9
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	--	--	--	--	--	--	--	--	--	71.6
ROCHESTER G&E										
NUCLEAR	--	--	--	100.	88.3	69.2	95.0	62.4	77.7	49.5
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	56.0
COAL	89.3	89.7	81.2	86.4	86.4	85.2	84.1	83.5	89.9	84.7
DUKE POWER COMPANY										
COAL	--	--	--	64.2	80.2	83.5	88.0	86.4	78.2	85.2
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	87.9	82.9	81.5	78.7	81.5	88.0	80.2	75.9	78.9
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	--	--	--	--	85.6	79.0	51.8	41.8	72.1	74.2
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	--	--	--	--	90.8	77.7	79.8	69.8	78.1	73.9
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	--	--	--	--	--	--	--	87.8	72.4	22.2
DAYTON POWER & LIGHT COMPANY										
COAL	--	--	--	--	71.9	79.3	80.7	77.2	75.3	77.1
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	--	--	--	77.4	73.0	69.8	83.3	80.9	80.1	69.9
DUQUESNE LIGHT COMPANY										
COAL	--	--	--	--	57.9	86.8	99.6	80.0	81.1	75.3
METROPOLITAN EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	82.2	65.4
PENNSYLVANIA ELECTRIC COMPANY										
COAL	--	61.4	68.2	47.0	51.2	67.8	75.9	59.2	68.6	65.6
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	--	91.2	84.3	69.5	83.4	85.6	85.9	82.9	83.7	84.6
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	80.6	72.9
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	56.9	88.4	75.2	82.4	72.7	84.7
DUKE POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	60.1	75.5	63.0

Table D-2 (continued)

[illegible]

TABLE D-3: CAPACITY FACTORS FOR CALENDAR YEARS (BY STATE & UTILITY)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
ALABAMA POWER COMPANY										
COAL	--	--	--	55.4	56.1	51.9	63.2	57.7	58.1	53.9
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	--	--	--	--	--	--	--	--	53.8	51.8
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	--	--	--	--	--	--	--	29.1	10.3	15.4
COAL	85.3	64.5	65.5	64.9	63.3	34.3	61.4	43.6	37.8	47.1
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	66.4	52.5
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	26.2	28.1
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	--	34.3	69.8	81.3	92.1	78.5	62.8	84.0	86.5	65.5
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	--	72.1	71.9	69.6	83.9	70.4	41.0	75.8	76.2	70.9
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	57.4	63.4	69.1	66.9
TAMPA ELECTRIC COMPANY										
COAL	--	--	--	46.0	46.7	61.4	57.4	63.2	61.0	48.1
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	--	--	--	--	--	--	--	--	--	59.9
COAL	--	--	--	--	--	55.4	48.3	50.2	50.7	49.4
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	48.6	55.8	65.1	55.2
COMMONWEALTH EDISON COMPANY										
NUCLEAR	--	--	--	--	39.6	60.2	67.0	44.3	50.7	56.6
COAL	86.7	52.5	50.8	55.5	53.4	49.3	50.5	51.0	43.2	39.2
ILLINOIS POWER COMPANY										
COAL	--	--	--	--	67.3	74.9	73.8	76.7	63.9	65.4
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	71.2	67.7	80.7	64.3	49.8	40.3	78.1	61.2	58.3	66.6
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	--	--	--	72.0	79.2	73.2	--	68.6	63.3	72.6
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	--	--	80.8	55.6	48.0	50.1	57.9	42.2	52.6	59.1
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	--	--	--	--	50.3	60.4	67.7	71.3	64.3	52.7
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	52.2	59.3
IOWA PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	--	--	--	70.9
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	--	--	--	--	23.3	35.3	42.4
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	--	--	53.9	69.3	73.9	53.0	69.1	52.6	73.9
KENTUCKY UTILITIES COMPANY										
COAL	--	--	--	--	--	42.7	66.7	57.6	57.8	45.6
TENNESSEE VALLEY AUTHORITY										
COAL	77.5	81.3	79.4	64.6	66.8	73.3	70.8	61.3	47.9	66.5
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	57.8	62.7	71.4	88.8
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	92.8
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	72.2	34.9	46.0	42.8
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	--	--	--	--	--	--	--	--	--	76.7
CONSUMERS POWER COMPANY										
NUCLEAR	--	--	--	--	--	37.0	41.0	1.5	44.0	47.8
DETROIT EDISON COMPANY										
COAL	--	75.0	83.0	74.9	80.3	69.5	72.5	66.5	64.3	52.7

Table D-3 (continued)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	--	--	--	--	--	69.9	67.2	47.7	73.4	71.1
COAL	--	--	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	--	--	--	--	--	--	--	49.3	53.8	58.5
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	39.3	48.9	51.2	44.0	48.1	43.8	37.8
UNION ELECTRIC COMPANY										
COAL	--	54.6	58.3	64.1	55.6	32.6	52.9	48.6	61.2	59.0
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	59.7	54.9
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	61.0	52.5	56.7
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	--	--	--	--	22.5	51.0	53.7	60.9	59.0	62.4
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	73.2	70.2	61.3	67.9	88.8	57.6	13.1
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	--	--	53.1	46.9	--	61.1	43.5	28.9	58.5
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	--	--	--	40.3	64.0	73.2	71.4	62.3	49.1	59.0
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	--	--	--	--	--	--	--	44.7	64.9	30.3
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	--	--	--	42.4	56.8	60.3	66.6	63.3	58.9	79.2
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	--	--	--	--	--	--	--	--	--	61.5
ROCHESTER G&E										
NUCLEAR	--	--	--	63.2	75.4	58.0	94.2	54.0	76.6	49.8
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	36.4
COAL	88.1	74.2	68.1	69.3	71.4	68.4	69.6	59.6	70.6	65.1
DUKE POWER COMPANY										
COAL	--	--	--	62.4	74.8	77.1	76.1	76.7	61.1	68.5
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	84.1	74.1	72.0	67.9	72.2	73.3	48.2	56.0	64.5
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	--	--	--	--	69.5	59.9	38.8	29.3	46.7	55.5
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	--	--	--	--	84.4	69.9	68.6	35.2	63.9	62.6
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	--	--	--	--	--	--	--	62.9	54.3	35.0
DAYTON POWER & LIGHT COMPANY										
COAL	--	--	--	--	61.3	88.6	74.3	56.8	57.9	64.4
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	--	--	--	70.4	62.1	65.3	67.9	47.9	65.2	70.2
DUQUESNE LIGHT COMPANY										
COAL	--	--	--	--	61.9	67.9	70.3	65.9	71.4	61.2
METROPOLITAN EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	82.0	64.6
PENNSYLVANIA ELECTRIC COMPANY										
COAL	--	53.2	61.5	43.3	47.1	60.7	66.7	50.5	59.4	56.3
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	--	87.0	77.7	58.1	69.2	66.7	73.8	71.3	72.3	75.8
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	59.2	65.8
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	41.6	82.1	65.0	82.6	71.7	83.4
DUKE POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	55.4	70.4	59.6

Table D-3 (continued)

[illegible]

TABLE D-4: EQUIVALENT AVAILABILITY FOR CALENDAR YEARS (BY STATE & UTILITY)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
ALABAMA POWER COMPANY										
COAL	--	--	--	65.2	87.6	58.8	67.5	74.0	69.0	57.8
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	--	--	--	--	--	--	--	--	67.7	47.3
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	--	--	--	--	--	--	--	71.3	20.0	27.6
COAL	86.1	73.0	76.6	77.9	77.6	42.1	70.5	54.6	52.6	52.0
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	77.0	56.6
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	--	28.1
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	--	77.1	74.4	81.4	91.0	76.0	61.4	84.3	86.1	--
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	--	72.6	84.8	73.4	--	--	--	89.2	75.7	72.3
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	68.3	37.8	30.0
TAMPA ELECTRIC COMPANY										
COAL	--	--	--	62.4	69.1	76.4	73.6	77.0	68.9	56.8
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
COAL	--	--	--	--	--	62.7	66.4	57.3	62.3	56.2
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	64.4	72.2	78.6	60.6
COMMONWEALTH EDISON COMPANY										
NUCLEAR	--	--	--	--	36.8	32.1	92.3	55.8	51.8	60.9
COAL	85.3	59.3	57.4	62.0	60.1	54.4	59.1	55.6	50.9	41.3
ILLINOIS POWER COMPANY										
COAL	--	--	--	--	70.3	77.0	80.8	84.7	67.6	76.7
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	69.4	68.2	75.1	56.2	66.6	45.0	77.7	71.4	67.6	68.2
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	--	--	--	79.1	85.6	83.5	--	76.2	73.7	85.1
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	--	--	--	70.3	59.9	60.0	04.6	63.0	73.1	74.4
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	--	--	--	--	71.0	72.7	82.1	85.5	87.0	67.2
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	62.0	74.2
IOWA PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	--	--	--	62.1
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	--	--	--	--	48.3	59.1	65.8
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	--	--	55.9	75.4	81.2	62.7	84.3	58.4	77.7
KENTUCKY UTILITIES COMPANY										
COAL	--	--	--	--	--	58.6	90.6	85.8	84.4	68.1
TENNESSEE VALLEY AUTHORITY										
COAL	79.5	80.7	72.0	60.7	64.0	74.0	60.9	46.5	62.2	55.0
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	55.1	66.8	92.9
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	90.7
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	71.7	37.4	49.6	41.7
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	--	--	--	--	--	--	--	--	--	55.1
CONSUMERS POWER COMPANY										
NUCLEAR	--	--	--	--	--	81.3	11.2	1.9	41.2	48.4
DETROIT EDISON COMPANY										
COAL	--	81.8	89.5	79.4	85.6	74.5	73.6	70.2	65.2	56.3

Table D-4 (continued)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	95.5	61.5	79.7	80.9
COAL	--	--	66.0	--	--	86.4	--	79.8	78.0	79.7
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	--	--	--	--	--	--	--	69.2	67.5	22.3
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	--	84.6	89.3	77.9	86.9	81.4	77.9
UNION ELECTRIC COMPANY										
COAL	--	--	--	66.9	63.9	40.0	60.6	55.3	66.2	63.6
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	71.9	73.3
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	92.6	67.4	64.3
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	--	--	--	--	44.4	67.5	65.1	69.1	66.8	68.2
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	77.0	96.3	82.2	67.2	66.1	59.2	70.7
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	--	--	62.9	63.7	--	67.3	55.3	37.9	72.7
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	--	--	--	54.3	63.5	71.4	72.1	61.1	44.0	61.6
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	--	--	--	--	--	--	--	89.4	73.3	32.6
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	--	--	--	--	67.8	--	--	70.5	73.0	90.9
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
ROCHESTER G&E										
NUCLEAR	--	--	--	****	88.3	--	95.0	62.4	77.7	48.3
N.C. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	53.6
COAL	89.1	89.2	79.8	85.0	85.8	83.6	82.5	77.9	84.5	78.9
DUKE POWER COMPANY										
COAL	--	--	--	56.5	75.9	81.3	86.9	85.9	76.5	82.4
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	85.4	79.1	77.7	74.1	78.6	83.7	71.8	65.6	71.6
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	--	--	--	--	84.9	77.5	51.2	41.6	65.4	72.9
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	--	--	--	--	88.9	76.8	78.3	64.4	70.6	67.1
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	--	--	--	--	--	--	--	72.5	62.4	18.8
DAYTON POWER & LIGHT COMPANY										
COAL	--	--	--	--	68.9	77.0	79.5	76.2	74.3	70.9
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	--	--	--	75.7	67.2	67.9	78.0	76.5	73.7	65.0
DUQUESNE LIGHT COMPANY										
COAL	--	--	--	--	57.9	80.8	66.8	65.7	66.2	69.9
METROPOLITAN EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	79.8	63.2
PENNSYLVANIA ELECTRIC COMPANY										
COAL	--	50.3	55.5	41.8	--	60.0	68.4	52.4	59.9	58.2
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	--	90.5	82.3	68.1	78.7	80.8	80.7	73.4	78.0	78.6
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	55.5	67.1
S.O. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	56.9	07.7	74.1	81.1	70.9	83.1
DUKE POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	58.3	72.0	61.0

Table D-4 (continued)

[illegible]

TABLE D-5: FORCED OUTAGE RATES FOR CALENDAR YEARS (BY STATE & UTILITY)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
ALABAMA										
ALABAMA POWER COMPANY										
COAL	--	--	--	10.3	3.1	16.7	19.6	15.8	9.5	14.6
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	--	--	--	--	--	--	--	--	14.3	27.7
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	--	--	--	--	--	--	--	25.6	87.4	67.6
COAL	9.1	11.8	8.8	8.6	15.0	49.5	14.1	26.3	38.0	34.1
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	6.7	21.6
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	72.5	69.6
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	--	57.8	9.9	--	2.1	1.5	23.7	7.2	0.2	2.5
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	--	16.7	4.1	3.3	--	--	--	5.6	9.9	6.4
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	7.7	2.1	3.0
TAMPA ELECTRIC COMPANY										
COAL	--	--	--	16.5	6.2	5.6	12.9	8.2	7.5	13.7
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	--	--	--	--	--	--	--	--	--	9.0
COAL	--	--	--	--	--	24.1	16.0	23.2	21.5	21.2
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	14.9	13.6	13.7	28.6
COMMONWEALTH EDISON COMPANY										
NUCLEAR	--	--	--	--	14.2	15.3	2.9	25.2	20.6	12.5
COAL	9.3	8.9	16.9	12.6	15.5	14.7	10.3	15.8	19.4	23.7
ILLINOIS POWER COMPANY										
COAL	--	--	--	--	3.0	7.8	5.7	8.7	9.1	8.4
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	14.6	13.2	12.9	19.2	34.1	33.0	12.6	14.5	13.9	14.6
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	--	--	--	2.5	4.2	4.0	--	6.5	3.4	6.5
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	--	--	5.0	5.7	34.0	21.2	7.2	0.4	3.4	10.0
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	--	--	--	--	1.9	4.3	1.8	3.2	8.5	5.0
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	6.1	3.7
IOWA PUBLIC SERVICE COMPANY										
COAL	--	--	--	--	--	--	--	--	--	3.9
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	--	--	--	--	39.8	29.8	27.2
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	--	--	25.3	10.6	12.0	34.8	9.4	11.8	7.4
KENTUCKY UTILITIES COMPANY										
COAL	--	--	--	--	--	0.1	3.5	1.9	4.2	7.1
TENNESSEE VALLEY AUTHORITY										
COAL	3.6	3.9	11.1	14.2	11.6	11.2	14.4	16.5	23.5	15.8
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	6.4	2.6	3.7	0.7
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	1.6
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	3.0	48.1	18.3	9.4
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	--	--	--	--	--	--	--	--	--	26.4
CONSUMERS POWER COMPANY										
NUCLEAR	--	--	--	--	--	0.0	54.9	94.3	31.8	12.5
DETROIT EDISON COMPANY										
COAL	--	4.6	1.1	4.6	3.7	12.2	5.9	14.0	14.2	18.5

Table D-5 (continued)

STATE	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	--	--	--	--	--	14.2	5.1	24.9	7.6	5.8
COAL	--	--	5.1	3.3	7.0	5.8	--	10.4	11.6	6.4
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	--	--	--	--	--	--	--	29.9	12.3	9.9
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	--	--	16.6	9.1	3.3	4.5	3.6	12.5	23.3
UNION ELECTRIC COMPANY										
COAL	--	16.3	13.4	13.6	19.3	41.1	22.4	15.9	10.2	10.5
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	--	13.6	4.7
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	--	--	--	--	--	--	--	3.7	2.3	13.1
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	--	--	--	--	50.1	23.6	21.8	18.5	20.0	11.0
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	7.4	1.4	4.9	14.4	16.3	11.4	1.8
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	--	--	23.8	25.3	--	19.8	15.5	17.0	11.2
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	--	--	--	15.1	11.7	13.5	12.1	26.6	25.0	20.5
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	--	--	--	--	--	--	--	7.8	8.4	6.3
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	--	--	--	43.4	1.2	3.0	3.8	4.3	2.3	2.0
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	--	--	--	--	--	--	--	--	--	15.4
ROCHESTER GEE										
NUCLEAR	--	--	--	0.0	3.3	1.6	4.6	35.4	3.6	35.2
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	--	30.2
COAL	3.1	3.4	6.6	8.0	2.8	8.1	11.4	6.9	7.2	6.9
DUKE POWER COMPANY										
COAL	--	--	--	17.6	5.9	3.5	2.9	1.5	2.9	6.2
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	--	7.4	8.7	12.1	14.9	9.8	9.6	13.6	14.4	10.6
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	--	--	--	--	5.7	9.0	27.2	42.1	10.4	14.1
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	--	--	--	--	6.0	6.1	5.4	7.9	7.1	8.5
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	--	--	--	--	--	--	--	11.6	16.9	34.4
DAYTON POWER & LIGHT COMPANY										
COAL	--	--	--	--	15.8	10.3	13.3	14.2	10.9	14.0
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	--	--	--	12.9	20.1	16.2	13.6	15.7	5.9	10.0
DUQUESNE LIGHT COMPANY										
COAL	--	--	--	--	4.5	6.3	0.4	12.5	3.7	5.7
METROPOLITAN EDISON COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	11.4	10.4
PENNSYLVANIA ELECTRIC COMPANY										
COAL	--	20.0	22.2	40.0	--	23.9	17.6	27.3	23.9	23.9
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	--	0.6	--	10.7	4.0	8.2	4.8	9.8	5.2	5.7
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	--	--	--	--	--	--	--	--	13.8	12.2
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	--	--	--	--	47.6	4.2	5.9	0.9	14.0	2.7
DUKE POWER COMPANY										
NUCLEAR	--	--	--	--	--	--	--	14.3	18.8	21.1

Table D-5 (continued)

[illegible]

TABLE D-6: AVAILABILITY FACTOR BY LIFE YEARS (BY STATE & UTILITY)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
ALABAMA POWER COMPANY										
COAL	65.2	82.5	81.6	78.8	63.3	88.8	63.1	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	69.3	51.0	--	--	--	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	46.8	25.3	25.8	--	--	--	--	--	--	--
COAL	71.7	83.1	77.0	76.4	79.8	84.1	88.3	71.1	71.9	62.1
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	77.1	56.6	--	--	--	--	--	--	--	--
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	27.5	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	79.6	75.8	83.0	93.4	78.9	62.8	86.1	87.4	70.2	--
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	83.3	72.7	61.6	82.9	81.7	63.3	91.2	86.1	82.5	--
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	79.4	47.8	29.9	37.7	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY										
COAL	82.2	66.6	73.9	79.8	83.9	62.8	52.9	76.8	52.4	--
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	83.8	--	--	--	--	--	--	--	--	--
COAL	82.4	72.6	57.4	56.4	59.0	66.0	64.2	65.7	--	--
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	64.4	74.9	78.6	60.6	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY										
NUCLEAR	74.7	71.0	65.5	65.3	68.8	73.3	--	--	--	--
COAL	63.1	66.9	71.0	72.8	72.0	75.1	60.6	56.5	44.1	88.5
ILLINOIS POWER COMPANY										
COAL	78.7	69.5	84.3	85.4	76.6	71.8	--	--	--	--
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	76.6	82.2	74.3	71.1	87.4	73.1	79.4	67.8	73.9	70.4
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	81.4	89.7	87.1	--	82.5	68.3	88.8	--	--	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	65.5	73.2	59.0	60.0	84.6	63.0	73.0	83.0	--	--
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	77.5	80.9	85.3	68.9	87.6	73.6	--	--	--	--
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	79.5	77.0	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY										
COAL	92.1	--	--	--	--	--	--	--	--	--
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	48.3	59.1	65.8	--	--	--	--	--	--	--
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	66.6	81.7	87.2	65.3	90.8	69.8	89.4	--	--	--
KENTUCKY UTILITIES COMPANY										
COAL	72.2	81.9	92.2	97.7	68.1	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
COAL	69.5	72.3	77.3	79.2	70.7	70.7	75.5	77.2	75.9	62.0
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	89.4	68.7	79.9	96.0	--	--	--	--	--	--
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	95.0	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	86.6	39.2	74.3	60.8	--	--	--	--	--	--
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	57.6	--	--	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY										
NUCLEAR	100.	12.9	5.5	64.5	55.2	--	--	--	--	--
DETROIT EDISON COMPANY										
COAL	79.0	79.4	72.3	79.3	78.3	77.2	80.8	85.7	--	--

Table D-6 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	71.3	85.9	76.1	72.2	91.5	--	--	--	--	--
COAL	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9	--	--
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	70.6	74.3	28.0	--	--	--	--	--	--	--
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	62.6	84.6	89.3	79.0	86.9	81.4	77.9	--	--	--
UNION ELECTRIC COMPANY										
COAL	75.4	64.4	82.1	69.4	66.4	62.3	50.1	64.6	72.0	--
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	85.2	75.5	--	--	--	--	--	--	--	--
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	92.6	67.4	69.5	--	--	--	--	--	--	--
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	60.9	64.7	80.9	68.9	82.7	72.8	--	--	--	--
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	77.0	96.5	82.4	73.2	70.4	73.3	79.3	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	71.8	65.9	--	75.7	64.1	53.5	77.0	--	--
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	69.5	77.6	81.6	76.1	60.5	61.8	74.8	--	--	--
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	89.4	77.0	34.8	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	48.9	68.9	70.3	76.3	70.5	73.4	90.9	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	71.6	--	--	--	--	--	--	--	--	--
ROCHESTER G&E										
NUCLEAR	100.	88.3	69.2	95.0	62.4	77.7	49.5	--	--	--
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	56.0	--	--	--	--	--	--	--	--	--
COAL	84.0	87.0	84.9	88.2	84.3	81.3	88.6	83.9	88.9	91.3
DUKE POWER COMPANY										
COAL	71.0	85.9	88.7	90.6	76.9	89.2	84.7	--	--	--
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	92.2	77.3	85.3	78.9	82.1	84.5	75.4	69.5	74.8	--
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	67.9	85.6	79.0	51.8	41.8	72.1	80.5	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	86.4	65.4	83.8	86.8	66.3	60.5	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	87.8	72.4	72.2	--	--	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY										
COAL	78.0	80.9	72.8	85.2	71.1	62.2	--	--	--	--
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	76.3	72.1	73.7	82.7	69.5	84.3	83.9	--	--	--
DUQUESNE LIGHT COMPANY										
COAL	57.9	86.8	99.6	80.0	81.1	75.3	--	--	--	--
METROPOLITAN EDISON COMPANY										
NUCLEAR	82.2	65.4	--	--	--	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY										
COAL	70.3	64.5	64.4	65.3	64.6	62.5	61.5	86.1	64.8	--
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	74.6	82.1	82.6	86.0	81.9	82.6	85.0	90.8	94.4	83.6
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	80.6	72.9	--	--	--	--	--	--	--	--
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	56.9	88.4	75.2	82.4	72.7	84.7	--	--	--	--
DUKE POWER COMPANY										
NUCLEAR	70.1	69.3	57.3	--	--	--	--	--	--	--

Table D-6 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
TENNESSEE										
TENNESSEE VALLEY AUTHORITY										
COAL	82.3	70.7	67.2	79.1	85.2	74.4	94.2	92.0	72.0	86.7
VERMONT										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	61.1	74.1	87.8	78.0	--	--	--	--	--	--
VIRGINIA										
VIRGINIA ELECTRIC & POWER COMPANY										
NUCLEAR	65.9	53.0	74.1	52.3	--	--	--	--	--	--
COAL	63.5	77.5	72.2	74.7	--	55.3	71.9	--	--	--
WASHINGTON										
PACIFIC POWER & LIGHT COMPANY										
COAL	61.1	52.0	38.5	69.7	70.6	--	--	--	--	--
W. VIRGINIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	83.4	90.1	86.5	83.6	90.2	59.4	86.7	80.4	67.7	--
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	76.6	77.6	82.7	82.1	78.7	83.1	80.2	84.2	75.2	79.7
VIRGINIA ELECTRIC & POWER COMPANY										
COAL	44.5	78.0	56.8	82.8	82.1	87.3	74.1	66.9	63.3	64.4
WISCONSIN										
WISCONSIN ELECTRIC POWER COMPANY										
NUCLEAR	96.2	76.7	86.1	86.1	72.2	82.1	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY										
COAL	84.7	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION										
NUCLEAR	88.1	78.9	--	--	--	--	--	--	--	--
WYOMING										
PACIFIC POWER & LIGHT COMPANY										
COAL	78.3	88.5	--	--	--	--	--	--	--	--

TABLE D-7: CAPACITY FACTOR BY LIFE YEARS (BY STATE & UTILITY)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
ALABAMA POWER COMPANY										
COAL	53.8	61.3	64.1	62.0	40.4	57.8	51.8	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	53.8	51.8	--	--	--	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	17.5	15.7	14.0	--	--	--	--	--	--	--
COAL	71.7	83.1	76.8	68.4	73.8	76.6	78.2	56.7	56.4	49.5
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	66.4	52.5	--	--	--	--	--	--	--	--
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	26.2	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	34.3	69.8	81.3	92.1	78.5	62.8	84.0	86.5	65.5	--
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	68.9	63.4	51.6	73.5	77.3	57.3	88.4	83.8	80.7	--
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	63.2	61.9	67.2	71.8	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY										
COAL	63.4	58.6	58.1	60.8	67.6	47.3	34.6	53.2	36.3	--
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	59.9	--	--	--	--	--	--	--	--	--
COAL	60.4	58.0	44.3	45.5	38.5	44.5	53.2	52.0	--	--
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	48.6	55.8	65.1	55.2	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY										
NUCLEAR	51.7	57.7	53.8	48.7	50.3	62.9	--	--	--	--
COAL	55.4	57.2	60.0	60.9	55.8	57.1	46.0	45.5	30.1	58.2
ILLINOIS POWER COMPANY										
COAL	69.8	69.3	74.1	73.5	64.1	59.6	--	--	--	--
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	68.8	75.7	67.0	61.5	86.2	71.5	60.0	64.1	73.8	66.3
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	69.4	74.9	73.2	--	70.2	55.9	72.6	--	--	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	66.4	59.0	48.0	50.1	57.9	42.2	53.0	55.8	--	--
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	61.0	67.1	68.1	52.7	56.7	59.9	--	--	--	--
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	52.2	59.3	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY										
COAL	70.9	--	--	--	--	--	--	--	--	--
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	23.3	35.3	42.4	--	--	--	--	--	--	--
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	53.9	69.3	73.9	53.0	69.1	52.6	73.9	--	--	--
KENTUCKY UTILITIES COMPANY										
COAL	53.2	62.8	51.6	56.7	45.6	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
COAL	50.4	68.5	75.0	73.0	74.0	68.9	70.0	72.1	72.6	74.2
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	57.8	62.7	71.4	88.8	--	--	--	--	--	--
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	92.8	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	72.2	34.9	46.0	42.8	--	--	--	--	--	--
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	76.7	--	--	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY										
NUCLEAR	37.0	41.0	1.5	44.0	47.8	--	--	--	--	--
DETROIT EDISON COMPANY										
COAL	67.1	68.4	58.9	70.3	69.3	67.6	67.7	79.8	--	--

Table D-7 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	59.8	70.9	66.2	59.4	81.9	--	--	--	--	--
COAL	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7	--	--
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	49.3	53.8	58.5	--	--	--	--	--	--	--
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	39.3	48.9	51.2	44.0	48.1	43.8	37.8	--	--	--
UNION ELECTRIC COMPANY										
COAL	57.6	50.4	62.6	53.4	47.4	48.1	40.6	52.2	63.3	--
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	59.7	54.9	--	--	--	--	--	--	--	--
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	61.0	52.5	56.7	--	--	--	--	--	--	--
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	37.4	49.1	61.9	54.8	68.1	53.9	--	--	--	--
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	73.2	78.2	81.3	67.9	66.8	57.6	73.1	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	53.1	46.9	--	61.1	43.5	28.9	58.5	--	--
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	49.8	69.7	74.4	66.8	54.5	52.4	66.3	--	--	--
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	44.7	64.9	30.3	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	42.4	56.8	60.3	66.6	63.3	58.9	79.2	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	61.5	--	--	--	--	--	--	--	--	--
ROCHESTER GCE										
NUCLEAR	63.2	75.4	58.0	94.2	54.0	76.6	49.8	--	--	--
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	36.4	--	--	--	--	--	--	--	--	--
COAL	70.8	73.3	67.0	69.9	69.1	61.0	69.9	63.9	66.9	74.1
DUKE POWER COMPANY										
COAL	60.9	78.3	78.7	80.4	61.4	66.9	60.3	--	--	--
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	44.0	17.8	15.1	46.8	72.0	63.9	37.4	54.5	58.3	--
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	54.3	69.5	59.9	38.8	29.3	46.7	56.7	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	78.1	66.7	69.4	39.6	54.4	52.8	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	62.9	54.3	35.0	--	--	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY										
COAL	67.6	68.3	60.2	64.5	53.3	57.1	--	--	--	--
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	70.6	61.9	61.1	62.1	53.4	72.1	72.5	--	--	--
DUQUESNE LIGHT COMPANY										
COAL	61.9	67.9	70.3	65.9	71.4	61.2	--	--	--	--
METROPOLITAN EDISON COMPANY										
NUCLEAR	82.0	64.6	--	--	--	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY										
COAL	63.3	58.7	54.8	55.5	57.0	53.0	52.7	80.0	59.5	--
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	57.8	68.9	72.5	75.3	72.6	69.8	71.6	82.5	84.1	71.6
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	59.2	65.8	--	--	--	--	--	--	--	--
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	41.6	82.1	65.0	82.6	71.7	83.4	--	--	--	--
DUKE POWER COMPANY										
NUCLEAR	64.5	65.5	55.3	--	--	--	--	--	--	--

Table D-7 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
TENNESSEE										
TENNESSEE VALLEY AUTHORITY										
COAL	65.5	58.2	46.6	65.4	73.2	69.1	73.1	83.6	62.3	79.5
VERMONT										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	43.5	59.8	85.1	72.6	--	--	--	--	--	--
VIRGINIA										
VIRGINIA ELECTRIC & POWER COMPANY										
NUCLEAR	58.8	50.0	70.3	50.9	--	--	--	--	--	--
COAL	42.3	58.8	60.0	59.6	--	36.0	43.2	--	--	--
WASHINGTON										
PACIFIC POWER & LIGHT COMPANY										
COAL	35.8	44.0	46.7	54.4	51.4	--	--	--	--	--
W. VIRGINIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	70.6	76.7	77.4	74.7	80.1	53.3	75.9	71.7	60.5	--
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	63.7	63.7	62.7	62.9	63.5	70.9	77.0	79.7	75.6	72.3
VIRGINIA ELECTRIC & POWER COMPANY										
COAL	42.5	70.1	50.2	68.4	64.6	72.4	61.5	47.4	44.2	55.9
WISCONSIN										
WISCONSIN ELECTRIC POWER COMPANY										
NUCLEAR	57.6	56.0	78.8	81.1	69.2	78.4	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY										
COAL	61.3	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION										
NUCLEAR	67.1	78.4	--	--	--	--	--	--	--	--
WYOMING										
PACIFIC POWER & LIGHT COMPANY										
COAL	47.9	46.8	--	--	--	--	--	--	--	--

TABLE D-8: EQUIVALENT AVAILABILITY BY LIFE YEARS (BY STATE & UTILITY)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
ALABAMA POWER COMPANY										
COAL	62.0	79.9	73.3	66.8	48.1	76.1	57.2	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	67.7	47.3	--	--	--	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	45.4	25.3	25.3	--	--	--	--	--	--	--
COAL	69.7	81.2	76.3	74.9	79.3	82.9	86.0	68.4	68.9	59.8
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	77.0	56.6	--	--	--	--	--	--	--	--
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	--	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	77.1	74.4	81.4	91.0	76.0	61.4	84.3	86.1	--	--
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	70.8	84.8	73.4	--	68.9	66.4	89.3	82.5	81.6	--
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	73.9	51.1	28.7	38.5	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY										
COAL	81.1	64.4	72.5	78.1	78.9	59.5	50.9	72.7	43.7	--
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
COAL	77.4	62.9	51.2	49.2	54.2	58.7	56.2	58.5	--	--
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	64.4	72.2	78.6	60.6	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY										
NUCLEAR	64.2	66.4	58.7	51.0	53.7	65.8	--	--	--	--
COAL	57.2	61.6	60.5	63.7	62.9	65.7	52.6	47.2	34.3	67.6
ILLINOIS POWER COMPANY										
COAL	77.4	68.7	83.2	82.6	74.8	69.2	--	--	--	--
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	71.9	85.5	61.9	--	82.6	68.7	73.7	64.4	71.9	66.9
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	79.2	84.5	83.5	--	73.1	64.0	85.1	--	--	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	73.1	70.8	59.9	60.0	84.6	63.8	73.0	77.6	--	--
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	74.4	80.9	85.3	68.9	87.6	73.6	--	--	--	--
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	62.0	74.2	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY										
COAL	62.1	--	--	--	--	--	--	--	--	--
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	48.3	59.1	65.8	--	--	--	--	--	--	--
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	55.9	75.4	81.2	67.7	84.3	58.4	77.7	--	--	--
KENTUCKY UTILITIES COMPANY										
COAL	68.9	80.9	92.2	97.7	68.1	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
COAL	62.2	68.8	75.1	73.7	66.7	66.3	56.0	68.0	73.6	60.3
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	55.1	66.8	92.9	--	--	--	--	--	--
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	90.7	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	71.7	37.4	49.6	41.7	--	--	--	--	--	--
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	55.1	--	--	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY										
NUCLEAR	81.3	11.2	1.9	41.2	48.4	--	--	--	--	--
DETROIT EDISON COMPANY										
COAL	71.3	70.2	62.9	73.3	72.1	69.9	74.1	81.8	--	--

Table D-8 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	65.3	85.2	75.2	72.2	91.5	--	--	--	--	--
COAL	66.0	--	--	86.4	--	79.8	78.0	79.7	--	--
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	69.2	67.5	22.3	--	--	--	--	--	--	--
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	--	84.6	89.3	77.9	86.9	81.4	77.9	--	--	--
UNION ELECTRIC COMPANY										
COAL	66.3	54.0	69.1	58.5	57.0	54.3	42.9	56.4	67.3	--
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	71.9	73.3	--	--	--	--	--	--	--	--
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	92.6	67.4	64.3	--	--	--	--	--	--	--
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	57.6	60.3	73.8	62.1	73.2	63.7	--	--	--	--
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	77.0	96.3	82.2	67.2	66.1	59.2	70.7	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	62.9	63.7	--	67.3	55.3	37.9	72.7	--	--
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
CCAL	56.8	68.5	73.8	65.7	46.0	56.0	68.0	--	--	--
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	89.4	73.3	32.6	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	--	67.8	--	--	70.5	73.0	90.9	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	--	--	--	--	--	--	--	--	--	--
ROCHESTER G&E										
NUCLEAR	100.	88.3	--	95.0	62.4	77.7	48.3	--	--	--
NC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	53.6	--	--	--	--	--	--	--	--	--
COAL	78.2	83.0	81.0	86.5	83.0	80.2	85.1	81.1	88.2	88.9
DUKE POWER COMPANY										
CCAL	66.5	83.5	87.2	89.4	76.3	87.7	83.7	--	--	--
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	90.4	72.8	81.2	75.3	79.2	77.6	63.5	59.4	62.5	--
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	67.9	84.9	77.5	51.2	41.6	65.4	78.0	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	84.0	60.0	79.9	81.1	58.7	57.7	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
CCAL	72.5	62.4	18.8	--	--	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY										
COAL	76.2	78.1	72.2	83.3	66.3	54.5	--	--	--	--
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	73.5	68.2	71.3	75.5	63.5	79.4	78.0	--	--	--
DUQUESNE LIGHT COMPANY										
COAL	57.9	80.8	66.8	65.7	66.2	69.9	--	--	--	--
METROPOLITAN EDISON COMPANY										
NUCLEAR	79.8	63.2	--	--	--	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY										
COAL	59.3	55.9	54.5	59.7	58.9	55.4	53.7	79.8	60.7	--
PENNSYLVANIA POWER & LIGHT COMPANY										
CCAL	68.3	75.8	77.0	80.8	76.6	77.1	80.1	88.9	87.3	80.7
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	55.5	67.1	--	--	--	--	--	--	--	--
SO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	56.9	87.7	74.1	81.1	70.9	83.1	--	--	--	--
DUKE POWER COMPANY										
NUCLEAR	66.8	67.0	56.2	--	--	--	--	--	--	--

Table D-8 (continued)

STATE	1	2	3	4	5	6	7	8	9	10
TENNESSEE										
TENNESSEE VALLEY AUTHORITY										
COAL	79.5	60.0	62.0	73.3	77.9	73.4	94.0	91.8	70.8	85.9
VERMONT										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	62.1	81.9	78.0	--	--	--	--	--	--
VIRGINIA										
VIRGINIA ELECTRIC & POWER COMPANY										
NUCLEAR	54.8	53.0	79.6	52.3	--	--	--	--	--	--
COAL	60.9	69.8	62.3	66.8	--	48.8	59.3	--	--	--
WASHINGTON										
PACIFIC POWER & LIGHT COMPANY										
COAL	61.1	52.0	38.5	67.3	66.4	--	--	--	--	--
W. VIRGINIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	81.0	88.5	84.4	82.5	89.2	57.8	82.3	76.4	63.7	--
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	75.6	82.3	72.7	69.6	67.7	80.8	78.5	80.2	73.8	76.4
VIRGINIA ELECTRIC & POWER COMPANY										
COAL	35.8	72.0	52.5	78.9	78.3	83.1	69.5	63.9	61.1	62.4
WISCONSIN										
WISCONSIN ELECTRIC POWER COMPANY										
NUCLEAR	96.1	75.8	86.1	80.8	71.8	82.3	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY										
COAL	75.0	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION										
NUCLEAR	82.3	78.7	--	--	--	--	--	--	--	--
WYOMING										
PACIFIC POWER & LIGHT COMPANY										
COAL	74.9	81.9	--	--	--	--	--	--	--	--

TABLE D-9: FORCED OUTAGE RATES BY LIFE YEARS(BY STATE & UTILITY)

STATE	1	2	3	4	5	6	7	8	9	10
ALABAMA										
ALABAMA POWER COMPANY										
COAL	14.6	15.8	7.4	13.6	25.0	8.1	12.9	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY										
COAL	14.3	27.7	--	--	--	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
NUCLEAR	59.4	73.1	70.9	--	--	--	--	--	--	--
COAL	3.3	6.3	22.2	10.5	11.1	10.2	8.1	4.8	14.2	33.0
ARKANSAS										
ARKANSAS POWER & LIGHT COMPANY										
NUCLEAR	6.7	21.6	--	--	--	--	--	--	--	--
CALIFORNIA										
SACRAMENTO MUNICIPAL UTILITY DISTRICT										
NUCLEAR	72.5	69.6	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY										
NUCLEAR	57.8	9.9	--	2.1	1.5	23.7	7.2	0.2	2.5	--
CONNECTICUT										
NORTHEAST UTILITIES SERVICE COMPANY										
NUCLEAR	12.5	4.1	3.3	2.2	19.1	8.9	8.9	0.8	2.1	--
FLORIDA										
FLORIDA POWER & LIGHT COMPANY										
NUCLEAR	6.3	9.1	4.0	0.1	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY										
COAL	3.7	4.9	8.8	5.1	4.7	16.4	19.4	14.6	24.1	--
GEORGIA										
GEORGIA POWER CO.										
NUCLEAR	9.0	--	--	--	--	--	--	--	--	--
COAL	14.2	13.1	32.9	23.3	36.9	17.4	18.3	13.2	--	--
ILLINOIS										
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY										
COAL	14.9	13.6	13.7	28.6	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY										
NUCLEAR	18.3	17.4	18.7	17.0	5.3	4.0	--	--	--	--
COAL	8.4	16.7	10.4	16.0	11.7	7.7	17.4	26.3	19.2	11.1
ILLINOIS POWER COMPANY										
COAL	9.1	8.0	6.5	5.2	10.1	5.7	--	--	--	--
INDIANA										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	17.0	10.5	10.5	16.0	8.5	15.2	22.6	15.1	13.4	12.3
INDIANAPOLIS POWER & LIGHT COMPANY										
COAL	3.3	3.3	4.0	--	8.9	4.4	6.5	--	--	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY										
COAL	3.6	7.5	34.0	21.2	7.2	0.4	4.7	10.7	--	--
PUBLIC SERVICE COMPANY OF INDIANA										
COAL	2.2	3.0	2.8	4.9	13.8	6.7	--	--	--	--
IOWA										
IOWA ELECTRIC LIGHT & POWER COMPANY										
NUCLEAR	6.1	3.7	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY										
COAL	3.9	--	--	--	--	--	--	--	--	--
KANSAS										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	39.8	29.8	27.2	--	--	--	--	--	--	--
KENTUCKY										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	25.3	10.6	12.0	34.8	9.4	11.8	7.4	--	--	--
KENTUCKY UTILITIES COMPANY										
COAL	1.5	5.9	0.7	0.1	7.2	--	--	--	--	--
TENNESSEE VALLEY AUTHORITY										
COAL	20.3	19.2	13.4	5.5	8.2	15.5	11.4	10.2	12.8	17.0
MAINE										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	6.4	2.6	3.7	0.7	--	--	--	--	--	--
MARYLAND										
BALTIMORE GAS & ELECTRIC COMPANY										
NUCLEAR	1.6	--	--	--	--	--	--	--	--	--
MASSACHUSETTS										
BOSTON EDISON COMPANY										
NUCLEAR	3.0	48.1	18.3	9.4	--	--	--	--	--	--
MICHIGAN										
AMERICAN ELECTRIC POWER SERVICE CORP										
NUCLEAR	26.4	--	--	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY										
NUCLEAR	0.0	54.9	94.3	31.8	12.5	--	--	--	--	--
DETROIT EDISON COMPANY										
COAL	13.1	9.4	12.9	8.8	13.9	11.6	12.8	7.5	--	--

Table D-9 (continued)

STATE	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
MINNESOTA										
NORTHERN STATES POWER COMPANY										
NUCLEAR	25.7	6.0	5.5	0.5	2.5	--	--	--	--	--
COAL	5.1	3.3	7.0	5.8	--	10.4	11.6	6.4	--	--
MISSISSIPPI										
SOUTHERN SERVICES, INCORPORATED										
COAL	29.9	12.3	9.9	--	--	--	--	--	--	--
MISSOURI										
KANSAS CITY POWER & LIGHT COMPANY										
COAL	16.6	9.1	3.3	4.5	3.6	12.5	23.3	--	--	--
UNION ELECTRIC COMPANY										
COAL	16.9	22.6	12.3	13.6	14.3	27.0	27.0	19.8	14.5	--
NEBRASKA										
NEBRASKA PUBLIC POWER DISTRICT										
NUCLEAR	13.6	4.7	--	--	--	--	--	--	--	--
OMAHA PUBLIC POWER DISTRICT										
NUCLEAR	3.7	2.3	13.1	--	--	--	--	--	--	--
NEVADA										
SOUTHERN CALIFORNIA EDISON COMPANY										
COAL	37.3	23.4	16.8	26.0	10.1	12.8	--	--	--	--
NEW JERSEY										
CENTRAL JERSEY POWER & LIGHT COMPANY										
NUCLEAR	7.4	1.4	4.9	14.4	16.3	11.4	1.8	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY										
COAL	--	23.8	25.3	--	19.8	15.5	17.0	11.2	--	--
NEW MEXICO										
ARIZONA PUBLIC SERVICE CO										
COAL	12.4	15.1	11.3	19.5	27.2	22.1	18.9	--	--	--
NEW YORK										
CONSOLIDATED EDISON COMPANY OF NY INC										
NUCLEAR	7.8	8.4	6.3	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION										
NUCLEAR	43.4	1.2	3.0	3.8	4.3	2.3	2.0	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK										
NUCLEAR	15.4	--	--	--	--	--	--	--	--	--
ROCHESTER GSE										
NUCLEAR	0.0	3.3	1.6	4.6	35.4	3.6	35.2	--	--	--
NO. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	30.2	--	--	--	--	--	--	--	--	--
COAL	4.9	6.2	3.2	8.9	9.6	8.1	6.3	11.0	7.4	5.2
DUKE POWER COMPANY										
COAL	9.0	4.2	1.5	3.8	1.4	1.0	9.4	--	--	--
OHIO										
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	6.9	11.9	8.8	16.4	10.2	9.8	12.9	17.6	13.8	--
CINCINNATI GAS & ELECTRIC COMPANY										
COAL	16.5	5.7	9.0	27.2	42.1	10.4	11.8	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY										
COAL	6.2	4.8	6.8	10.0	5.0	9.3	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY										
COAL	11.6	16.9	34.4	--	--	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY										
COAL	10.8	9.0	19.0	13.8	14.1	12.4	--	--	--	--
PENNSYLVANIA										
ALLEGHENY POWER SERVICE CORPORATION										
COAL	13.9	15.6	26.2	8.0	6.4	8.2	10.5	--	--	--
DUQUESNE LIGHT COMPANY										
COAL	4.5	6.3	0.4	12.5	3.7	5.7	--	--	--	--
METROPOLITAN EDISON COMPANY										
NUCLEAR	11.4	10.4	--	--	--	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY										
COAL	17.9	24.5	30.2	22.6	27.5	21.8	25.9	13.5	23.9	--
PENNSYLVANIA POWER & LIGHT COMPANY										
COAL	10.7	6.7	9.1	4.0	8.7	4.1	6.0	2.2	1.3	4.9
PHILADELPHIA ELECTRIC COMPANY										
NUCLEAR	13.8	12.2	--	--	--	--	--	--	--	--
SC. CAROLINA										
CAROLINA POWER & LIGHT COMPANY										
NUCLEAR	47.6	4.2	5.9	0.9	14.0	2.7	--	--	--	--
DUKE POWER COMPANY										
NUCLEAR	16.3	21.5	20.5	--	--	--	--	--	--	--

Table D-9 (continued)

<u>STATE</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
TENNESSEE										
TENNESSEE VALLEY AUTHORITY										
COAL	15.1	25.5	21.0	11.0	2.4	7.3	4.8	2.7	11.4	13.2
VERMONT										
YANKEE ATOMIC ELECTRIC COMPANY										
NUCLEAR	--	3.6	4.4	3.5	--	--	--	--	--	--
VIRGINIA										
VIRGINIA ELECTRIC & POWER COMPANY										
NUCLEAR	22.8	28.1	10.2	39.8	--	--	--	--	--	--
COAL	35.3	10.0	5.7	12.2	--	10.5	19.5	--	--	--
WASHINGTON										
PACIFIC POWER & LIGHT COMPANY										
COAL	13.0	19.9	11.5	9.3	26.4	--	--	--	--	--
W. VIRGINIA										
ALLEGHENY POWER SERVICE CORPORATION										
CCAL	11.8	4.3	4.2	6.0	3.4	26.4	4.3	5.1	6.4	--
AMERICAN ELECTRIC POWER SERVICE CORP										
COAL	18.5	16.7	9.8	10.6	12.2	3.7	8.8	14.1	7.0	8.9
VIRGINIA ELECTRIC & POWER COMPANY										
COAL	43.2	16.5	32.8	12.3	3.8	5.6	14.0	20.2	20.3	14.0
WISCONSIN										
WISCONSIN ELECTRIC POWER COMPANY										
NUCLEAR	3.4	0.5	2.1	2.8	16.3	0.1	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY										
COAL	0.4	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION										
NUCLEAR	9.7	5.0	--	--	--	--	--	--	--	--
WYOMING										
PACIFIC POWER & LIGHT COMPANY										
COAL	1.7	9.7	--	--	--	--	--	--	--	--

E. Utility Data

- E-1: Availability Factor for Calendar Years
- E-2: Capacity Factors for Calendar Years
- E-3: Equivalent Availability for Calendar Years
- E-4: Forced Outage Rates for Calendar Years
- E-5: Availability Factors by Life Years of Service
- E-6: Capacity Factors by Life Years of Service
- E-7: Equivalent Availability by Life Years of Service
- E-8: Forced Outage Rates by Life Years of Service

TABLE E-1: AVAILABILITY FACTOR FOR CALENDAR YEARS (BY UTILITY)

[illegible]

Table E-1 (continued)

UTILITY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	85.2	75.5
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	--	--	--	48.9	68.9	70.3	76.3	70.5	73.4	90.9
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	--	76.8	86.3	77.7	86.6	73.4	48.0	85.2	80.9	82.8
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	--	--	57.9	70.3	59.9	60.0	84.6	63.8	73.1	79.5
NORTHERN STATES POWER COMPANY NUCLEAR	--	--	--	--	--	82.9	95.5	61.8	80.3	81.6
COAL	--	--	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9
OMAHA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	92.6	67.4	69.5
PACIFIC POWER & LIGHT COMPANY COAL	--	--	--	--	--	52.4	73.4	14.9	72.7	79.9
PENNSYLVANIA ELECTRIC COMPANY COAL	--	61.4	68.2	47.0	51.2	67.8	75.9	59.2	68.6	65.6
PENNSYLVANIA POWER & LIGHT COMPANY COAL	--	91.2	84.3	69.5	83.4	85.6	85.9	82.9	83.7	84.6
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	--	--	80.6	72.9
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	--	--	--	--	--	--	--	--	--	71.6
PUBLIC SERVICE COMPANY OF INDIANA COAL	--	--	--	--	71.0	72.7	82.1	85.5	87.0	70.3
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	--	--	71.8	65.9	--	75.7	64.1	53.5	77.0
ROCHESTER G&E NUCLEAR	--	--	--	100.	88.3	69.2	95.0	62.4	77.7	49.5
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	27.5	28.1
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	--	79.6	75.8	83.0	93.4	78.9	62.8	86.1	87.4	70.2
COAL	--	--	--	--	48.9	70.4	70.0	77.0	75.1	77.4
SOUTHERN ELECTRIC GENERATING COMPANY COAL	--	--	--	--	--	--	--	--	69.3	51.0
SOUTHERN SERVICES, INCORPORATED COAL	--	--	--	--	--	--	--	70.6	74.3	28.0
TAMPA ELECTRIC COMPANY COAL	--	--	--	63.3	69.9	80.7	76.5	79.0	72.1	61.1
TENNESSEE VALLEY AUTHORITY NUCLEAR	--	--	--	--	--	--	--	74.0	20.1	27.9
COAL	85.0	78.0	75.9	77.3	77.6	65.3	75.2	64.3	66.5	68.2
UNION ELECTRIC COMPANY COAL	--	73.3	70.8	79.7	76.3	49.2	68.4	64.7	76.9	73.4
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	--	--	--	--	--	--	77.0	49.4	70.8	60.4
COAL	72.2	81.0	74.1	77.6	83.5	75.7	70.3	57.0	57.3	67.5
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	--	--	--	--	74.8	72.3	65.9	81.2	83.1	86.7
WISCONSIN POWER & LIGHT COMPANY COAL	--	--	--	--	--	--	--	--	--	84.7
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	--	--	--	--	--	--	--	--	88.1	78.9
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	75.3	71.4	83.9	87.0

TABLE E-2: CAPACITY FACTOR FOR CALENDAR YEARS (BY UTILITY)

[illegible]

Table E-2 (continued)

UTILITY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	59.7	54.9
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	--	--	--	42.4	56.8	60.3	66.6	63.3	58.9	79.2
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	--	72.1	71.9	69.6	83.9	70.4	41.0	75.8	76.2	70.9
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	--	--	80.8	55.6	48.0	50.1	57.9	42.2	52.6	59.1
NORTHERN STATES POWER COMPANY NUCLEAR	--	--	--	--	--	69.9	67.2	47.7	73.4	71.1
COAL	--	--	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7
OMAHA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	61.0	52.5	56.7
PACIFIC POWER & LIGHT COMPANY COAL	--	--	--	--	--	31.6	45.3	37.3	51.0	50.5
PENNSYLVANIA ELECTRIC COMPANY COAL	--	53.2	61.5	43.3	47.1	60.7	66.7	50.5	59.4	56.3
PENNSYLVANIA POWER & LIGHT COMPANY COAL	--	87.0	77.7	58.1	69.2	66.7	73.8	71.3	72.3	75.8
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	--	--	59.2	65.8
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	--	--	--	--	--	--	--	--	--	61.5
PUBLIC SERVICE COMPANY OF INDIANA COAL	--	--	--	--	50.3	60.4	67.7	71.3	64.3	52.7
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	--	--	53.1	46.9	--	61.1	43.5	28.9	58.5
ROCHESTER G&E NUCLEAR	--	--	--	63.2	75.4	58.0	94.2	54.0	76.6	49.1
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	26.2	28.1
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	--	34.3	69.8	81.3	92.1	78.5	62.8	84.0	86.5	65.5
COAL	--	--	--	--	22.5	51.0	53.7	60.9	59.0	62.4
SOUTHERN ELECTRIC GENERATING COMPANY COAL	--	--	--	--	--	--	--	--	53.8	51.8
SOUTHERN SERVICES, INCORPORATED COAL	--	--	--	--	--	--	--	49.3	51.8	58.5
TAMPA ELECTRIC COMPANY COAL	--	--	--	46.0	46.7	61.4	57.4	63.2	61.0	48.1
TENNESSEE VALLEY AUTHORITY NUCLEAR	--	--	--	--	--	--	--	29.1	10.3	15.4
COAL	83.0	70.7	70.6	65.1	66.2	59.6	65.3	56.3	45.6	37.7
UNION ELECTRIC COMPANY COAL	--	54.6	58.3	64.1	55.6	32.6	52.9	48.6	61.2	59.0
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	--	--	--	--	--	--	87.0	45.5	68.4	57.2
COAL	72.2	72.0	68.8	55.6	67.0	63.8	55.9	42.4	42.8	52.7
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	--	--	--	--	39.7	35.5	72.3	76.1	78.9	82.4
WISCONSIN POWER & LIGHT COMPANY COAL	--	--	--	--	--	--	--	--	--	61.3
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	--	--	--	--	--	--	--	--	67.1	78.4
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	50.7	61.3	78.3	80.7

TABLE E-3: EQUIVALENT AVAILABILITY FOR CALENDAR YEARS (BY UTILITY)

[illegible]

Table E-3 (continued)

UTILITY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	71.9	73.3
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	--	--	--	--	67.8	--	--	70.5	73.0	90.9
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	--	72.6	84.8	73.4	--	--	--	89.3	75.7	72.3
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	--	--	--	70.3	59.9	60.0	84.6	63.8	73.1	74.4
NORTHERN STATES POWER COMPANY NUCLEAR	--	--	--	--	--	--	95.5	61.5	79.7	80.9
COAL	--	--	66.0	--	--	86.4	--	79.8	78.0	79.7
OMAHA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	92.6	67.4	64.3
PACIFIC POWER & LIGHT COMPANY COAL	--	--	--	--	--	52.4	73.4	14.9	73.7	74.1
PENNSYLVANIA ELECTRIC COMPANY COAL	--	50.3	55.5	41.8	--	60.0	68.4	52.4	59.9	58.2
PENNSYLVANIA POWER & LIGHT COMPANY COAL	--	90.5	82.3	68.1	70.7	80.8	80.7	73.4	78.0	78.6
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	--	--	55.5	67.1
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	--	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	--	--	--	--	71.0	72.7	82.1	85.5	87.0	67.2
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	--	--	62.9	63.7	--	67.3	55.3	37.9	72.7
ROCHESTER G&E NUCLEAR	--	--	--	100.	88.3	--	95.0	62.4	77.7	48.3
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	--	28.1
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	--	77.1	74.4	81.4	91.0	76.0	61.4	84.3	86.1	--
COAL	--	--	--	--	44.4	67.5	65.1	69.1	66.8	68.2
SOUTHERN ELECTRIC GENERATING COMPANY COAL	--	--	--	--	--	--	--	--	67.7	47.3
SOUTHERN SERVICES, INCORPORATED COAL	--	--	--	--	--	--	--	64.2	67.5	22.3
TAMPA ELECTRIC COMPANY COAL	--	--	--	62.4	69.1	76.4	73.6	77.0	68.9	56.8
TENNESSEE VALLEY AUTHORITY NUCLEAR	--	--	--	--	--	--	--	71.3	20.0	27.6
COAL	84.0	75.3	74.6	70.0	71.8	63.3	71.3	58.7	59.3	57.8
UNION ELECTRIC COMPANY COAL	--	--	--	66.9	63.9	40.0	60.6	55.3	66.2	63.6
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	--	--	--	--	--	--	--	49.4	70.8	52.3
COAL	65.6	--	71.3	73.7	78.9	68.6	65.6	54.5	55.2	60.8
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	--	--	--	--	98.8	72.3	85.9	80.1	82.9	82.3
WISCONSIN POWER & LIGHT COMPANY COAL	--	--	--	--	--	--	--	--	--	75.0
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	--	--	--	--	--	--	--	--	82.3	78.7
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	--	58.6	74.4	85.4

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[illegible]

Table E-4 (continued)

UTILITY	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	13.6	4.7
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	--	--	--	43.4	1.2	3.0	3.8	4.3	2.3	2.0
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	--	16.7	4.1	3.3	--	--	--	5.6	9.9	6.4
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	--	--	5.0	5.7	34.0	21.2	7.2	0.4	3.4	10.0
NORTHERN STATES POWER COMPANY NUCLEAR	--	--	--	--	--	14.2	5.1	24.9	7.6	5.8
COAL	--	--	5.1	3.3	7.0	5.8	--	10.4	11.6	6.4
OMAHA PUBLIC POWER DISTRICT NUCLEAR	--	--	--	--	--	--	--	3.7	2.3	13.1
PACIFIC POWER & LIGHT COMPANY COAL	--	--	--	--	--	22.3	4.2	20.6	8.1	12.1
PENNSYLVANIA ELECTRIC COMPANY COAL	--	20.0	22.2	40.8	--	23.9	17.6	27.3	23.9	23.9
PENNSYLVANIA POWER & LIGHT COMPANY COAL	--	0.6	--	10.7	4.0	8.2	4.8	9.8	5.2	5.7
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	--	--	13.8	12.2
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	--	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	--	--	--	--	1.9	4.3	1.8	3.2	8.5	5.0
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	--	--	23.8	25.3	--	19.8	15.5	17.0	11.2
ROCHESTER GEE NUCLEAR	--	--	--	0.0	3.3	1.6	4.6	35.4	3.6	35.2
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	--	--	--	--	--	--	--	--	72.5	69.6
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	--	57.8	9.9	--	2.1	1.5	23.7	7.2	0.2	2.5
COAL	--	--	--	--	50.1	23.6	21.8	18.5	20.0	11.0
SOUTHERN ELECTRIC GENERATING COMPANY COAL	--	--	--	--	--	--	--	--	14.3	27.1
SOUTHERN SERVICES, INCORPORATED COAL	--	--	--	--	--	--	--	29.9	12.3	9.9
TAMPA ELECTRIC COMPANY COAL	--	--	--	16.5	6.2	5.6	12.9	8.2	7.5	13.7
TENNESSEE VALLEY AUTHORITY NUCLEAR	--	--	--	--	--	--	--	25.6	87.4	67.6
COAL	7.7	9.8	9.3	10.4	11.7	23.3	13.4	19.5	20.1	23.4
UNION ELECTRIC COMPANY COAL	--	16.3	12.4	13.6	19.3	41.1	22.4	15.9	10.2	10.5
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	--	--	--	--	--	--	15.0	36.7	9.8	27.0
COAL	26.6	12.0	15.4	14.2	6.1	8.7	16.9	33.4	16.7	25.2
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	--	--	--	--	0.5	0.5	3.9	5.1	9.5	0.1
WISCONSIN POWER & LIGHT COMPANY COAL	--	--	--	--	--	--	--	--	--	0.4
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	--	--	--	--	--	--	--	--	9.7	5.0
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	--	--	--	--	--	--	6.4	3.1	4.1	2.1

TABLE E-5: AVAILABILITY FACTOR BY LIFE YEARS OF SERVICE (BY UTILITY)

UTILITY	1	2	3	4	5	6	7	8	9	10
ALABAMA POWER COMPANY COAL	65.2	82.5	81.6	78.8	63.3	88.8	63.1	--	--	--
ALLEGHENY POWER SERVICE CORPORATION COAL	80.7	83.4	81.0	83.2	77.8	71.8	85.8	80.4	67.7	--
AMERICAN ELECTRIC POWER SERVICE CORP NUCLEAR	57.6	--	--	--	--	--	--	--	--	--
COAL	81.8	78.6	82.5	77.9	82.7	79.4	79.2	71.4	74.5	78.8
ARIZONA PUBLIC SERVICE COMPANY COAL	69.5	77.6	81.6	76.1	60.5	61.8	74.8	--	--	--
ARKANSAS POWER & LIGHT COMPANY NUCLEAR	77.1	56.6	--	--	--	--	--	--	--	--
BALTIMORE GAS & ELECTRIC COMPANY NUCLEAR	95.0	--	--	--	--	--	--	--	--	--
BCSTON EDISON COMPANY NUCLEAR	86.6	39.2	74.3	60.8	--	--	--	--	--	--
CAROLINA POWER & LIGHT COMPANY NUCLEAR	56.5	88.4	75.2	82.4	72.7	84.7	--	--	--	--
COAL	84.0	87.0	84.9	88.2	84.3	81.3	88.6	83.9	88.9	91.3
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY COAL	64.4	74.9	78.6	60.6	--	--	--	--	--	--
CENTRAL JERSEY POWER & LIGHT COMPANY NUCLEAR	77.0	96.5	82.4	73.2	70.4	73.3	79.3	--	--	--
CINCINNATI GAS & ELECTRIC COMPANY COAL	67.9	85.6	79.0	51.8	41.8	72.1	80.5	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY COAL	86.4	65.4	83.8	86.8	66.3	60.5	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY COAL	87.8	72.4	22.2	--	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY NUCLEAR	74.7	71.0	65.5	65.3	68.8	73.3	--	--	--	--
COAL	63.1	66.9	71.0	72.8	72.0	75.1	60.6	56.5	44.1	88.5
CONSOLIDATED EDISON COMPANY OF NY INC NUCLEAR	89.4	77.0	34.8	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY NUCLEAR	100.	12.9	5.5	64.5	55.2	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY COAL	78.0	80.9	72.8	85.2	71.1	62.2	--	--	--	--
DETROIT EDISON COMPANY COAL	79.0	79.4	72.3	79.3	78.3	77.2	80.8	85.7	--	--
DUKE POWER COMPANY NUCLEAR	70.1	69.3	57.3	--	--	--	--	--	--	--
COAL	71.0	85.9	88.7	90.6	76.9	89.2	84.7	--	--	--
DUQUESNE LIGHT COMPANY COAL	57.9	86.8	99.6	80.0	81.1	75.3	--	--	--	--
FLORIDA POWER & LIGHT COMPANY NUCLEAR	79.4	47.8	29.9	37.7	--	--	--	--	--	--
GEORGIA POWER COMPANY NUCLEAR	83.8	--	--	--	--	--	--	--	--	--
COAL	82.4	72.6	57.4	56.4	59.0	66.0	64.2	65.7	--	--
ILLINOIS POWER COMPANY COAL	78.7	69.5	84.3	85.4	76.6	71.8	--	--	--	--
INDIANAPOLIS POWER & LIGHT COMPANY COAL	81.4	89.7	87.1	--	82.5	68.3	88.8	--	--	--
IOWA ELECTRIC LIGHT & POWER COMPANY NUCLEAR	79.5	77.0	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY COAL	92.1	--	--	--	--	--	--	--	--	--
KANSAS CITY POWER & LIGHT COMPANY COAL	55.5	71.9	77.6	79.0	86.9	81.4	77.9	--	--	--
KENTUCKY UTILITIES COMPANY COAL	72.2	81.9	92.2	97.7	68.1	--	--	--	--	--
METROPOLITAN EDISON COMPANY NUCLEAR	82.2	65.4	--	--	--	--	--	--	--	--

Table E-5 (continued)

UTILITY	1	2	3	4	5	6	7	8	9	10
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	85.2	75.5	--	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	48.9	68.9	70.3	76.3	70.5	73.4	90.9	--	--	--
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	83.3	72.7	61.6	82.9	81.7	63.3	91.2	86.1	82.5	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	65.5	73.2	59.9	60.0	84.6	63.8	73.0	83.0	--	--
NORTHERN STATES POWER COMPANY NUCLEAR	71.3	85.9	76.1	72.2	91.5	--	--	--	--	--
COAL	68.0	82.6	79.7	86.7	--	82.0	78.0	79.9	--	--
OMAHA PUBLIC POWER DISTRICT NUCLEAR	92.6	67.4	69.5	--	--	--	--	--	--	--
PACIFIC POWER & LIGHT COMPANY COAL	69.7	70.2	38.5	69.7	70.6	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY COAL	70.3	64.5	64.4	65.3	64.6	62.5	61.5	86.1	64.8	--
PENNSYLVANIA POWER & LIGHT COMPANY COAL	74.6	82.1	82.6	86.0	81.9	82.6	85.0	90.8	94.4	83.6
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	80.6	72.9	--	--	--	--	--	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	71.6	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	77.5	80.9	85.3	68.9	87.6	73.6	--	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	71.8	65.9	--	75.7	64.1	53.5	77.0	--	--
ROCHESTER GEE NUCLEAR	100.	88.3	69.2	95.0	62.4	77.7	49.5	--	--	--
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	27.5	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	79.6	75.8	83.0	93.4	78.9	62.8	86.1	87.4	70.2	--
COAL	60.9	64.7	80.9	68.9	82.7	72.8	--	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY COAL	69.3	51.0	--	--	--	--	--	--	--	--
SOUTHERN SERVICES, INCORPORATED COAL	70.6	74.3	28.0	--	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY COAL	82.2	66.6	73.9	79.8	83.9	62.8	52.9	76.8	52.4	--
TENNESSEE VALLEY AUTHORITY NUCLEAR	46.8	25.3	25.8	--	--	--	--	--	--	--
COAL	77.6	73.2	72.9	70.4	76.7	77.0	83.6	77.7	73.3	66.2
UNION ELECTRIC COMPANY COAL	75.4	64.4	82.1	69.4	66.4	62.3	50.1	64.6	72.0	--
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	65.9	55.0	74.1	52.3	--	--	--	--	--	--
COAL	49.2	77.9	62.0	80.1	82.1	76.6	73.4	66.9	63.3	64.4
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	96.2	76.7	86.1	86.1	72.2	82.7	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY COAL	84.7	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	88.1	78.9	--	--	--	--	--	--	--	--
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	75.3	71.4	83.9	87.0	--	--	--	--	--	--

TABLE E-6: CAPACITY FACTOR BY LIFE YEARS OF SERVICE (BY UTILITY)

UTILITY	1	2	3	4	5	6	7	8	9	10
ALABAMA POWER COMPANY COAL	53.8	61.3	64.1	62.0	40.4	57.8	51.8	--	--	--
ALLEGHENY POWER SERVICE CORPORATION COAL	70.6	71.1	70.4	68.4	64.1	62.7	74.8	71.7	60.5	--
AMERICAN ELECTRIC POWER SERVICE CORP NUCLEAR	76.7	--	--	--	--	--	--	--	--	--
COAL	63.8	69.1	68.5	62.8	71.1	68.4	63.3	61.9	67.9	68.3
ARIZONA PUBLIC SERVICE COMPANY COAL	49.8	69.7	74.4	66.8	54.5	52.4	66.3	--	--	--
ARKANSAS POWER & LIGHT COMPANY NUCLEAR	66.4	52.5	--	--	--	--	--	--	--	--
BALTIMORE GAS & ELECTRIC COMPANY NUCLEAR	92.8	--	--	--	--	--	--	--	--	--
BOSTON EDISON COMPANY NUCLEAR	72.2	34.9	46.0	42.8	--	--	--	--	--	--
CAROLINA POWER & LIGHT COMPANY NUCLEAR	39.0	82.1	65.0	82.6	71.7	83.4	--	--	--	--
COAL	70.8	73.3	67.0	69.9	69.1	61.0	69.9	63.9	66.9	74.1
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY COAL	48.6	55.8	65.1	55.2	--	--	--	--	--	--
CENTRAL JERSEY POWER & LIGHT COMPANY NUCLEAR	73.2	78.2	81.3	67.9	66.8	57.6	73.1	--	--	--
CINCINNATI GAS & ELECTRIC COMPANY COAL	54.3	69.5	59.9	38.8	29.3	46.7	56.7	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY COAL	78.1	66.7	69.4	39.6	54.4	52.8	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY COAL	62.9	54.3	35.0	--	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY NUCLEAR	51.7	57.7	53.8	48.7	50.3	62.9	--	--	--	--
COAL	55.4	57.2	60.0	60.9	55.8	57.1	46.0	45.5	30.1	58.2
CONSOLIDATED EDISON COMPANY OF NY INC NUCLEAR	44.7	64.9	30.3	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY NUCLEAR	37.0	41.0	1.5	44.0	47.8	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY COAL	67.6	68.3	60.2	64.5	53.3	57.1	--	--	--	--
DETROIT EDISON COMPANY COAL	67.1	68.4	58.9	70.3	69.3	67.6	67.7	79.8	--	--
DUKE POWER COMPANY NUCLEAR	64.5	65.5	55.3	--	--	--	--	--	--	--
COAL	60.9	78.3	78.7	80.4	61.4	66.9	60.3	--	--	--
DUQUESNE LIGHT COMPANY COAL	61.9	67.9	70.3	65.9	71.4	61.2	--	--	--	--
FLORIDA POWER & LIGHT COMPANY NUCLEAR	63.2	61.9	67.2	71.8	--	--	--	--	--	--
GEORGIA POWER COMPANY NUCLEAR	59.9	--	--	--	--	--	--	--	--	--
COAL	60.4	58.0	44.3	45.5	38.5	44.5	53.2	52.0	--	--
ILLINOIS POWER COMPANY COAL	69.8	69.3	74.1	73.5	64.1	59.6	--	--	--	--
INDIANAPOLIS POWER & LIGHT COMPANY COAL	69.4	74.9	73.2	--	70.2	55.9	72.6	--	--	--
IOWA ELECTRIC LIGHT & POWER COMPANY NUCLEAR	52.2	59.3	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY COAL	70.9	--	--	--	--	--	--	--	--	--
KANSAS CITY POWER & LIGHT COMPANY COAL	31.3	42.1	46.8	44.0	48.1	43.8	37.8	--	--	--
KENTUCKY UTILITIES COMPANY COAL	53.2	62.8	51.6	56.7	45.6	--	--	--	--	--
METROPOLITAN EDISON COMPANY NUCLEAR	82.0	64.6	--	--	--	--	--	--	--	--

Table E-6 (continued)

UTILITY	1	2	3	4	5	6	7	8	9	10
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	59.7	54.9	--	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	42.4	56.8	60.3	66.6	63.3	58.9	79.2	--	--	--
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	68.9	63.4	51.6	73.5	77.3	57.3	88.4	83.8	80.7	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	66.4	59.0	48.0	50.1	57.9	42.2	53.0	55.8	--	--
NORTHERN STATES POWER COMPANY NUCLEAR	59.8	70.9	66.2	59.4	81.9	--	--	--	--	--
COAL	58.6	70.3	65.4	69.8	--	63.0	63.3	65.7	--	--
OMAHA PUBLIC POWER DISTRICT NUCLEAR	61.0	52.5	56.7	--	--	--	--	--	--	--
PACIFIC POWER & LIGHT COMPANY COAL	41.9	45.4	46.7	54.4	51.4	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY COAL	63.3	58.2	54.8	55.5	57.0	53.8	52.7	80.0	59.5	--
PENNSYLVANIA POWER & LIGHT COMPANY COAL	57.8	68.9	72.5	75.3	72.6	69.8	71.6	82.5	84.1	71.6
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	59.2	65.8	--	--	--	--	--	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	61.5	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	61.0	67.1	68.1	52.7	56.7	59.9	--	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	53.1	46.9	--	61.1	43.5	28.9	58.5	--	--
ROCHESTER G&E NUCLEAR	63.2	75.4	58.0	94.2	54.0	76.6	49.8	--	--	--
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	26.2	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	34.3	69.8	81.3	92.1	78.5	62.8	84.0	86.5	65.5	--
COAL	37.4	49.1	61.9	54.8	68.1	53.9	--	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY COAL	53.0	51.8	--	--	--	--	--	--	--	--
SOUTHERN SERVICES, INCORPORATED COAL	49.3	53.8	58.5	--	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY COAL	63.4	58.6	58.1	60.8	67.6	47.3	34.6	53.2	36.3	--
TENNESSEE VALLEY AUTHORITY NUCLEAR	17.5	15.7	14.0	--	--	--	--	--	--	--
COAL	63.7	66.2	63.1	69.5	73.8	72.2	74.0	68.2	62.8	62.7
UNION ELECTRIC COMPANY COAL	57.6	50.4	62.6	53.4	47.4	48.1	40.6	52.2	63.3	--
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	58.8	50.0	70.3	50.9	--	--	--	--	--	--
COAL	42.4	67.3	53.5	65.5	64.6	60.3	55.4	47.4	44.2	55.9
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	57.6	56.0	78.8	81.1	69.2	78.4	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY COAL	61.3	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	67.1	78.4	--	--	--	--	--	--	--	--
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	50.7	61.3	78.3	80.7	--	--	--	--	--	--

TABLE E-7: EQUIVALENT AVAILABILITY BY LIFE YEARS OF SERVICE (BY UTILITY)

UTILITY	1	2	3	4	5	6	7	8	9	10
ALABAMA POWER COMPANY COAL	62.0	79.9	73.3	66.8	48.1	76.1	57.2	--	--	--
ALLEGHENY POWER SERVICE CORPORATION COAL	77.8	80.9	78.8	79.0	73.8	68.6	80.8	76.4	63.7	--
AMERICAN ELECTRIC POWER SERVICE CORP NUCLEAR	55.1	--	--	--	--	--	--	--	--	--
COAL	81.9	77.1	75.9	70.9	75.8	73.8	70.6	64.6	68.5	70.0
ARIZONA PUBLIC SERVICE COMPANY COAL	56.8	68.5	73.8	65.7	46.0	56.0	68.0	--	--	--
ARKANSAS POWER & LIGHT COMPANY NUCLEAR	77.0	56.6	--	--	--	--	--	--	--	--
BALTIMORE GAS & ELECTRIC COMPANY NUCLEAR	90.7	--	--	--	--	--	--	--	--	--
BOSTON EDISON COMPANY NUCLEAR	71.7	37.4	49.6	41.7	--	--	--	--	--	--
CAROLINA POWER & LIGHT COMPANY NUCLEAR	55.3	87.7	74.1	81.1	70.9	83.1	--	--	--	--
COAL	78.2	83.0	81.0	86.5	83.0	80.2	85.1	81.1	88.2	88.9
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY COAL	64.4	72.2	78.6	60.6	--	--	--	--	--	--
CENTRAL JERSEY POWER & LIGHT COMPANY NUCLEAR	77.0	96.3	82.2	67.2	66.1	59.2	70.7	--	--	--
CINCINNATI GAS & ELECTRIC COMPANY COAL	67.9	84.9	77.5	51.2	41.6	65.4	78.0	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY COAL	84.0	60.0	79.9	81.1	58.7	57.7	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY COAL	72.5	62.4	18.8	--	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY NUCLEAR	64.2	66.4	58.7	51.0	53.7	65.8	--	--	--	--
COAL	57.2	61.6	60.5	63.7	62.9	65.7	52.6	47.2	34.3	67.6
CONSOLIDATED EDISON COMPANY OF NY INC NUCLEAR	89.4	73.3	32.6	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY NUCLEAR	81.3	11.2	1.9	41.2	48.4	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY COAL	76.2	78.1	72.2	83.3	66.3	54.5	--	--	--	--
DETROIT EDISON COMPANY COAL	71.3	70.2	62.9	73.3	72.1	69.9	74.1	81.8	--	--
DUKE POWER COMPANY NUCLEAR	66.8	67.0	56.2	--	--	--	--	--	--	--
COAL	66.5	83.5	87.2	89.4	76.3	87.7	83.7	--	--	--
DUQUESNE LIGHT COMPANY COAL	57.9	80.8	66.8	65.7	66.2	69.9	--	--	--	--
FLORIDA POWER & LIGHT COMPANY NUCLEAR	73.9	51.1	28.7	38.5	--	--	--	--	--	--
GEORGIA POWER COMPANY NUCLEAR	--	--	--	--	--	--	--	--	--	--
COAL	77.4	62.9	51.2	49.2	54.2	58.7	56.2	58.5	--	--
ILLINOIS POWER COMPANY COAL	77.4	68.7	83.2	82.6	74.8	69.2	--	--	--	--
INDIANAPOLIS POWER & LIGHT COMPANY COAL	79.2	84.5	83.5	--	73.1	64.0	85.1	--	--	--
IOWA ELECTRIC LIGHT & POWER COMPANY NUCLEAR	62.0	74.2	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY COAL	62.1	--	--	--	--	--	--	--	--	--
KANSAS CITY POWER & LIGHT COMPANY COAL	48.3	71.9	77.6	77.9	86.9	81.4	77.9	--	--	--
KENTUCKY UTILITIES COMPANY COAL	68.9	80.9	92.2	97.7	68.1	--	--	--	--	--
METROPOLITAN EDISON COMPANY NUCLEAR	79.8	63.2	--	--	--	--	--	--	--	--

Table E-7 (continued)

UTILITY	1	2	3	4	5	6	7	8	9	10
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	71.9	73.3	--	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	--	67.8	--	--	70.5	73.0	90.9	--	--	--
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	70.8	84.8	73.4	--	68.9	66.4	89.3	82.5	81.6	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	73.1	70.8	59.9	60.0	84.6	63.8	73.0	77.6	--	--
NORTHERN STATES POWER COMPANY NUCLEAR	65.3	85.2	75.2	72.2	91.5	--	--	--	--	--
COAL	66.0	--	--	86.4	--	79.8	78.0	79.7	--	--
OMAHA PUBLIC POWER DISTRICT NUCLEAR	92.6	67.4	64.3	--	--	--	--	--	--	--
PACIFIC POWER & LIGHT COMPANY COAL	68.0	66.9	38.5	67.3	66.4	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY COAL	59.3	55.9	54.5	59.7	58.9	55.4	53.7	79.8	60.7	--
PENNSYLVANIA POWER & LIGHT COMPANY COAL	68.3	75.8	77.0	80.8	76.6	77.1	80.1	88.9	87.3	80.7
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	55.5	67.1	--	--	--	--	--	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	--	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	74.4	80.9	85.3	68.9	87.6	73.6	--	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	--	62.9	63.7	--	67.3	55.3	37.9	72.7	--	--
ROCHESTER G&E NUCLEAR	100.	88.3	--	95.0	62.4	77.7	48.3	--	--	--
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	--	28.1	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR	77.1	74.4	81.4	91.0	76.0	61.4	84.3	86.1	--	--
COAL	57.6	60.3	73.8	62.1	73.2	63.7	--	--	--	--
SOUTHERN ELECTRIC GENERATING COMPANY COAL	67.7	47.3	--	--	--	--	--	--	--	--
SOUTHERN SERVICES, INCORPORATED COAL	69.2	67.5	22.2	--	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY COAL	81.1	64.4	72.5	78.1	78.9	59.5	50.9	72.7	43.7	--
TENNESSEE VALLEY AUTHORITY NUCLEAR	45.4	25.3	25.3	--	--	--	--	--	--	--
COAL	74.1	66.8	69.6	73.9	73.7	74.5	74.3	72.9	70.8	64.3
UNION ELECTRIC COMPANY COAL	64.3	54.0	60.1	58.5	57.0	54.3	42.9	56.4	67.3	--
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR	54.8	53.0	79.6	52.3	--	--	--	--	--	--
COAL	44.2	71.3	55.8	74.8	78.3	71.6	66.1	63.9	61.1	62.4
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	96.1	75.8	86.1	80.8	71.8	82.3	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY COAL	75.0	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	82.3	78.7	--	--	--	--	--	--	--	--
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	--	58.6	74.4	85.4	--	--	--	--	--	--

TABLE E-8: FORCED OUTAGE RATE FOR LIFE YEARS OF SERVICE(BY UTILITY)

UTILITY	1	2	3	4	5	6	7	8	9	10
ALABAMA POWER COMPANY COAL	14.6	15.8	7.4	13.6	25.0	8.1	12.9	--	--	--
ALLEGHENY POWER SERVICE CORPORATION COAL	12.6	8.6	13.7	7.0	5.2	17.3	6.4	5.1	6.4	--
AMERICAN ELECTRIC POWER SERVICE CORP NUCLEAR	26.4	--	--	--	--	--	--	--	--	--
COAL	14.3	13.6	9.8	15.8	10.5	9.9	14.3	16.2	12.3	11.1
ARIZONA PUBLIC SERVICE COMPANY COAL	12.4	15.1	11.3	19.5	27.2	22.1	18.9	--	--	--
ARKANSAS POWER & LIGHT COMPANY NUCLEAR	6.7	21.6	--	--	--	--	--	--	--	--
BALTIMORE GAS & ELECTRIC COMPANY NUCLEAR	1.6	--	--	--	--	--	--	--	--	--
BOSTON EDISON COMPANY NUCLEAR	3.0	48.1	18.3	9.4	--	--	--	--	--	--
CAROLINA POWER & LIGHT COMPANY NUCLEAR	38.9	4.2	5.9	0.9	14.0	2.7	--	--	--	--
COAL	4.9	6.2	3.2	8.9	9.6	8.1	6.3	11.0	7.4	5.2
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY COAL	14.9	13.6	13.7	28.6	--	--	--	--	--	--
CENTRAL JERSEY POWER & LIGHT COMPANY NUCLEAR	7.4	1.4	4.9	14.4	16.3	11.4	1.8	--	--	--
CINCINNATI GAS & ELECTRIC COMPANY COAL	16.5	5.7	9.0	27.2	42.1	10.4	11.8	--	--	--
CLEVELAND ELECTRIC ILLUMINATING COMPANY COAL	6.2	4.8	6.8	10.0	5.0	9.3	--	--	--	--
COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY COAL	11.6	16.9	34.4	--	--	--	--	--	--	--
COMMONWEALTH EDISON COMPANY NUCLEAR	18.3	17.4	18.7	17.0	5.3	4.0	--	--	--	--
COAL	8.4	16.7	10.4	16.0	11.7	7.7	17.4	26.3	19.2	11.1
CONSOLIDATED EDISON COMPANY OF NY INC NUCLEAR	7.8	8.4	6.3	--	--	--	--	--	--	--
CONSUMERS POWER COMPANY NUCLEAR	0.0	54.9	94.3	31.8	12.5	--	--	--	--	--
DAYTON POWER & LIGHT COMPANY COAL	10.8	9.0	19.0	13.8	14.1	12.4	--	--	--	--
DETROIT EDISON COMPANY COAL	13.1	9.4	12.9	8.8	13.9	11.6	12.8	7.5	--	--
DUKE POWER COMPANY NUCLEAR	16.3	21.5	20.5	--	--	--	--	--	--	--
COAL	9.0	4.2	1.5	3.8	1.4	1.0	9.4	--	--	--
DUQUESNE LIGHT COMPANY COAL	4.5	6.3	0.4	12.5	3.7	5.7	--	--	--	--
FLORIDA POWER & LIGHT COMPANY NUCLEAR	6.3	9.1	4.0	0.1	--	--	--	--	--	--
GEORGIA POWER COMPANY NUCLEAR	9.0	--	--	--	--	--	--	--	--	--
COAL	14.2	13.1	32.9	23.3	36.9	17.4	18.3	13.2	--	--
ILLINOIS POWER COMPANY COAL	9.1	8.0	6.5	5.2	10.1	5.7	--	--	--	--
INDIANAPOLIS POWER & LIGHT COMPANY COAL	3.3	3.3	4.0	--	8.9	4.4	6.5	--	--	--
IOWA ELECTRIC LIGHT & POWER COMPANY NUCLEAR	6.1	3.7	--	--	--	--	--	--	--	--
IOWA PUBLIC SERVICE COMPANY COAL	3.9	--	--	--	--	--	--	--	--	--
KANSAS CITY POWER & LIGHT COMPANY COAL	28.2	19.5	15.3	4.5	3.6	12.5	23.3	--	--	--
KENTUCKY UTILITIES COMPANY COAL	1.5	5.9	0.7	0.1	7.2	--	--	--	--	--
METROPOLITAN EDISON COMPANY NUCLEAR	11.4	10.4	--	--	--	--	--	--	--	--

Table E-8 (continued)

UTILITY	1	2	3	4	5	6	7	8	9	10
NEBRASKA PUBLIC POWER DISTRICT NUCLEAR	13.6	4.7	--	--	--	--	--	--	--	--
NIAGARA MOHAWK POWER CORPORATION NUCLEAR	43.4	1.2	3.0	3.8	4.3	2.3	2.0	--	--	--
NORTHEAST UTILITIES SERVICE COMPANY NUCLEAR	12.5	4.1	3.3	2.2	19.1	8.9	8.9	0.8	2.1	--
NORTHERN INDIANA PUBLIC SERVICE COMPANY COAL	3.6	7.5	34.0	21.2	7.2	0.4	4.7	10.7	--	--
NORTHERN STATES POWER COMPANY NUCLEAR COAL	25.7 5.1	6.0 3.3	5.5 7.0	0.5 5.8	2.5 --	-- 10.4	-- 11.6	-- 6.4	-- --	-- --
OMAHA PUBLIC POWER DISTRICT NUCLEAR	3.7	2.3	13.1	--	--	--	--	--	--	--
PACIFIC POWER & LIGHT COMPANY COAL	7.4	14.8	11.5	9.3	26.4	--	--	--	--	--
PENNSYLVANIA ELECTRIC COMPANY COAL	17.9	24.5	30.2	22.6	27.5	21.8	25.9	13.5	23.9	--
PENNSYLVANIA POWER & LIGHT COMPANY COAL	10.7	6.7	9.1	4.0	8.7	4.1	6.0	2.2	1.3	4.9
PHILADELPHIA ELECTRIC COMPANY NUCLEAR	13.8	12.2	--	--	--	--	--	--	--	--
POWER AUTHORITY OF STATE OF NEW YORK NUCLEAR	15.4	--	--	--	--	--	--	--	--	--
PUBLIC SERVICE ELECTRIC & GAS COMPANY COAL	2.2	3.0	2.8	4.9	13.8	6.7	--	--	--	--
PUBLIC SERVICE COMPANY OF INDIANA COAL	--	23.8	25.3	--	19.8	15.5	17.0	11.2	--	--
ROCHESTER G&E NUCLEAR	0.0	3.3	1.6	4.6	35.4	3.6	35.2	--	--	--
SACRAMENTO MUNICIPAL UTILITY DISTRICT NUCLEAR	72.5	69.6	--	--	--	--	--	--	--	--
SOUTHERN CALIFORNIA EDISON COMPANY NUCLEAR COAL	57.8 37.3	9.9 23.4	-- 16.8	2.1 26.0	1.5 10.1	23.7 12.8	7.2 --	0.2 --	-- --	-- --
SOUTHERN ELECTRIC GENERATING COMPANY COAL	14.3	27.7	--	--	--	--	--	--	--	--
SOUTHERN SERVICES, INCORPORATED COAL	29.9	12.3	9.4	--	--	--	--	--	--	--
TAMPA ELECTRIC COMPANY COAL	3.7	4.9	8.0	5.1	4.7	16.4	19.4	14.6	24.1	--
TENNESSEE VALLEY AUTHORITY NUCLEAR COAL	59.4 13.8	73.1 20.1	70.9 17.9	-- 8.5	-- 8.6	-- 12.1	-- 9.0	-- 6.5	-- 13.3	-- 24.4
UNION ELECTRIC COMPANY COAL	16.9	22.6	12.3	13.6	14.3	27.0	27.0	19.8	14.5	--
VIRGINIA ELECTRIC & POWER COMPANY NUCLEAR COAL	22.8 41.2	28.1 14.9	10.2 23.8	39.8 12.3	-- 3.8	-- 7.2	-- 15.9	-- 20.2	-- 20.3	-- 14.0
WISCONSIN ELECTRIC POWER COMPANY NUCLEAR	3.4	0.5	2.1	2.8	16.3	0.1	--	--	--	--
WISCONSIN POWER & LIGHT COMPANY COAL	0.4	--	--	--	--	--	--	--	--	--
WISCONSIN PUBLIC SERVICE CORPORATION NUCLEAR	9.7	5.0	--	--	--	--	--	--	--	--
YANKEE ATOMIC ELECTRIC COMPANY NUCLEAR	6.4	3.1	4.1	2.1	--	--	--	--	--	--

F. State and Utility Rankings

- F-1: State-Nuclear Unit Availability Factors for Calendar Years
- F-2: State-Nuclear Unit Capacity Factors for Calendar Years
- F-3: State-Nuclear Unit Equivalent Availability for Calendar Years
- F-4: State-Nuclear Unit Forced Outage Rates for Calendar Years
- F-5: State-Coal Unit Availability Factors for Calendar Years
- F-6: State-Coal Unit Capacity Factors for Calendar Years
- F-7: State-Coal Unit Equivalent Availability for Calendar Years
- F-8: State-Coal Unit Forced Outage Rates for Calendar Years
- F-9: Utility-Nuclear Unit Availability Factors for Calendar Years
- F-10: Utility-Nuclear Unit Capacity Factors for Calendar Years
- F-11: Utility-Nuclear Unit Equivalent Availability for Calendar Years
- F-12: Utility-Nuclear Unit Forced Outage Rates for Calendar Years
- F-13: Utility-Coal Unit Availability Factors for Calendar Years
- F-14: Utility-Coal Unit Capacity Factors for Calendar Years
- F-15: Utility-Coal Unit Equivalent Availability for Calendar Years
- F-16: Utility-Coal Unit Forced Outage Rates for Calendar Years

TABLE P-1: ORDERING OF NUCLEAR UNIT AVAILABILITY FACTORS BY CALENDAR YEAR (BY STATE)

<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
	CA (79.6)	CT (86.3)	CA (83.0)	WI (98.8)	MI (100.)	MN (95.5)	NB (92.6)	VT (87.8)	ME (96.0)
	CT (76.8)	CA (75.8)	CT (77.7)	NJ (96.5)	SC (88.4)	IL (95.0)	CA (86.1)	WI (84.7)	MD (95.0)
			NJ (77.0)	CA (93.4)	MN (82.9)	ME (39.4)	CT (85.2)	PA (81.1)	WI (84.1)
			NY (74.4)	CT (86.6)	NJ (82.4)	MA (36.6)	WI (81.2)	CT (80.9)	GA (83.8)
				NY (78.6)	CA (78.9)	WI (35.9)	NY (74.1)	MN (80.3)	CT (82.8)
				IL (65.0)	CT (73.4)	NY (35.7)	VT (74.1)	ME (79.9)	MN (81.6)
				SC (56.9)	WI (72.3)	FL (81.5)	AL (74.0)	IA (79.5)	NJ (79.3)
					NY (69.8)	VA (77.0)	FL (72.5)	AR (77.1)	VT (78.0)
					IL (64.7)	SC (75.2)	SC (71.3)	NB (76.3)	IA (77.0)
						NJ (73.2)	NJ (70.4)	NY (76.0)	NB (72.5)
						CA (62.8)	ME (68.7)	SC (74.8)	IL (71.0)
						VT (61.1)	IL (62.5)	MA (74.3)	PA (70.4)
						CT (48.0)	MN (61.8)	NJ (73.3)	SC (68.4)
						MI (12.9)	VA (49.4)	VA (70.8)	NY (61.7)
							MA (39.2)	MI (64.5)	MA (60.8)
							MI (5.5)	IL (60.7)	VA (60.4)
								CA (57.4)	AR (56.6)
								FL (32.6)	MI (56.4)
								AL (20.1)	NC (56.0)
									CA (49.2)
									FL (30.0)
									AL (27.9)

ALABAMA AL
 ARKANSAS AR
 CALIFORNIA CA
 CONNECTICUT CT
 FLORIDA FL
 GEORGIA GA
 ILLINOIS IL

IOWA IA
 MAINE ME
 MARYLAND MD
 MASSACHUSETTS ... MA
 MICHIGAN MI
 MINNESOTA MN
 NEBRASKA NB

NEW JERSEY NJ
 NEW YORK NY
 NORTH CAROLINA .. NC
 PENNSYLVANIA PA
 SOUTH CAROLINA .. SC
 VERMONT VT
 VIRGINIA VA
 WISCONSIN WI

TABLE F-2: ORDERING OF NUCLEAR UNIT CAPACITY FACTORS BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CT (72.1)	CT (71.9)	CA (81.3)	CA (92.1)	SC (82.1)	NY (80.4)	CA (84.0)	VT (85.1)	MD (92.8)	
CA (34.3)	CA (69.8)	NJ (73.2)	CT (83.9)	NJ (81.3)	WI (72.3)	WI (76.1)	CT (76.2)	ME (88.8)	
		CT (69.6)	NJ (78.2)	CA (78.5)	MA (72.2)	CT (75.8)	WI (75.0)	WI (81.1)	
		NY (52.8)	NY (66.1)	CT (70.4)	NJ (67.9)	SC (69.0)	MN (73.4)	NJ (73.1)	
			SC (41.6)	MN (69.9)	MN (67.2)	NJ (66.8)	ME (71.4)	VT (72.6)	
			WI (39.7)	IL (60.2)	IL (67.0)	FL (63.4)	SC (70.7)	MN (71.1)	
			IL (39.6)	NY (59.2)	VA (67.0)	ME (62.7)	FL (69.1)	CT (70.9)	
				MI (37.0)	SC (65.0)	NB (61.0)	VA (68.4)	FL (66.9)	
				WI (35.5)	CA (62.8)	VT (59.8)	NY (66.8)	SC (65.6)	
					ME (57.8)	NY (54.0)	PA (66.8)	PA (65.4)	
					FL (57.4)	MN (47.7)	AR (66.4)	MI (62.3)	
					VT (43.5)	VA (45.5)	NJ (57.6)	GA (59.9)	
					CT (41.0)	IL (44.3)	CA (56.3)	IA (59.3)	
					MI (41.0)	MA (34.9)	NB (56.1)	VA (57.2)	
						AL (29.1)	IA (52.2)	IL (56.6)	
						MI (1.5)	IL (50.7)	NB (55.8)	
							MA (46.0)	NY (55.2)	
							MI (44.0)	AR (52.5)	
							AL (10.3)	CA (46.8)	
								MA (42.8)	
								NC (36.4)	
								AL (15.4)	

ALABAMA AL
 ARKANSAS AR
 CALIFORNIA CA
 CONNECTICUT CT
 FLORIDA FL
 GEORGIA GA
 ILLINOIS IL

IOWA IA
 MAINE ME
 MARYLAND MD
 MASSACHUSETTS MA
 MICHIGAN MI
 MINNESOTA MN
 NEBRASKA NB

NEW JERSEY NJ
 NEW YORK NY
 NORTH CAROLINA .. NC
 PENNSYLVANIA PA
 SOUTH CAROLINA .. SC
 VERMONT VT
 VIRGINIA VA
 WISCONSIN WI

TABLE F-3: ORDERING OF NUCLEAR UNIT EQUIVALENT AVAILABILITY BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
CA (77.1)	CT (84.8)	NY (100.)	WI (98.8)	SC (87.7)	MN (95.5)	NB (92.6)	WI (82.7)	ME (92.9)	
CT (72.6)	CA (74.4)	CA (81.4)	NJ (96.3)	NJ (82.2)	NY (95.0)	CA (84.3)	VT (81.9)	MD (90.7)	
		NJ (77.0)	CA (91.0)	MI (81.3)	IL (92.3)	WI (80.1)	MN (79.7)	MN (80.9)	
		CT (73.4)	NY (78.1)	CA (76.0)	WI (85.9)	NY (74.1)	CA (79.3)	WI (80.5)	
			SC (56.9)	WI (72.3)	SC (74.1)	AL (71.3)	AR (77.0)	VT (78.0)	
			IL (36.8)	IL (32.1)	MA (71.7)	SC (69.7)	CT (75.7)	IA (74.2)	
					NJ (67.2)	FL (68.3)	NY (74.7)	CT (72.3)	
					CA (61.4)	NJ (66.1)	SC (71.7)	NJ (70.7)	
					VA (15.0)	VT (62.1)	VA (70.8)	NB (68.8)	
					MI (11.2)	MN (61.5)	NB (69.6)	SC (66.6)	
						IL (55.8)	ME (66.8)	PA (65.8)	
						ME (55.1)	PA (63.6)	IL (60.9)	
						VA (49.4)	IA (62.0)	NY (57.3)	
						CT (45.8)	NJ (59.2)	AR (56.6)	
						MA (37.4)	IL (51.8)	NC (53.6)	
						MI (1.9)	MA (49.6)	VA (52.3)	
							MI (41.2)	MA (41.7)	
							PL (37.8)	FL (30.0)	
							AL (20.0)	AL (27.6)	
								CA (15.3)	

ALABAMA AL
 ARKANSAS AR
 CALIFORNIA CA
 CONNECTICUT CT
 FLORIDA FL
 GEORGIA GA
 ILLINOIS IL

IOWA IA
 MAINE ME
 MARYLAND MD
 MASSACHUSETTS MA
 MICHIGAN MI
 MINNESOTA MN
 NEBRASKA NB

NEW JERSEY NJ
 NEW YORK NY
 NORTH CAROLINA .. NC
 PENNSYLVANIA PA
 SOUTH CAROLINA .. SC
 VERMONT VT
 VIRGINIA VA
 WISCONSIN WI

TABLE F-4: ORDERING OF NUCLEAR UNIT FORCED OUTAGE RATES BY CALENDAR YEAR (BY STATE)

<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
CT(16.7)	CT(4.1)	CT(3.3)	WI(0.5)	MI(0.0)	IL(2.9)	ME(2.6)	FL(2.1)	ME(0.7)	
CA(57.8)	CA(9.9)	NJ(7.4)	NJ(1.4)	WI(0.5)	MA(3.0)	VT(3.6)	ME(3.7)	MD(1.6)	
		NY(21.7)	CA(2.1)	CA(1.5)	WI(3.9)	NB(3.7)	VT(4.4)	NJ(1.8)	
			NY(2.3)	NY(2.3)	NY(4.2)	WI(5.1)	NY(4.8)	WI(1.8)	
			IL(14.2)	SC(4.2)	MN(5.1)	CT(5.6)	IA(6.1)	FL(3.0)	
			SC(47.6)	NJ(4.9)	SC(5.9)	CA(7.2)	AR(6.7)	VT(3.5)	
				MN(14.2)	ME(6.4)	SC(7.6)	MN(7.6)	IA(3.7)	
				IL(15.3)	NJ(14.4)	FL(7.7)	NB(8.0)	MN(5.8)	
					VA(15.0)	NY(15.8)	WI(9.6)	CT(6.4)	
					CA(23.7)	NJ(16.3)	VA(9.8)	NB(8.9)	
					MI(54.9)	MN(24.9)	CT(9.9)	GA(9.0)	
						IL(25.2)	NJ(11.4)	MA(9.4)	
						AL(25.6)	PA(13.0)	PA(11.6)	
						VA(36.7)	SC(17.6)	IL(12.5)	
						MA(48.1)	MA(18.3)	NY(14.7)	
						MI(94.3)	IL(20.6)	SC(16.5)	
							MI(31.8)	NI(19.5)	
							CA(36.3)	AR(21.6)	
							AL(87.4)	VA(27.0)	
								NC(30.2)	
								CA(36.1)	
								AL(67.6)	

ALABAMA AL
 ARKANSAS AR
 CALIFORNIA CA
 CONNECTICUT CT
 FLORIDA FL
 GEORGIA GA
 ILLINOIS IL

IOWA IA
 MAINE ME
 MARYLAND MD
 MASSACHUSETTS ... MA
 MICHIGAN MI
 MINNESOTA MN
 NEBRASKA NB

NEW JERSEY NJ
 NEW YORK NY
 NORTH CAROLINA .. NC
 PENNSYLVANIA PA
 SOUTH CAROLINA .. SC
 VERMONT VT
 VIRGINIA VA
 WISCONSIN WI

TABLE P-5: ORDERING OF COAL UNIT AVAILABILITY FACTORS BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NC (89.3)	NC (89.7)	MI (89.8)	WV (83.2)	MI (87.8)	MN (86.7)	TN (88.5)	NC (85.0)	NC (83.2)	IA (92.1)
IL (88.4)	OH (87.9)	OH (82.9)	MI (82.8)	TN (85.2)	NC (84.4)	NC (86.4)	MN (82.0)	MN (78.0)	WY (86.2)
TN (88.0)	KY (83.1)	WV (82.8)	MN (82.6)	NC (83.3)	NM (81.6)	PA (81.8)	IN (79.7)	WV (77.9)	NC (85.0)
AL (87.3)	MI (81.8)	NC (81.2)	NC (79.0)	AL (82.3)	FL (80.7)	IN (81.4)	MI (79.6)	MO (77.6)	WI (84.7)
KY (79.9)	WV (81.7)	AL (78.3)	TN (76.9)	MN (79.7)	MI (79.3)	NM (80.5)	TN (79.6)	IN (77.0)	MN (79.9)
WV (74.9)	PA (76.3)	KY (73.6)	OH (76.5)	MO (78.4)	WV (77.8)	WV (80.4)	FL (79.0)	PA (76.3)	NV (77.4)
IN (73.6)	TN (76.1)	PA (73.6)	AL (76.1)	VA (77.5)	OH (77.2)	MI (79.4)	NV (77.0)	MI (76.0)	NJ (77.0)
	AL (75.3)	TN (73.5)	MO (74.0)	WV (77.1)	KY (75.3)	OH (77.9)	IL (75.2)	KY (75.2)	WV (76.3)
	MO (73.3)	IN (72.6)	KY (73.2)	KY (75.4)	TN (74.4)	FL (76.5)	WV (74.7)	NV (75.1)	IN (75.6)
	IN (72.2)	MO (70.8)	NJ (71.8)	IL (73.8)	PA (73.8)	NJ (75.7)	NM (72.3)	WY (75.0)	MO (74.1)
	IL (67.4)	MN (68.0)	IL (71.4)	OH (73.5)	VA (72.2)	VA (74.7)	OH (72.2)	OH (74.9)	KY (73.3)
		IL (64.3)	IN (70.8)	IN (72.8)	IL (70.6)	AL (73.5)	PA (72.1)	MS (74.3)	PA (72.6)
			MN (69.3)	MN (71.6)	NV (70.4)	WA (73.4)	AL (72.0)	TN (72.7)	VA (71.9)
			VA (63.5)	PA (70.3)	GA (69.8)	IL (72.2)	MS (70.6)	FL (72.1)	OH (71.8)
			FL (63.3)	FL (69.9)	IN (62.9)	GA (71.6)	KY (69.9)	WA (71.5)	TN (71.8)
			PA (62.0)	NJ (65.9)	MO (57.2)	KY (71.5)	MO (67.8)	GA (69.8)	WA (70.5)
				NV (48.9)	AL (54.1)	MO (70.2)	GA (66.9)	AL (69.5)	MI (68.7)
					WA (52.4)	NV (70.0)	NJ (64.1)	IL (65.4)	NM (67.8)
							KS (48.3)	KS (59.1)	KS (65.8)
							WA (14.9)	NM (56.0)	AL (64.1)
								VA (55.3)	IL (63.3)
								NJ (53.5)	GA (61.7)
									FL (61.1)
									MS (28.0)

ALABAMA AL
FLORIDA FL
GEORGIA GA
ILLINOIS IL
INDIANA IN
IOWA IA
KANSAS KS
KENTUCKY KY

MICHIGAN MI
MINNESOTA MN
MISSISSIPPI MS
MISSOURI MO
NEVADA NV
NEW JERSEY NJ
NEW MEXICO NM
NORTH CAROLINA .. NC

OHIO OH
PENNSYLVANIA PA
TENNESSEE TN
VIRGINIA VA
WASHINGTON WA
W. VIRGINIA WV
WISCONSIN WI
WYOMING WY

TABLE P-6: ORDERING OF COAL UNIT CAPACITY FACTORS BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NC(88.1)	OH(84.1)	MI(83.0)	MI(74.9)	MI(80.3)	NM(73.2)	NC(73.5)	NC(68.2)	NC(65.2)	IA(70.9)
TN(87.0)	KY(81.3)	IN(80.7)	WV(71.4)	TN(73.2)	NC(72.7)	MI(72.5)	MI(66.5)	PA(65.2)	NC(67.2)
IL(86.7)	MI(75.0)	KY(79.4)	MN(70.3)	NC(73.1)	MN(69.8)	NM(71.4)	TN(64.0)	MI(64.3)	MN(65.7)
AL(85.3)	NC(74.2)	WV(76.6)	OH(67.9)	KY(67.4)	MI(69.5)	IN(69.9)	IN(63.5)	MN(63.3)	PA(65.2)
KY(77.5)	WV(73.8)	OH(74.1)	TN(67.5)	MN(65.4)	TN(69.1)	PA(68.9)	FL(63.2)	FL(61.0)	WV(64.5)
WV(73.8)	PA(70.1)	TN(68.5)	NC(67.0)	WV(65.2)	WV(67.8)	WV(68.2)	NM(63.2)	WV(60.7)	KY(63.8)
IN(71.2)	TN(63.3)	NC(68.1)	IN(64.1)	NM(64.0)	KY(67.3)	OH(67.2)	MN(63.0)	IN(59.6)	NV(62.4)
	IN(67.7)	PA(66.9)	AL(62.5)	OH(63.4)	OH(67.1)	KY(66.4)	KY(61.4)	NV(59.0)	WI(61.3)
	AL(64.5)	AL(65.5)	KY(61.9)	PA(61.9)	PA(63.7)	TN(62.8)	NV(60.9)	MO(58.7)	IN(60.3)
	MO(54.6)	MN(58.6)	MO(55.8)	AL(61.5)	FL(61.4)	AL(62.3)	WV(60.5)	OH(55.8)	NM(59.8)
	IL(52.5)	MO(58.3)	IL(55.5)	VA(58.8)	VA(60.0)	NJ(61.1)	IL(60.4)	WA(54.2)	TN(59.5)
		IL(50.8)	PA(54.6)	IL(56.9)	IL(55.7)	VA(59.6)	PA(57.0)	IL(53.8)	OH(58.9)
			NJ(53.1)	IN(55.4)	GA(55.4)	PL(57.4)	AL(50.7)	MS(53.8)	MS(58.5)
			FL(46.0)	MO(54.0)	IN(52.8)	IL(54.8)	GA(50.2)	KY(52.0)	NJ(58.5)
			VA(42.3)	NJ(46.9)	NV(51.0)	NV(53.7)	MS(49.3)	TN(51.0)	MO(55.9)
			NM(40.3)	FL(46.7)	AL(43.1)	MO(51.5)	MO(48.5)	GA(50.7)	WA(53.9)
				NV(22.5)	MO(36.3)	GA(48.3)	OH(47.7)	NM(49.1)	IL(52.7)
					WA(31.6)	WA(45.3)	NJ(43.5)	AL(48.8)	MI(52.7)
							WA(37.3)	WY(44.7)	AL(50.7)
							KS(23.3)	VA(36.0)	GA(49.4)
								KS(35.3)	WY(48.3)
								NJ(28.9)	FL(48.1)
									VA(43.2)
									KS(42.4)

ALABAMA AL
FLORIDA FL
GEORGIA GA
ILLINOIS IL
INDIANA IN
IOWA IA
KANSAS KS
KENTUCKY KY

MICHIGAN MI
MINNESOTA MN
MISSISSIPPI MS
MISSOURI MO
NEVADA NV
NEW JERSEY NJ
NEW MEXICO NM
NORTH CAROLINA .. NC

OHIO OH
PENNSYLVANIA PA
TENNESSEE TN
VIRGINIA VA
WASHINGTON WA
W. VIRGINIA WV
WISCONSIN WI
WYOMING WY

TABLE F-7: ORDERING OF COAL UNIT EQUIVALENT AVAILABILITY BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NC (89.1)	NC (89.2)	MI (89.5)	WV (80.7)	MI (85.6)	MN (86.4)	TN (87.9)	NC (81.9)	NC (79.9)	NC (81.1)
TN (87.0)	CH (85.4)	WV (81.4)	MI (79.4)	WV (84.9)	NC (82.4)	NC (85.1)	MN (79.8)	MN (78.0)	MN (79.7)
AL (86.1)	MI (81.8)	NC (79.8)	NC (75.5)	NC (80.9)	WV (78.3)	IN (80.8)	PL (77.0)	IN (75.3)	WY (79.6)
IL (85.3)	KY (80.7)	OH (79.1)	AL (74.8)	AL (80.1)	PL (76.4)	OH (74.8)	IN (75.7)	WY (75.0)	WI (75.0)
KY (79.5)	WV (80.2)	AL (76.6)	TN (74.4)	TN (77.9)	OH (74.7)	PL (73.6)	TN (75.0)	WV (72.2)	NJ (72.7)
WV (69.9)	AL (73.0)	IN (75.1)	OH (72.7)	OH (70.6)	MI (74.5)	MI (73.6)	MI (70.2)	WA (71.5)	IN (71.5)
IN (69.4)	TN (71.3)	KY (72.8)	MO (66.9)	IN (69.9)	TN (73.4)	WA (73.4)	MS (69.2)	OH (69.4)	WV (70.8)
	PA (70.4)	TN (71.9)	IN (65.5)	PA (69.9)	KY (72.4)	PA (73.3)	NV (69.1)	KY (69.0)	NV (68.2)
	IN (68.2)	MN (66.0)	NJ (62.9)	VA (69.8)	NM (71.4)	NM (72.1)	WV (69.0)	FL (68.9)	OH (66.8)
	IL (59.3)	PA (64.4)	FL (62.4)	PL (69.1)	PA (68.2)	WV (72.0)	IL (68.0)	PA (68.5)	PA (66.3)
		IL (57.4)	IL (62.0)	MO (69.1)	NV (67.5)	AL (69.0)	OH (67.3)	MO (68.4)	TN (66.3)
			VA (60.9)	KY (66.9)	GA (62.7)	NJ (67.3)	KY (65.9)	MS (67.5)	WA (65.9)
			KY (59.5)	NJ (63.7)	VA (62.3)	KY (67.2)	PA (64.5)	NV (66.8)	KS (65.8)
			PA (59.1)	NM (63.5)	IN (61.2)	VA (66.8)	AL (64.3)	MI (65.2)	MO (65.6)
			NM (54.3)	IL (62.7)	IL (60.0)	GA (66.4)	NM (61.1)	TN (63.2)	KY (62.2)
				NV (44.4)	WA (52.4)	NV (65.1)	MO (59.8)	GA (62.3)	IA (62.1)
					AL (50.4)	IL (64.5)	GA (57.3)	AL (61.8)	NM (61.6)
					MO (49.8)	MO (63.5)	NJ (55.3)	IL (61.1)	VA (59.3)
							KS (48.3)	KS (59.1)	IL (59.2)
							WA (14.9)	VA (48.8)	FL (56.8)
								NM (44.0)	MI (56.3)
								NJ (37.9)	GA (56.2)
									AL (53.8)
									MS (22.3)

ALABAMA AL
 FLORIDA FL
 GEORGIA GA
 ILLINOIS IL
 INDIANA IN
 IOWA IA
 KANSAS KS
 KENTUCKY KY

MICHIGAN MI
 MINNESOTA MN
 MISSISSIPPI MS
 MISSOURI MO
 NEVADA NV
 NEW JERSEY NJ
 NEW MEXICO NM
 NORTH CAROLINA .. NC

OHIO OH
 PENNSYLVANIA PA
 TENNESSEE TN
 VIRGINIA VA
 WASHINGTON WA
 W. VIRGINIA WV
 WISCONSIN WI
 WYOMING WY

TABLE P-8: ORDERING OF COAL UNIT FORCED OUTAGE RATES BY CALENDAR YEAR (BY STATE)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
NC (3.1)	NC (3.4)	MI (1.1)	MN (3.3)	TN (2.4)	FL (5.6)	WA (4.2)	NC (4.2)	WY (2.0)	WI (0.4)
KY (3.6)	KY (3.9)	MN (5.1)	TN (4.5)	MI (3.7)	VA (5.7)	MI (5.9)	IN (7.0)	NC (4.7)	IA (3.9)
AL (9.1)	MI (4.6)	NC (6.6)	MI (4.6)	NC (4.4)	MN (5.8)	NC (6.3)	FL (8.2)	IN (7.3)	MN (6.4)
IL (9.3)	OH (7.4)	TN (7.1)	WV (6.2)	FL (6.2)	NC (5.8)	IN (7.2)	MN (10.4)	FL (7.5)	NC (6.5)
TN (11.5)	IL (8.9)	OH (8.7)	AL (9.0)	MN (7.0)	TN (7.3)	IL (10.3)	KY (10.5)	VA (10.5)	WY (6.9)
IN (14.6)	WV (10.0)	WV (8.7)	NC (11.2)	VA (10.0)	KY (9.1)	TN (11.7)	IL (13.1)	MO (10.6)	IN (8.8)
WV (20.6)	PA (10.3)	AL (8.8)	IN (11.6)	PA (10.5)	OH (10.0)	NH (12.1)	MI (14.0)	WV (10.9)	MS (9.9)
	AL (11.8)	IN (10.3)	IL (12.6)	KY (11.3)	MI (12.2)	WV (12.1)	MO (14.1)	WA (11.2)	NV (11.0)
	IN (13.2)	KY (11.1)	MO (14.6)	NH (11.7)	WV (12.7)	VA (12.2)	NJ (15.5)	MN (11.6)	NJ (11.2)
	TN (15.8)	MO (13.4)	NM (15.1)	AL (12.0)	IL (13.0)	PA (12.4)	TN (15.7)	MS (12.3)	WV (11.2)
	MC (16.3)	IL (16.9)	FL (16.5)	IL (12.4)	NH (13.5)	FL (12.9)	NV (18.5)	PA (13.3)	KY (12.4)
		PA (22.2)	KY (17.0)	MO (16.8)	PA (17.1)	OH (14.5)	WV (18.5)	OH (13.9)	MO (12.4)
			OH (17.6)	WV (17.1)	IN (19.1)	GA (16.0)	PA (18.7)	MI (14.2)	FL (13.7)
			PA (23.2)	OH (20.1)	WA (22.3)	KY (16.3)	OH (19.0)	IL (15.0)	PA (14.4)
			NJ (23.8)	IN (21.6)	NV (23.6)	AL (16.9)	WA (20.6)	KY (15.1)	OH (14.7)
			VA (35.3)	NJ (25.3)	GA (24.1)	MO (19.5)	AL (21.0)	NJ (17.0)	IL (17.8)
				NV (50.1)	AL (33.1)	NJ (19.8)	GA (23.2)	NV (20.0)	MI (18.5)
					MO (33.5)	NV (21.8)	NH (26.6)	GA (21.5)	VA (19.5)
							MS (29.9)	AL (22.4)	WA (19.8)
							KS (39.8)	TN (22.8)	TN (20.4)
								NM (25.0)	NM (20.5)
								KS (29.8)	GA (21.2)
									AL (24.8)
									KS (27.2)

ALABAMA AL
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 IOWA IA
 KANSAS KS
 KENTUCKY KY

MICHIGAN MI
 MINNESOTA MN
 MISSISSIPPI MS
 MISSOURI MO
 NEVADA NV
 NEW JERSEY NJ
 NEW MEXICO NM
 NORTH CAROLINA .. NC

OHIO OH
 PENNSYLVANIA PA
 TENNESSEE TN
 VIRGINIA VA
 WASHINGTON WA
 W. VIRGINIA WV
 WISCONSIN WI
 WYOMING WY

TABLE F-9: ORDERING OF NUCLEAR UNIT AVAILABILITY FACTORS BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	21(79.6)	31(86.3)	78(100.1)	50(98.8)	45(100.)	24(95.5)	165(92.6)	120(88.1)	29(95.0)
	21(76.8)	21(75.8)	21(83.0)	123(96.5)	92(88.4)	30(95.0)	6(89.4)	21(87.4)	14(90.9)
			81(77.7)	21(93.4)	24(82.9)	78(95.0)	21(86.1)	152(85.2)	145(87.0)
			123(77.0)	78(88.3)	123(82.4)	35(86.6)	81(85.2)	145(83.9)	50(86.7)
			14(48.9)	81(86.6)	21(78.9)	50(85.9)	92(82.4)	50(83.1)	82(83.8)
				14(68.9)	81(73.4)	51(81.5)	50(81.2)	46(82.2)	81(82.8)
				30(65.0)	50(72.3)	19(77.0)	129(74.0)	81(80.9)	24(81.6)
				92(56.9)	14(70.3)	14(76.3)	51(72.5)	38(80.6)	123(79.3)
					78(69.2)	145(75.3)	145(71.4)	24(80.3)	120(78.9)
					30(64.7)	92(75.2)	14(70.5)	94(79.5)	94(77.0)
						23(73.2)	123(70.4)	78(77.7)	152(75.5)
						21(62.8)	30(62.5)	98(77.1)	38(72.9)
						81(48.0)	78(62.4)	6(77.0)	143(71.6)
						45(12.9)	24(61.8)	113(75.5)	30(71.0)
							113(60.1)	35(74.3)	92(70.4)
							19(49.4)	14(73.4)	21(70.2)
							35(39.2)	123(73.3)	165(69.5)
							45(5.5)	92(72.7)	46(65.4)
								19(70.8)	113(63.0)
								165(67.4)	35(60.8)
								45(64.5)	19(60.4)
								30(60.7)	44(57.6)
								51(32.6)	98(56.6)
								168(27.5)	45(55.2)
								129(20.1)	78(49.5)
									6(34.8)
									51(30.0)
									168(28.1)
									129(27.9)
6	CONSOLIDATED EDISON COMPANY OF NY			45	CONSUMERS POWER COMPANY		113	DUKE POWER COMPANY	
14	NIAGARA MOHAWK POWER CORPORATION			46	METROPOLITAN EDISON COMPANY		120	WISCONSIN PUBLIC SERVICE CORP	
19	VIRGINIA ELECTRIC & POWER COMPANY			50	WISCONSIN ELECTRIC POWER COMPANY		123	CENTRAL JERSEY POWER & LIGHT CO	
21	SOUTHERN CALIFORNIA EDISON COMPANY			51	FLORIDA POWER & LIGHT COMPANY		129	TENNESSEE VALLEY AUTHORITY	
24	NORTHERN STATES POWER COMPANY			78	ROCHESTER G&E		143	POWER AUTHORITY OF STATE OF NY	
29	BALTIMORE GAS & ELECTRIC COMPANY			81	NORTHEAST UTILITIES SERVICE CO		145	YANKEE ATOMIC ELECTRIC COMPANY	
30	COMMONWEALTH EDISON COMPANY			82	GEORGIA POWER COMPANY		152	NEBRASKA PUBLIC POWER DISTRICT	
35	BOSTON EDISON COMPANY			92	CAROLINA POWER & LIGHT COMPANY		165	OMAHA PUBLIC POWER DISTRICT	
38	PHILADELPHIA ELECTRIC COMPANY			94	IOWA ELECTRIC LIGHT & POWER CO		168	SACRAMENTO MUNICIPAL UTILITY DIST	
44	AMERICAN ELECTRIC POWER SERV CORP			98	ARKANSAS POWER & LIGHT COMPANY				

TABLE F-10: ORDERING OF NUCLEAR UNIT CAPACITY FACTORS BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	81(72.1)	81(71.5)	21(81.3)	21(92.1)	92(82.1)	78(94.2)	21(84.0)	21(86.5)	29(92.8)
	21(34.3)	21(69.8)	123(73.2)	81(83.9)	123(81.3)	50(72.3)	92(82.6)	46(82.0)	50(82.4)
			81(69.6)	123(78.2)	21(78.5)	35(72.2)	50(76.1)	50(78.9)	145(80.7)
			78(63.2)	78(75.4)	81(70.4)	123(67.9)	81(75.8)	145(78.3)	14(79.2)
			14(42.4)	14(56.8)	24(69.9)	24(67.2)	123(66.8)	78(76.6)	120(78.4)
				92(41.6)	14(60.3)	30(67.0)	51(63.4)	81(76.2)	44(76.7)
				50(39.7)	30(60.2)	19(67.0)	14(63.3)	24(73.4)	123(73.1)
				30(39.6)	78(58.0)	14(66.6)	145(61.3)	92(71.7)	24(71.1)
					45(37.0)	92(65.0)	165(61.0)	113(70.4)	81(70.9)
					50(35.5)	21(62.8)	113(55.4)	51(69.1)	51(66.9)
						51(57.4)	78(54.0)	19(68.4)	38(65.8)
						145(50.7)	24(47.7)	120(67.1)	21(65.5)
						45(41.0)	19(45.5)	98(66.4)	46(64.6)
						81(41.0)	6(44.7)	6(64.9)	143(61.5)
							30(44.3)	152(59.7)	92(59.9)
							35(34.9)	38(59.2)	82(59.9)
							129(29.1)	14(58.9)	113(59.6)
							45(1.5)	123(57.6)	94(59.3)
								165(52.5)	19(57.2)
								94(52.2)	165(56.7)
								30(50.7)	30(56.6)
								35(46.0)	152(54.9)
								45(44.0)	98(52.5)
								168(26.2)	78(49.8)
								129(10.3)	45(47.8)
									35(42.8)
									6(30.3)
									168(28.1)
									129(15.4)

6 CONSOLIDATED EDISON COMPANY OF NY
14 NIAGARA MOHAWK POWER CORPORATION
19 VIRGINIA ELECTRIC & POWER COMPANY
21 SOUTHERN CALIFORNIA EDISON COMPANY
24 NORTHERN STATES POWER COMPANY
29 BALTIMORE GAS & ELECTRIC COMPANY
30 COMMONWEALTH EDISON COMPANY
35 BOSTON EDISON COMPANY
38 PHILADELPHIA ELECTRIC COMPANY
44 AMERICAN ELECTRIC POWER SERV CORP

45 CONSUMERS POWER COMPANY
46 METROPOLITAN EDISON COMPANY
50 WISCONSIN ELECTRIC POWER COMPANY
51 FLORIDA POWER & LIGHT COMPANY
78 ROCHESTER G&E
81 NORTHEAST UTILITIES SERVICE CO
82 GEORGIA POWER COMPANY
92 CAROLINA POWER & LIGHT COMPANY
94 IOWA ELECTRIC LIGHT & POWER CO
98 ARKANSAS POWER & LIGHT COMPANY

113 DUKE POWER COMPANY
120 WISCONSIN PUBLIC SERVICE CORP
123 CENTRAL JERSEY POWER & LIGHT CO
129 TENNESSEE VALLEY AUTHORITY
143 POWER AUTHORITY OF STATE OF NY
145 YANKEE ATOMIC ELECTRIC COMPANY
152 NEBRASKA PUBLIC POWER DISTRICT
165 OMAHA PUBLIC POWER DISTRICT
168 SACRAMENTO MUNICIPAL UTILITY DIST

TABLE P-11: ORDERING OF NUCLEAR UNIT EQUIVALENT AVAILABILITY BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
21(77.1)	81(84.8)	78(100.)	50(98.8)	92(87.7)	24(95.5)	165(92.6)	21(86.1)	14(90.9)	
81(72.6)	21(74.4)	21(81.4)	123(96.3)	123(82.2)	78(95.0)	6(89.4)	50(82.9)	29(90.7)	
		123(77.0)	21(91.0)	45(81.3)	30(92.3)	81(89.3)	120(82.3)	145(85.4)	
		81(73.4)	78(88.3)	21(76.0)	50(85.9)	21(84.3)	46(79.8)	50(82.3)	
			14(67.8)	50(72.3)	92(74.1)	92(81.1)	24(79.7)	24(80.9)	
			92(56.9)	30(32.1)	35(71.7)	50(80.1)	78(77.7)	120(78.7)	
			30(36.8)		123(67.2)	129(71.3)	98(77.0)	94(74.2)	
					21(61.4)	14(70.5)	81(75.7)	152(73.3)	
					45(11.2)	51(68.3)	145(74.4)	81(72.3)	
						123(66.1)	6(73.3)	123(70.7)	
						78(62.4)	14(73.0)	92(68.4)	
						24(61.5)	113(72.0)	38(67.1)	
						145(58.6)	152(71.9)	165(64.3)	
						113(58.3)	92(70.9)	46(63.2)	
						30(55.8)	19(70.8)	113(61.0)	
						19(49.4)	165(67.4)	30(60.9)	
						35(37.4)	94(62.0)	98(56.6)	
						45(1.9)	123(59.2)	44(55.1)	
							38(55.5)	19(52.3)	
							30(51.8)	45(48.4)	
							35(49.6)	78(48.3)	
							45(41.2)	35(41.7)	
							51(37.8)	6(32.6)	
							129(2.0)	51(30.0)	
								168(28.1)	
								129(27.6)	

6 CONSOLIDATED EDISON COMPANY OF NY
 14 NIAGARA MOHAWK POWER CORPORATION
 19 VIRGINIA ELECTRIC & POWER COMPANY
 21 SOUTHERN CALIFORNIA EDISON COMPANY
 24 NORTHERN STATES POWER COMPANY
 29 BALTIMORE GAS & ELECTRIC COMPANY
 30 COMMONWEALTH EDISON COMPANY
 35 BOSTON EDISON COMPANY
 38 PHILADELPHIA ELECTRIC COMPANY
 44 AMERICAN ELECTRIC POWER SERV CORP

45 CONSUMERS POWER COMPANY
 46 METROPOLITAN EDISON COMPANY
 50 WISCONSIN ELECTRIC POWER COMPANY
 51 FLORIDA POWER & LIGHT COMPANY
 78 ROCHESTER G&E
 91 NORTHEAST UTILITIES SERVICE CO
 82 GEORGIA POWER COMPANY
 92 CAROLINA POWER & LIGHT COMPANY
 94 IOWA ELECTRIC LIGHT & POWER CO
 98 ARKANSAS POWER & LIGHT COMPANY

113 DUKE POWER COMPANY
 120 WISCONSIN PUBLIC SERVICE CORP
 123 CENTRAL JERSEY POWER & LIGHT CO
 129 TENNESSEE VALLEY AUTHORITY
 143 POWER AUTHORITY OF STATE OF NY
 145 YANKEE ATOMIC ELECTRIC COMPANY
 152 NEBRASKA PUBLIC POWER DISTRICT
 165 OMAHA PUBLIC POWER DISTRICT
 168 SACRAMENTO MUNICIPAL UTILITY DIST

TABLE F-12: ORDERING OF NUCLEAR UNIT FORCED OUTAGE RATES BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	81(16.7)	81(4.1)	78(0.0)	50(0.5)	45(0.0)	30(2.9)	92(0.9)	21(0.2)	50(0.1)
	21(57.8)	21(9.5)	81(3.3)	14(1.2)	50(0.5)	35(3.0)	145(3.1)	51(2.1)	29(1.6)
			123(7.4)	123(1.4)	21(1.5)	14(3.8)	165(3.7)	14(2.3)	123(1.8)
			14(43.4)	21(2.1)	78(1.6)	50(3.9)	14(4.3)	165(2.3)	14(2.0)
				78(3.3)	14(3.0)	78(4.6)	50(5.1)	78(3.6)	145(2.1)
				30(14.2)	92(4.2)	24(5.1)	81(5.6)	145(4.1)	21(2.5)
				92(47.6)	123(4.9)	92(5.9)	21(7.2)	94(6.1)	51(3.0)
					24(14.2)	145(6.4)	51(7.7)	98(6.7)	94(3.7)
					30(15.3)	123(14.4)	6(7.8)	24(7.6)	152(4.7)
						19(15.0)	113(14.3)	6(8.4)	120(5.0)
						21(23.7)	123(16.3)	50(9.5)	24(5.8)
						45(54.9)	24(24.9)	120(9.7)	6(6.3)
							30(25.2)	19(9.8)	81(6.4)
							129(25.6)	81(9.9)	82(9.0)
							78(35.4)	123(11.4)	35(9.4)
							19(36.7)	46(11.4)	46(10.4)
							75(48.1)	152(13.6)	38(12.2)
							45(94.3)	38(13.8)	30(12.5)
								92(14.0)	45(12.5)
								35(18.3)	165(13.1)
								113(18.8)	92(16.5)
								30(20.6)	113(21.1)
								45(31.8)	98(21.6)
								168(72.5)	44(26.4)
								129(87.4)	19(27.0)
									78(35.2)
									129(67.6)
									168(69.6)

6 CONSOLIDATED EDISON COMPANY OF NY
14 NIAGARA MOHAWK POWER CORPORATION
19 VIRGINIA ELECTRIC & POWER COMPANY
21 SOUTHERN CALIFORNIA EDISON COMPANY
24 NORTHERN STATES POWER COMPANY
29 BALTIMORE GAS & ELECTRIC COMPANY
30 COMMONWEALTH EDISON COMPANY
35 BOSTON EDISON COMPANY
38 PHILADELPHIA ELECTRIC COMPANY
44 AMERICAN ELECTRIC POWER SERV CORP

45 CONSUMERS POWER COMPANY
46 METROPOLITAN EDISON COMPANY
50 WISCONSIN ELECTRIC POWER COMPANY
51 FLORIDA POWER & LIGHT COMPANY
78 ROCHESTER G&E
81 NORTHEAST UTILITIES SERVICE CO
82 GEORGIA POWER COMPANY
92 CAROLINA POWER & LIGHT COMPANY
94 IOWA ELECTRIC LIGHT & POWER CO
98 ARKANSAS POWER & LIGHT COMPANY

113 DUKE POWER COMPANY
120 WISCONSIN PUBLIC SERVICE CORP
123 CENTRAL JERSEY POWER & LIGHT CO
129 TENNESSEE VALLEY AUTHORITY
143 POWER AUTHORITY OF STATE OF NY
145 YANKEE ATOMIC ELECTRIC COMPANY
152 NEBRASKA PUBLIC POWER DISTRICT
165 OMAHA PUBLIC POWER DISTRICT
168 SACRAMENTO MUNICIPAL UTILITY DIST

TABLE P-13: ORDERING OF COAL UNIT AVAILABILITY FACTORS BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
92 (89.3)	36 (91.2)	10 (95.4)	92 (86.4)	85 (92.6)	13 (89.3)	9 (99.6)	104 (89.0)	92 (89.9)	131 (92.1)
30 (88.4)	92 (89.7)	20 (89.8)	20 (82.8)	27 (90.8)	85 (87.1)	104 (90.6)	84 (87.8)	43 (87.0)	85 (88.8)
129 (85.0)	44 (83.1)	36 (84.3)	24 (82.6)	26 (90.6)	9 (86.8)	113 (88.0)	117 (86.6)	10 (85.9)	113 (85.2)
44 (75.8)	20 (81.8)	32 (81.2)	85 (82.1)	20 (87.8)	24 (86.7)	36 (85.9)	113 (86.4)	104 (85.4)	92 (84.7)
19 (72.2)	19 (81.0)	44 (80.6)	10 (81.5)	92 (86.4)	36 (85.6)	44 (84.6)	43 (85.5)	36 (83.7)	74 (84.7)
	10 (79.9)	129 (75.9)	4 (79.7)	5 (85.6)	92 (85.2)	73 (84.6)	92 (83.5)	26 (82.6)	36 (84.6)
	129 (78.0)	19 (74.1)	19 (77.6)	13 (84.6)	113 (83.5)	92 (84.1)	36 (82.9)	9 (81.1)	24 (79.9)
	4 (73.3)	4 (70.8)	129 (77.3)	19 (83.5)	99 (81.6)	117 (82.8)	24 (82.0)	33 (78.6)	135 (79.9)
	30 (67.4)	23 (68.2)	44 (74.5)	36 (83.4)	137 (80.7)	43 (82.1)	44 (81.7)	113 (78.2)	73 (79.5)
	23 (61.4)	24 (68.0)	3 (71.8)	113 (80.2)	40 (79.3)	40 (80.7)	85 (81.6)	27 (78.1)	117 (78.4)
		30 (64.3)	30 (71.4)	24 (79.7)	20 (79.3)	99 (80.5)	26 (80.6)	24 (78.0)	44 (78.2)
		73 (57.9)	73 (70.3)	10 (79.1)	5 (79.0)	27 (79.8)	9 (80.0)	85 (77.5)	21 (77.4)
			36 (69.5)	129 (77.6)	117 (77.9)	20 (79.4)	20 (79.6)	4 (76.9)	40 (77.1)
			99 (69.3)	4 (76.3)	27 (77.7)	10 (79.1)	10 (79.0)	20 (76.0)	3 (77.0)
			26 (66.1)	30 (74.8)	10 (76.0)	13 (79.0)	137 (79.0)	44 (75.7)	10 (76.8)
			113 (64.2)	44 (72.2)	19 (75.7)	137 (76.5)	40 (77.2)	40 (75.3)	9 (75.3)
			137 (63.3)	40 (71.9)	43 (72.7)	23 (75.9)	21 (77.0)	21 (75.1)	5 (74.2)
			13 (62.6)	99 (71.6)	44 (72.3)	3 (75.7)	33 (74.9)	90 (74.3)	27 (73.9)
			23 (47.0)	43 (71.0)	21 (70.4)	129 (75.2)	99 (72.3)	73 (73.1)	4 (73.4)
				117 (70.6)	82 (69.8)	135 (73.4)	90 (70.6)	135 (72.7)	13 (71.9)
				137 (69.9)	30 (68.1)	26 (72.9)	27 (69.8)	84 (72.4)	43 (70.3)
				3 (65.9)	23 (67.8)	82 (71.6)	30 (67.6)	5 (72.1)	26 (69.5)
				73 (59.9)	129 (65.3)	30 (71.2)	13 (67.6)	137 (72.1)	20 (68.7)
				9 (57.9)	26 (64.7)	19 (70.3)	82 (66.9)	13 (70.3)	129 (68.2)
				23 (51.2)	73 (60.0)	21 (70.0)	4 (64.7)	82 (69.8)	104 (68.1)
				21 (48.9)	104 (58.6)	4 (68.4)	129 (64.3)	122 (69.3)	99 (67.8)
					135 (52.4)	33 (64.4)	3 (64.1)	117 (68.9)	19 (67.5)
					4 (49.2)	5 (51.8)	73 (63.8)	23 (68.6)	23 (65.6)
							23 (59.2)	129 (66.5)	82 (61.7)
							19 (57.0)	30 (58.7)	137 (61.1)
							5 (41.8)	19 (57.3)	33 (60.6)
							135 (14.9)	99 (56.0)	122 (51.0)
								3 (53.5)	30 (49.2)
									90 (28.0)
									84 (22.2)

3 PUBLIC SERVICE ELECTRIC & GAS CO
4 UNION ELECTRIC COMPANY
5 CINCINNATI GAS & ELECTRIC COMPANY
9 DUQUESNE LIGHT COMPANY
10 ALLEGHENY POWER SERVICE CORP
13 KANSAS CITY POWER & LIGHT CO
19 VIRGINIA ELECTRIC & POWER CO
20 DETROIT EDISON COMPANY
21 SOUTHERN CALIFORNIA EDISON CO
23 PENNSYLVANIA ELECTRIC COMPANY
24 NORTHERN STATES POWER COMPANY
26 ALABAMA POWER COMPANY

27 CLEVELAND ELECTRIC ILLUMINATING CO
30 COMMONWEALTH EDISON COMPANY
33 CENTRAL ILLINOIS PUBLIC SERV CO
36 PENNSYLVANIA POWER & LIGHT CO
40 DAYTON POWER & LIGHT COMPANY
43 PUBLIC SERVICE CO OF INDIANA
44 AMERICAN ELECTRIC POWER SERV CORP
73 NORTHERN INDIANA PUBLIC SERV CO
74 WISCONSIN POWER & LIGHT COMPANY
82 GEORGIA POWER COMPANY
84 COLUMBUS & SOUTHERN OHIO ELEC CO
85 INDIANAPOLIS POWER & LIGHT COMPANY

90 SOUTHERN SERVICES, INCORPORATED
92 CAROLINA POWER & LIGHT COMPANY
99 ARIZONA PUBLIC SERVICE COMPANY
104 KENTUCKY UTILITIES COMPANY
113 DUKE POWER COMPANY
117 ILLINOIS POWER COMPANY
122 SOUTHERN ELECTRIC GENERATING CO
129 TENNESSEE VALLEY AUTHORITY
131 IOWA PUBLIC SERVICE COMPANY
135 PACIFIC POWER & LIGHT COMPANY
137 TAMPA ELECTRIC COMPANY

TABLE P-14: ORDERING OF COAL UNIT CAPACITY FACTORS BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
92 (88.1)	36 (87.0)	10 (84.9)	10 (76.9)	27 (84.4)	113 (77.1)	113 (76.1)	113 (76.7)	36 (72.3)	36 (75.8)
30 (86.7)	44 (78.9)	20 (83.0)	20 (74.9)	20 (80.3)	117 (74.9)	40 (74.3)	117 (76.7)	9 (71.4)	85 (72.6)
129 (83.0)	20 (75.0)	73 (80.8)	85 (72.0)	85 (79.2)	99 (73.2)	117 (73.8)	36 (71.3)	92 (70.6)	10 (71.4)
44 (73.1)	92 (74.2)	36 (77.7)	24 (70.3)	113 (74.8)	85 (73.2)	36 (73.8)	43 (71.3)	10 (69.0)	131 (70.9)
19 (72.2)	19 (72.0)	44 (76.6)	92 (69.3)	92 (71.4)	10 (70.8)	44 (73.5)	85 (68.6)	33 (65.1)	113 (68.5)
	129 (70.7)	129 (70.6)	44 (67.6)	5 (69.5)	27 (69.9)	20 (72.5)	20 (66.5)	20 (64.3)	24 (65.7)
	10 (69.6)	19 (68.8)	129 (65.1)	36 (69.2)	24 (69.8)	99 (71.4)	9 (65.9)	43 (64.3)	117 (65.4)
	4 (54.6)	92 (68.7)	4 (64.1)	10 (68.5)	20 (69.5)	9 (70.3)	99 (63.2)	27 (63.9)	92 (65.1)
	23 (53.2)	23 (61.5)	113 (62.4)	117 (67.3)	40 (68.8)	92 (69.6)	137 (63.2)	117 (63.9)	44 (64.6)
	30 (52.5)	24 (58.6)	36 (58.1)	19 (67.0)	92 (68.4)	27 (68.6)	24 (63.0)	85 (63.3)	40 (64.4)
		4 (58.3)	73 (55.6)	129 (66.2)	9 (67.9)	43 (67.7)	84 (62.9)	24 (63.3)	27 (62.6)
		30 (50.8)	19 (55.6)	24 (65.4)	36 (66.7)	104 (66.7)	21 (60.9)	4 (61.2)	21 (62.4)
			30 (55.5)	99 (64.0)	19 (63.8)	23 (66.7)	92 (59.6)	113 (61.1)	74 (61.3)
			26 (55.4)	9 (61.9)	44 (62.4)	10 (66.5)	44 (59.4)	137 (61.0)	9 (61.2)
			3 (53.1)	40 (61.3)	137 (61.4)	129 (65.3)	10 (59.3)	23 (59.4)	99 (59.8)
			137 (46.0)	44 (59.0)	23 (60.7)	26 (63.2)	26 (57.7)	21 (59.0)	73 (59.1)
			23 (43.3)	26 (56.1)	43 (60.4)	3 (61.1)	104 (57.6)	26 (58.1)	4 (59.0)
			99 (40.3)	4 (55.6)	5 (59.9)	73 (57.9)	40 (56.8)	40 (57.9)	3 (58.5)
			13 (39.3)	30 (53.4)	129 (59.6)	137 (57.4)	129 (56.3)	104 (57.8)	90 (58.5)
				43 (50.3)	82 (55.4)	19 (55.9)	33 (55.8)	44 (57.7)	129 (57.7)
				13 (48.9)	26 (51.9)	21 (53.7)	30 (51.0)	84 (54.3)	23 (56.3)
				73 (48.0)	13 (51.2)	4 (52.9)	23 (50.5)	122 (53.8)	5 (55.5)
				23 (47.1)	21 (51.0)	30 (50.5)	82 (50.2)	90 (53.8)	33 (55.2)
				3 (46.9)	73 (50.1)	33 (48.6)	90 (49.3)	73 (52.6)	26 (53.9)
				137 (46.7)	30 (49.3)	82 (48.3)	4 (48.6)	135 (51.0)	20 (52.7)
				21 (22.5)	104 (42.7)	135 (45.3)	3 (43.5)	82 (50.7)	43 (52.7)
					4 (32.6)	13 (44.0)	19 (42.4)	99 (49.1)	19 (52.7)
					135 (31.6)	5 (38.8)	73 (42.2)	5 (46.7)	122 (51.8)
							135 (37.3)	129 (45.6)	135 (50.5)
							13 (35.7)	30 (43.2)	82 (49.4)
							27 (35.2)	19 (42.8)	137 (48.1)
							5 (29.3)	13 (39.6)	104 (45.6)
								3 (28.9)	13 (40.1)
									30 (39.2)
									84 (35.0)

3 PUBLIC SERVICE ELECTRIC & GAS CO
4 UNION ELECTRIC COMPANY
5 CINCINNATI GAS & ELECTRIC COMPANY
9 DUQUESNE LIGHT COMPANY
10 ALLEGHENY POWER SERVICE CORP
13 KANSAS CITY POWER & LIGHT CO
19 VIRGINIA ELECTRIC & POWER CO
20 DETROIT EDISON COMPANY
21 SOUTHERN CALIFORNIA EDISON CO
23 PENNSYLVANIA ELECTRIC COMPANY
24 NORTHERN STATES POWER COMPANY
26 ALABAMA POWER COMPANY

27 CLEVELAND ELECTRIC ILLUMINATING CO
30 COMMONWEALTH EDISON COMPANY
33 CENTRAL ILLINOIS PUBLIC SERV CO
36 PENNSYLVANIA POWER & LIGHT CO
40 DAYTON POWER & LIGHT COMPANY
43 PUBLIC SERVICE CO OF INDIANA
44 AMERICAN ELECTRIC POWER SERV CORP
73 NORTHERN INDIANA PUBLIC SERV CO
74 WISCONSIN POWER & LIGHT COMPANY
82 GEORGIA POWER COMPANY
84 COLUMBUS & SOUTHERN OHIO ELEC CO
85 INDIANAPOLIS POWER & LIGHT COMPANY

90 SOUTHERN SERVICES, INCORPORATED
92 CAROLINA POWER & LIGHT COMPANY
99 ARIZONA PUBLIC SERVICE COMPANY
104 KENTUCKY UTILITIES COMPANY
113 DUKE POWER COMPANY
117 ILLINOIS POWER COMPANY
122 SOUTHERN ELECTRIC GENERATING CO
129 TENNESSEE VALLEY AUTHORITY
131 IOWA PUBLIC SERVICE COMPANY
135 PACIFIC POWER & LIGHT COMPANY
137 TAMPA ELECTRIC COMPANY

TABLE P-15: ORDERING OF COAL UNIT EQUIVALENT AVAILABILITY BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
92(88.1)	36(87.0)	10(84.9)	10(76.9)	27(84.4)	113(77.1)	113(76.1)	113(76.7)	36(72.3)	36(75.8)
30(86.7)	44(78.9)	20(83.0)	20(74.9)	20(80.3)	117(74.9)	40(74.3)	117(76.7)	9(71.4)	85(72.6)
129(83.0)	20(75.0)	73(80.8)	85(72.0)	85(79.2)	99(73.2)	117(73.8)	36(71.3)	92(70.6)	10(71.4)
44(73.1)	92(74.2)	36(77.7)	24(70.3)	113(74.8)	85(73.2)	36(73.8)	43(71.3)	10(69.0)	131(70.9)
19(72.2)	19(72.0)	44(76.6)	92(69.3)	92(71.4)	10(70.8)	44(73.5)	85(68.6)	33(65.1)	113(68.5)
	129(70.7)	129(70.6)	44(67.6)	5(69.5)	27(69.9)	20(72.5)	20(66.5)	20(64.3)	24(65.7)
	10(69.6)	19(68.8)	129(65.1)	36(69.2)	24(69.8)	99(71.4)	9(65.9)	43(64.3)	117(65.4)
	4(54.6)	92(68.1)	4(64.1)	10(68.5)	20(69.5)	9(70.3)	99(63.2)	27(63.9)	92(65.1)
	23(53.2)	23(61.5)	113(62.4)	117(67.3)	40(68.8)	92(69.6)	137(63.2)	117(63.9)	44(64.6)
	30(52.5)	24(58.6)	36(58.1)	19(67.0)	92(68.4)	27(68.6)	24(63.0)	85(63.3)	40(64.4)
		4(58.3)	73(55.6)	129(66.2)	9(67.9)	43(67.7)	84(62.9)	24(63.3)	27(62.6)
		30(50.8)	19(55.6)	24(65.4)	36(66.7)	104(66.7)	21(60.9)	4(61.2)	21(62.4)
			30(55.5)	99(64.0)	19(63.8)	23(66.7)	92(59.6)	113(61.1)	74(61.3)
			26(55.4)	9(61.9)	44(62.4)	10(66.5)	44(59.4)	137(61.0)	9(61.2)
			3(53.1)	40(61.3)	137(61.4)	129(65.3)	10(59.3)	23(59.4)	99(59.8)
			137(46.0)	44(59.0)	23(60.7)	26(63.2)	26(57.7)	21(59.0)	73(59.1)
			23(43.3)	26(56.1)	43(60.4)	3(61.1)	104(57.6)	26(58.1)	4(59.0)
			99(40.3)	4(55.6)	5(59.9)	73(57.9)	40(56.8)	40(57.9)	3(58.5)
			13(39.3)	30(53.4)	129(59.6)	137(57.4)	129(56.3)	104(57.8)	90(58.5)
				43(50.3)	82(55.4)	19(55.9)	33(55.8)	44(57.7)	129(57.7)
				13(48.9)	26(51.9)	21(53.7)	30(51.0)	84(54.3)	23(56.3)
				73(48.0)	13(51.2)	4(52.9)	23(50.5)	122(53.8)	5(55.5)
				23(47.1)	21(51.0)	30(50.5)	82(50.2)	90(53.8)	33(55.2)
				3(46.9)	73(50.1)	33(48.6)	90(49.3)	73(52.6)	26(53.9)
				137(46.7)	30(49.3)	82(48.3)	4(48.6)	135(51.0)	20(52.7)
				21(22.5)	104(42.7)	135(45.3)	3(43.5)	82(50.7)	43(52.7)
					4(32.6)	13(44.0)	19(42.4)	99(49.1)	19(52.7)
					135(31.6)	5(38.8)	73(42.2)	5(46.7)	122(51.8)
							135(37.3)	129(45.6)	135(50.5)
							13(35.7)	30(43.2)	82(49.4)
							27(35.2)	19(42.8)	137(48.1)
							5(29.3)	13(39.6)	104(45.6)
								3(28.9)	13(40.1)
									30(39.2)
									84(35.0)

3 PUBLIC SERVICE ELECTRIC & GAS CO
4 UNION ELECTRIC COMPANY
5 CINCINNATI GAS & ELECTRIC COMPANY
9 DUQUESNE LIGHT COMPANY
10 ALLEGHENY POWER SERVICE CORP
13 KANSAS CITY POWER & LIGHT CO
19 VIRGINIA ELECTRIC & POWER CO
20 DETROIT EDISON COMPANY
21 SOUTHERN CALIFORNIA EDISON CO
23 PENNSYLVANIA ELECTRIC COMPANY
24 NORTHERN STATES POWER COMPANY
26 ALABAMA POWER COMPANY

27 CLEVELAND ELECTRIC ILLUMINATING CO
30 COMMONWEALTH EDISON COMPANY
33 CENTRAL ILLINOIS PUBLIC SERV CO
36 PENNSYLVANIA POWER & LIGHT CO
40 DAYTON POWER & LIGHT COMPANY
43 PUBLIC SERVICE CO OF INDIANA
44 AMERICAN ELECTRIC POWER SERV CORP
73 NORTHERN INDIANA PUBLIC SERV CO
74 WISCONSIN POWER & LIGHT COMPANY
82 GEORGIA POWER COMPANY
84 COLUMBUS & SOUTHERN OHIO ELEC CO
85 INDIANAPOLIS POWER & LIGHT COMPANY

90 SOUTHERN SERVICES, INCORPORATED
92 CAROLINA POWER & LIGHT COMPANY
99 ARIZONA PUBLIC SERVICE COMPANY
104 KENTUCKY UTILITIES COMPANY
113 DUKE POWER COMPANY
117 ILLINOIS POWER COMPANY
122 SOUTHERN ELECTRIC GENERATING CO
129 TENNESSEE VALLEY AUTHORITY
131 IOWA PUBLIC SERVICE COMPANY
135 PACIFIC POWER & LIGHT COMPANY
137 TAMPA ELECTRIC COMPANY

TABLE F-16: ORDERING OF COAL UNIT FORCED OUTAGE RATES BY CALENDAR YEAR (BY UTILITY)

1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
92(3.1)	36(0.6)	20(1.1)	85(2.5)	43(1.9)	104(0.1)	9(0.4)	73(0.4)	113(2.9)	74(0.4)
129(7.7)	92(3.4)	10(2.8)	24(3.3)	92(2.8)	13(3.3)	43(1.8)	113(1.5)	85(3.4)	131(3.9)
30(9.3)	10(3.8)	73(5.0)	20(4.6)	117(3.0)	113(3.5)	113(2.9)	104(1.9)	73(3.4)	43(5.0)
44(12.7)	20(4.6)	24(5.1)	73(5.7)	26(3.1)	85(4.0)	104(3.5)	43(3.2)	9(3.7)	9(5.7)
19(26.6)	30(8.9)	92(6.6)	92(8.0)	20(3.7)	43(4.3)	135(4.2)	85(6.5)	104(4.2)	36(5.7)
	129(9.8)	129(9.3)	10(9.2)	36(4.0)	137(5.6)	13(4.5)	92(6.9)	10(4.8)	10(5.8)
	44(10.5)	44(9.8)	26(10.3)	85(4.2)	24(5.8)	36(4.8)	27(7.9)	36(5.2)	113(6.2)
	19(12.0)	4(13.4)	129(10.4)	9(4.5)	27(6.1)	27(5.4)	137(8.2)	27(7.1)	24(6.4)
	4(16.3)	19(15.4)	36(10.7)	5(5.7)	9(6.3)	117(5.7)	117(8.7)	92(7.2)	85(6.5)
	23(20.0)	30(16.9)	30(12.6)	113(5.9)	117(7.8)	20(5.9)	36(9.8)	137(7.5)	92(6.9)
		23(22.2)	4(13.6)	27(6.0)	92(8.1)	73(7.2)	24(10.4)	135(8.1)	104(7.2)
			19(14.2)	19(6.1)	36(8.2)	30(10.3)	84(11.6)	43(8.5)	117(8.4)
			99(15.1)	137(6.2)	19(8.7)	44(10.9)	9(12.5)	117(9.1)	27(8.5)
			44(15.5)	24(7.0)	5(9.0)	92(11.4)	44(12.9)	26(9.5)	90(9.9)
			137(16.5)	13(9.1)	40(10.3)	99(12.1)	33(13.6)	4(10.2)	73(10.0)
			13(16.6)	99(11.7)	10(11.1)	137(12.9)	20(14.0)	5(10.4)	4(10.5)
			113(17.6)	129(11.7)	20(12.2)	40(13.3)	40(14.2)	40(10.9)	44(10.6)
			3(23.8)	10(13.9)	99(13.5)	129(13.6)	3(15.5)	24(11.6)	21(11.0)
			23(40.8)	30(15.5)	30(14.7)	33(14.9)	26(15.8)	90(12.3)	3(11.2)
				40(15.8)	26(16.7)	10(15.4)	30(15.8)	44(13.3)	135(12.1)
				4(19.3)	44(18.1)	82(16.0)	4(15.9)	33(13.7)	137(13.7)
				44(25.3)	73(21.2)	19(16.9)	10(16.1)	20(14.2)	40(14.0)
				3(25.3)	135(22.3)	23(17.6)	21(18.5)	122(14.3)	5(14.1)
				73(34.0)	129(23.3)	26(19.6)	129(19.5)	19(16.7)	26(14.6)
				21(50.1)	21(23.6)	3(19.8)	135(20.6)	84(16.9)	20(18.5)
					23(23.9)	21(21.8)	13(21.7)	3(17.0)	99(20.5)
					82(24.1)	4(22.4)	82(23.2)	30(19.4)	82(21.2)
					4(41.1)	5(27.2)	99(26.6)	21(20.0)	129(23.4)
							23(27.3)	13(21.2)	30(23.7)
							90(29.9)	82(21.5)	23(23.9)
							19(33.4)	23(23.9)	19(25.2)
							5(42.1)	99(25.0)	13(25.3)
								129(28.1)	122(27.7)
									33(28.6)
									84(34.4)
3 PUBLIC SERVICE ELECTRIC & GAS CO				27 CLEVELAND ELECTRIC ILLUMINATING CO			90 SOUTHERN SERVICES, INCORPORATED		
4 UNION ELECTRIC COMPANY				30 COMMONWEALTH EDISON COMPANY			92 CAROLINA POWER & LIGHT COMPANY		
5 CINCINNATI GAS & ELECTRIC COMPANY				33 CENTRAL ILLINOIS PUBLIC SERV CO			99 ARIZONA PUBLIC SERVICE COMPANY		
9 DUQUESNE LIGHT COMPANY				36 PENNSYLVANIA POWER & LIGHT CO			104 KENTUCKY UTILITIES COMPANY		
10 ALLEGHENY POWER SERVICE CORP				40 DAYTON POWER & LIGHT COMPANY			113 DUKE POWER COMPANY		
13 KANSAS CITY POWER & LIGHT CO				43 PUBLIC SERVICE CO OF INDIANA			117 ILLINOIS POWER COMPANY		
19 VIRGINIA ELECTRIC & POWER CO				44 AMERICAN ELECTRIC POWER SERV CORP			122 SOUTHERN ELECTRIC GENERATING CO		
20 DETROIT EDISON COMPANY				73 NORTHERN INDIANA PUBLIC SERV CO			129 TENNESSEE VALLEY AUTHORITY		
21 SOUTHERN CALIFORNIA EDISON CO				74 WISCONSIN POWER & LIGHT COMPANY			131 IOWA PUBLIC SERVICE COMPANY		
23 PENNSYLVANIA ELECTRIC COMPANY				82 GEORGIA POWER COMPANY			135 PACIFIC POWER & LIGHT COMPANY		
24 NORTHERN STATES POWER COMPANY				84 COLUMBUS & SOUTHERN OHIO ELEC CO			137 TAMPA ELECTRIC COMPANY		
26 ALABAMA POWER COMPANY				85 INDIANAPOLIS POWER & LIGHT COMPANY					

G. Units in Study

G-1: Nameplate Rating and Commercial Operating Dates

TABLE G-1: NAMEPLATE RATING AND COMMERCIAL OPERATION DATE (BY STATE & UTILITY)

STATE	NUCLEAR			COAL		
	NAME	NAMEPLATE RATING	C.O. DATE	NAME	NAMEPLATE RATING	C.O. DATE
ALABAMA	TENNESSEE VALLEY AUTHORITY					
	BROWNS PERRY (#1)	1152	10/15/73	WIDOWS CREEK (#7)	575	9/25/60
	BROWNS PERRY (#2)	1152	8/28/74	WIDOWS CREEK (#8)	550	6/28/64
				COLBERT (#5)	550	10/07/62
	SOUTHERN ELECTRIC GENERATING COMPANY					
	ALABAMA POWER COMPANY			E C GASTON (#5)	952	6/05/74
				BARRY (#4)	404	12/31/69
				BARRY (#5)	789	7/24/71
				GORGAS (#2)	789	6/26/72
ARKANSAS	ARKANSAS POWER & LIGHT COMPANY					
	ARKANSAS NUCLEAR ONE	902	12/19/74			
CALIFORNIA	SACRAMENTO MUNICIPAL UTILITY DISTRICT					
	RANCHO SECO (#1)	963	10/13/74			
	SOUTHERN CALIFORNIA EDISON COMPANY					
	SAN ONOPE (#1)	450	7/16/67			
CONNECTICUT	NORTHEAST UTILITIES SERVICE COMPANY					
	CONN. YANKEE (#1)	600	8/07/67			
	HILLSTONE (#1)	662	12/28/70			
	HILLSTONE (#2)	909	12/26/75			
FLORIDA	FLORIDA POWER & LIGHT COMPANY					
	TURKEY POINT (#3)	760	11/02/72			
	TURKEY POINT (#4)	760	6/19/73			
	TAMPA ELECTRIC COMPANY					
				BIG BEND (#1)	450	8/14/70
				BIG BEND (#2)	446	4/06/73
GEORGIA	GEORGIA POWER COMPANY					
	HATCH (#1)	850	12/21/75			
				BOWEN (#1)	806	7/04/71
				BOWEN (#2)	789	1/01/74
				BOWEN (#3)	884	12/11/74
				BOWEN (#4)	952	11/14/75
				HAMMOND (#4)	578	6/26/70
				HARLLEE BRANCH (#3)	544	6/13/68
				HARLLEE BRANCH (#4)	544	5/15/69
				YATES (#6)	404	7/23/74
ILLINOIS	CENTRAL ILLINOIS PUBLIC SERVICE COMPANY					
	COMMONWEALTH EDISON COMPANY			COPPEEN (#2)	617	9/16/72
	DRESDEN (#2)	828	4/13/70			
	DRESDEN (#3)	828	7/22/71	KINCAID (#1)	660	3/08/67
	QUAD-CITIES (#1)	828	4/12/72	KINCAID (#2)	660	3/22/68
	QUAD-CITIES (#2)	828	5/23/72	WILL COUNTY (#4)	598	4/17/63
	ZION (#1)	1085	6/19/73			
	ZION (#2)	1085	12/24/73			
	ILLINOIS POWER COMPANY			BALDWIN (#1)	623	7/13/70
INDIANA	AMERICAN ELECTRIC POWER SERVICE CORP					
	INDIANAPOLIS POWER & LIGHT COMPANY					
				BREED (#1)	450	8/01/60
				TANNERS CREEK (#4)	580	7/01/64
				PETERSBURG (#2)	471	12/25/69
	NORTHERN INDIANA PUBLIC SERVICE COMPANY			ELMER W STOUT (#7)	471	5/24/73
	PUBLIC SERVICE COMPANY OF INDIANA			BAILLY (#8)	422	7/31/68
				MICHIGAN CITY (#12)	520	5/31/74
				CAYUGA (#1)	531	8/07/70
				CAYUGA (#2)	531	5/10/72
				GIBSON (#2)	618	4/16/75

Table G-1 (continued)

<u>STATE</u>	<u>NAME</u>	<u>NAMEPLATE RATING</u>	<u>C.O. DATE</u>	<u>NAME</u>	<u>NAMEPLATE RATING</u>	<u>C.O. DATE</u>
IOWA	IOWA ELECTRIC LIGHT & POWER COMPANY DUANE ARNOLD (#1)	565	6/22/74			
	IOWA PUBLIC SERVICE COMPANY			GEORGE NEAL (#3)	550	10/09/75
KANSAS	KANSAS CITY POWER & LIGHT COMPANY			LA CYGNE (#1)	873	5/31/73
KENTUCKY	AMERICAN ELECTRIC POWER SERVICE CORP			BIG SANDY (#2)	816	7/24/69
	KENTUCKY UTILITIES COMPANY			E W BROWN (#3)	440	7/19/71
TENNESSEE VALLEY AUTHORITY				GHENT (#1)	512	12/16/73
				PARADISE (#1)	704	8/28/63
				PARADISE (#2)	704	3/15/63
				PARADISE (#3)	1150	5/20/69
MAINE	YANKEE ATOMIC ELECTRIC COMPANY MAINE YANKEE (#1)	810	11/08/72			
MARYLAND	BALTIMORE GAS & ELECTRIC COMPANY CALVERT CLIPPS (#1)	918	5/08/75			
MASSACHUSETTS	BOSTON EDISON COMPANY PILGRIM (#1)	678	12/09/72			
MICHIGAN	AMERICAN ELECTRIC POWER SERVICE CORP D C COOK (#1)	1152	2/10/75			
	CONSUMERS POWER COMPANY PALISADES (#1)	812	12/31/71			
DETROIT EDISON COMPANY				MONROE (#1)	750	5/03/71
				MONROE (#2)	850	1/14/73
				MONROE (#3)	823	3/11/73
				MONROE (#4)	750	3/16/74
				ST. CLAIR (#7)	470	3/05/69
				TRENTON CHANNEL (#9)	440	1/16/68
MINNESOTA	NORTHERN STATES POWER COMPANY MORTLELLU (#1)	569	3/05/71			
	PRAIRIE ISLAND (#1)	593	12/07/73			
	PRAIRIE ISLAND (#2)	593	12/21/74			
MISSISSIPPI	SOUTHERN SERVICES, INCORPORATED					
				WATSON (#5)	578	4/02/73
MISSOURI	KANSAS CITY POWER & LIGHT COMPANY					
	UNION ELECTRIC COMPANY			HAWTHORN (#5)	515	5/31/69
				LABADIE (#1)	621	6/30/70
				LABADIE (#2)	621	6/25/71
				LABADIE (#3)	621	8/26/72
				LABADIE (#4)	621	6/15/73
				SIoux (#1)	550	5/17/67
				SIoux (#2)	550	5/14/68
NEBRASKA	NEBRASKA PUBLIC POWER DISTRICT COOPER (#1)	836	5/10/74			
	OMAHA PUBLIC POWER DISTRICT PORT CALHOUN (#1)	502	8/25/73			
NEVADA	SOUTHERN CALIFORNIA EDISON COMPANY					
				MOHAVE (#1)	755	11/27/70
				MOHAVE (#2)	755	7/21/71

Table G-1 (continued)

STATE	NAME	NAMEPLATE RATING	C.O. DATE	NAME	NAMEPLATE RATING	C.O. DATE
NEW JERSEY						
	CENTRAL JERSEY POWER & LIGHT COMPANY					
	OYSTER CREEK (#1)	650	12/23/69			
	PUBLIC SERVICE ELECTRIC & GAS COMPANY			HUDSON (#2)	660	12/18/68
NEW MEXICO						
	ARIZONA PUBLIC SERVICE COMPANY			FOUR CORNERS (#4)	755	5/22/69
				FOUR CORNERS (#5)	755	4/06/70
NEW YORK						
	CONSOLIDATED EDISON COMPANY OF NY INC					
	INDIAN POINT (#2)	1022	6/26/73			
	NIAGARA MOHAWK POWER CORPORATION					
	NINE MILE POINT (#1)	640	11/09/69			
	POWER AUTHORITY OF STATE OF NEW YORK					
	PITZPATRICK (#1)	883	7/01/75			
	ROCHESTER G&E					
	GINNA (#1)	517	12/02/69			
NORTH CAROLINA						
	CAROLINA POWER & LIGHT COMPANY			ROXBORO (#1)	411	4/30/66
	BRUNSWICK (#2)	867	4/29/75	ROXBORO (#2)	657	3/10/68
				ROXBORO (#3)	700	3/23/73
	DUKE POWER COMPANY			BELEWS CREEK (#1)	1080	6/21/74
				BELEWS CREEK (#2)	1176	12/13/75
				CLIFFSIDE (#5)	571	5/23/72
				MARSHALL (#3)	650	5/15/69
				MARSHALL (#4)	650	5/01/70
OHIO						
	AMERICAN ELECTRIC POWER SERVICE CORP			CARDINAL (#1)	590	2/01/67
				CARDINAL (#2)	590	7/01/67
				GEN. J. M. GAVIN (#1)	1300	1/01/74
				GEN. J. M. GAVIN (#2)	1300	4/18/75
				MUSKINGUM RIVER (#5)	591	9/20/68
	CINCINNATI GAS & ELECTRIC COMPANY			WALTER C BECKJORD (#6)	461	5/15/69
				MIAMI PORT (#7)	500	5/01/75
	CLEVELAND ELECTRIC ILLUMINATING COMPANY			AVON LAKE (#9)	680	8/06/70
				EASTLAKE (#5)	626	7/01/72
	COLUMBUS & SOUTHERN OHIO ELECTRIC COMPANY			CONESVILLE (#4)	800	6/08/73
	DAYTON POWER & LIGHT COMPANY			J M STUART (#1)	610	4/12/71
				J M STUART (#2)	610	8/31/70
				J M STUART (#3)	610	3/20/72
				J M STUART (#4)	560	5/08/74
	NO SYSTEM ASSIGNMENT			SAMMIS (#6)	623	1/15/69
				SAMMIS (#7)	680	7/17/71
PENNSYLVANIA						
	ALLEGHENY POWER SERVICE CORPORATION			HATFIELD'S FERRY (#1)	576	11/01/69
				HATFIELD'S FERRY (#2)	576	10/16/70
				HATFIELD'S FERRY (#3)	576	11/04/71
	DUQUESNE LIGHT COMPANY			CHESWICK (#1)	565	6/07/70
	METROPOLITAN EDISON COMPANY					
	THREE MILE ISLAND (#1)	871	9/02/74	CONEMAUGH (#1)	936	5/21/70
	PENNSYLVANIA ELECTRIC COMPANY			CONEMAUGH (#2)	936	5/27/71
				KEYSTONE (#1)	936	6/18/67
				KEYSTONE (#2)	936	6/16/68
	PENNSYLVANIA POWER & LIGHT COMPANY			BRUNNER ISLAND (#2)	405	9/27/65
				BRUNNER ISLAND (#3)	790	6/13/69
				MONTGOMERY (#1)	721	11/27/71

Table G-1 (continued)

STATE	NAME	NAMEPLATE RATING	C.O. DATE	NAME	NAMEPLATE RATING	C.O. DATE
PHILADELPHIA	ELECTRIC COMPANY					
	PEACH BOTTOM (#2)	1152	7/05/74	HOMER CITY (#1)	600	7/31/69
	PEACH BOTTOM (#3)	1152	12/23/74	HOMER CITY (#2)	600	12/11/69
				MONTOUR (#2)	736	2/15/73
SOUTH CAROLINA						
	CAROLINA POWER & LIGHT COMPANY					
	H B ROBINSON (#2)	769	9/26/70			
	DUKE POWER COMPANY					
	OCONEE (#1)	887	7/16/73			
	OCONEE (#2)	887	9/09/74			
	OCONEE (#3)	887	12/16/74			
TENNESSEE						
	TENNESSEE VALLEY AUTHORITY					
				BULL RUN (#1)	950	2/10/66
				CUMBERLAND (#1)	1300	4/22/72
				CUMBERLAND (#2)	1300	2/01/73
VERMONT						
	YANKEE ATOMIC ELECTRIC COMPANY					
	VT. YANKEE (#1)	563	9/20/72			
VIRGINIA						
	VIRGINIA ELECTRIC & POWER COMPANY					
	SURRY (#1)	848	3/10/73	CHESTERFIELD (#6)	694	5/03/69
	SURRY (#2)	848	7/04/72			
WASHINGTON						
	PACIFIC POWER & LIGHT COMPANY					
				CENTRALIA (#1)	665	8/07/71
				CENTRALIA (#2)	665	7/11/72
WEST VIRGINIA						
	ALLEGHENY POWER SERVICE CORPORATION					
				FORT MARTIN (#1)	576	5/30/67
				FORT MARTIN (#2)	576	9/20/68
				HARRISON (#1)	684	10/24/72
				HARRISON (#2)	684	10/29/73
				HARRISON (#3)	684	11/14/74
AMERICAN ELECTRIC POWER SERVICE CORP						
				AMOS (#1)	816	9/01/71
				AMOS (#2)	816	6/06/72
				AMOS (#3)	1300	7/04/73
				MITCHELL (#1)	816	4/22/70
				MITCHELL (#2)	816	3/18/71
				PHIL SPORN (#5)	496	12/01/60
VIRGINIA ELECTRIC & POWER COMPANY						
				MT STORM (#1)	570	9/20/65
				MT STORM (#2)	570	6/24/66
				MT STORM (#3)	522	12/08/73
WISCONSIN						
	WISCONSIN ELECTRIC POWER COMPANY					
	POINT BEACH (#1)	524	11/06/70			
	POINT BEACH (#2)	524	8/02/72			
	WISCONSIN POWER & LIGHT COMPANY					
				COLUMBIA ENERGY (#1)	511	3/15/75
	WISCONSIN PUBLIC SERVICE CORPORATION					
	KEWAUNEE (#1)	560	6/16/74			
WYOMING						
	PACIFIC POWER & LIGHT COMPANY					
				JIM BRIDGER (#1)	500	8/06/74
				JIM BRIDGER (#2)	508	7/10/75
				JIM BRIDGER (#3)	500	8/06/74

APPENDIX A

In 1977, the Federal Energy Administration (now DOE) purchased from the Edison Electric Institute (EEI) its historical power-plant performance data base. The data base covers the years 1957 through 1975 and includes approximately 14,000 unit years of performance data for some 1000 units of 2 MW(e) and larger.

In 1977 Oak Ridge National Laboratory, under contract to the DOE, performed some preliminary analysis of the EEI data for 400 MW(e) and larger coal and nuclear units. The results of this analysis are reported in DOE/ERA-007 "Interim Report on the Performance of 400 Megawatt and Larger Nuclear and Coal-Fired Generating Units," April 1978.

In analyzing the EEI data, ORNL identified some anomalies in the data which showed up as inconsistencies among the equivalent availability factor, availability factor and capacity factor and which appeared, at first, to be related to the method used in computing available hours. The nature and extent of the anomalies are discussed in more detail in DOE/ERA-007.

In 1978 EEI submitted revised data to DOE in which the availability factor was computed by the same method used by EEI for the annual report of the Equipment Availability Task Force, EEI Prime Mover's Committee. Subsequent review by ORNL of the revised data showed that the previously observed anomalies still were present. Due to serious constraints on manpower EEI was unable to undertake an effort to find the source of the anomalous data.

In response to DOE's offer of assistance, EEI has made available all the raw outage data from 20 units. From the raw data ORNL selected four unit years for a detailed review. This review uncovered several reasons why anomalies occur.

SCOPE OF THE DATA RECEIVED FROM EEI

A magnetic tape was received from EEI. It contained approximately 14,000 unit years of performance data, covering the years 1960-75, for some 1,000 units 2 MW(e) and larger. A second magnetic tape, covering the years 1960-76, of nuclear units and those fossil units 100 MW(e) and larger, was also received.

On these tapes, each unit was described by design data, e.g., nameplate rating, date of commercial operation, and annual performance data for each calendar year beginning at the date of commercial operation. The annual performance data were

1. year,
2. Maximum Dependable Capacity (MDC) for that year,
3. period hours (PH) in that year,
4. service hours (SH),
5. available hours (AH),
6. forced outage hours (FOH),
7. planned outage hours (POH),
8. maintenance hours (MH),
9. availability factor (AF),

10. equivalent availability factor (EAF),
11. forced outage rate (FOR), and
12. capacity factor (CF).

All of these were derived using the standard EEI definitions (see, e.g., EEI Publication No. 77-64, "Report on Equipment Availability for the Ten-Year Period 1967-1976," December 1977) with one exception. EEI defines the availability factor as

$$AF = \frac{AH}{PH} = \frac{\text{available hours}}{\text{period hours}}$$

$$AH = SH + RSH = \text{service hours} + \text{reserve shutdown hours}$$

but the reserve shutdown hours were either not reported by the utilities or were felt to be unreliable. Thus, EEI calculates available hours as period hours minus unavailable hours, or

$$AH = PH - FOH - POH - MH.$$

Note that the accuracy of the annual availability factors, equivalent availability factors, and forced outage rates depends on two things:

(1) accurate reporting of outages by the utilities, and (2) accurate addition of the outage hours by the EEI computer programs which transform raw outage data into annual summary data.

An analysis of the summary data on these two tapes received from EEI uncovered various anomalies such as

1. availability factors less than the corresponding capacity factors,
2. service hours exceeding available hours, and
3. negative availability factors.

Twenty units, having these anomalies for various years of operation, were picked and the EEI staff supplied the raw outage data for these units as reported by the operating utilities. Four unit years in which the number of reported outages was small (less than 50) were selected for an investigation into why the EEI reported "fishy" availability factors for those years. A detailed investigation of the selected data revealed that the utilities reporting to EEI commonly mislabel the outages they report. The EEI computer program which tallies the outages and calculates annual performance data fails to detect many of the reporting errors. Thus, the annual availability factors, equivalent availability factors, and forced outage rates are systematically in error because all are calculated by summing outage hours. Availability factors and equivalent availability factors are systematically too low: forced outage rates are systematically too high.

The four unit-years of data investigated were selected because the relatively small number of outages reported make checking by hand calculation possible. It would be difficult to do this check for all the unit-year data and determine exactly the percentage of the data in error. However, a rough check shows that 20-25% of the unit-year data are immediately suspect because service hours exceed available hours, or capacity factor exceeds operating availability or equivalent availability. Presumably, another significant fraction of the data is in error but not enough to be immediately apparent.

APPENDIX B

DATA DEFINITIONS

Available: The status of a unit or major piece of equipment which is capable of service, whether or not it is actually in service.

Availability Factor: $(AH/PH) \times 100$

Available Hours (AH): The time in hours during which a unit or major equipment is available; SH + RSH.

Service Hours (SH): The total number of hours the unit was actually operated with breakers closed to the station bus.

Reserve Shutdown: The removal of a unit from service for economy or similar reasons. This status continues as long as the unit is out but available for operation.

Reserve Shutdown Hours (RSH): Reserve shutdown duration in hours.

Period Hours (PH): The clock hours in the period under consideration (generally one year).

Unavailable: The status of any major piece of equipment which renders it inoperable because of the failure of a component, work being performed, or other adverse condition.

Maintenance Outage: The removal of a unit from service to perform work on specific components which could have been postponed past the very next weekend. This is work done to prevent a potential forced outage and which could not be postponed from season to season.

Maintenance Outage
Hours (MOH): The time in hours during which a unit or major equipment is available due to a maintenance outage.

Planned Outage: The removal of a unit from service for inspection and/or general overhaul of one or more major equipment groups. This is work which is usually scheduled well in advance; e.g., annual boiler overhaul, five-year turbine overhaul.

Planned Outage
Hours (POH): The time in hours during which a unit or major equipment is unavailable due to a planned outage.

Equivalent Availability Factor: $[AH - (EFOH + ESOH)] \times 100/PH$

Scheduled Partial
Outage:

The occurrence of a component failure or other condition which requires that the load on the unit be reduced 2% or more but where this reduction could be postponed past the very next weekend.

Scheduled Partial
Outage Hours (SPOH):

The time in hours during which a unit or major equipment is unavailable for full load due to a scheduled partial outage.

Equivalent Scheduled
Outage Hours (ESOH):

Σ [Scheduled Partial Outage Hours x size of reduction/MDC].

Forced Partial Outage:

The occurrence of a component failure or other condition which requires that the load on the unit be reduced 2% or more immediately or up to and including the very next weekend.

Forced Partial
Outage Hours (FPOH):

The time in hours during which a unit or major equipment is unavailable for full load due to a Forced Partial Outage.

Equivalent Forced
Outage Hours (EFOH): $\Sigma [\text{Forced Partial Outage Hours} \times \text{Size of Reduction/MDC}]$.

Size of Reduction: Change in the unit MDC rating in MW resulting from a partial outage.

Capacity Factor: $\frac{(\text{Total Gross Generation in MW-Hr}) \times 100}{(\text{PH}) \times (\text{MDC})}$

Maximum Dependable
Capacity (MDC): The dependable main-unit capacity winter or summer, whichever is smaller.

Forced Outage Rate: $[\text{FOH}/(\text{SH} + \text{FOH})] \times 100$

Forced Outage: The occurrence of a component failure or other condition which requires that the unit be removed from service immediately or up to and including the very next weekend.

Forced Outage
Hours (FOH): The time in hours during which a unit or major equipment was unavailable due to a Forced Outage.

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