Applicants' Exhibit 22

NEPOOL FORECAST

FOR NEW ENGLAND

1980 - 1995

DOCKET NUMBER
PROD. & UTIL. FAC. 50-471

April 1, 1980

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NEPLAN

New England Power Planning

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JAMES R. SMITH
DIRECTOR

March 14, 1980

Energy Facilities Siting Council
73 Tremont Street
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Gentlemen:

On behalf of Boston Edison Company, New England Gas and Electric Association, New England Electric System Companies, Northeast Utilities System, Eastern Utilities Associates, Fitchburg Gas and Electric Light Company, and Massachusetts Municipal Wholesale Electric Company, enclosed are fifteen copies of a supplemental report entitled, "NEPOOL Forecast for New England - 1980-1995", which report is being jointly filed by said companies as part of their long-range forecast of electric power needs and requirements pursuant to Massachusetts General Laws, Chapter 164, Section 69(i).

The "NEPOOL Model for Long Range Forecasting of Electrical Energy and Demand" has been used to produce this regional forecast, incorporating, for the first time, some load management concepts. Specifically, controlled storage-type electrical space heating and water heating are assumed for the region resulting in about an 800 MW decrease in the otherwise expected 1995 winter peak. The resultant annual compound growth rate for 1979 through 1995 is 2.0% for summer peak, 2.7% for winter peak and 2.6% for energy. This is a decrease in the growth rate of about 1.1% in winter peak and energy and 1.7% in summer peak from the April 1, 1979 report.

Adequate reserves are indicated for the expected peak loads through 1991/92, assuming all five "NEPOOL Planned" units are in service as scheduled, even though two units do not, as yet, have construction permits. Additional capacity will be required for 1992/93 and beyond.

However, with approximately 60% of the existing capacity in oil-fired units, energy deficiencies could occur in the mid 1980s. It is especially critical that all non-oil-fired capacity be built as scheduled and that conservation and load management efforts be continued to prevent energy deficiencies and to achieve the lowest possible price for electric energy.

Sincerely,

James R. Smith, Secretary
NEPOOL Planning Committee

JRS:dv
Attachment

NEPOOL FORECAST

1980-1995

NEW ENGLAND LONG-RANGE FORECAST OF
ELECTRIC POWER NEEDS AND REQUIREMENTS

TABLE OF CONTENTS

NEPOOL FORECAST

1980 - 1995

I. INTRODUCTION

The New England Power Pool (NEPOOL) Agreement is an agreement among electric utility systems in New England. The systems making up NEPOOL own or control 99.6% of all New England generation.

The objectives of NEPOOL are:

(a) to assure that the bulk power supply of New England and any adjoining areas served by Participants conforms to proper standards of reliability, and

(b) to attain maximum practicable economy, consistent with such proper standards of reliability in the bulk power supply, and to provide for equitable sharing of the resulting benefits and costs.

These objectives are accomplished through joint planning; central dispatching; cooperation in environmental matters; coordinated construction, operation, and maintenance of electric generation and transmission facilities; and through effective coordination with other power pools and utilities situated in the United States and Canada.

II. SUMMARY

A. Load Forecast

The current forecast of electrical power needs for New England is presented in Exhibit I. The forecast shows coincident winter and summer peak loads and net energy for the total New England area for the period 1980-1995. These values exclude self-generation by end-users of electricity.

As shown in Exhibit I, the New England annual (winter) peak load is forecast to increase at a compound annual growth rate of 2.7% from the 1979/80 actual weather-corrected value to 1995/96. The summer peak load is forecast to increase at 2.0% per year from the weather-corrected 1979 actual value to 1995, while net energy is expected to increase at 2.6% per year from 1979 actual to 1995.

The "NEPOOL Model for Long-Range Forecasting of Electric Energy and Demand" was completed in July, 1977 and has since undergone extensive revision, testing, and verification. This Model has been used to develop Exhibit I. In addition to seasonal peak loads and net energy, a forecast of electric energy sales to ultimate customers, and a forecast of a number of the more important demographic and economic indicators for New England are shown for each forecast year in Exhibit II.

It is important to recognize while examining the forecast data, that the NEPOOL Model is a long-term forecasting model and, therefore, is not designed to project short-term swings around a long-term trend. In addition, for the first time, the current forecast includes some load management in the form of thermal storage devices for electric space and water heating. These and other details of the forecast and its basic assumptions are presented in a report entitled "NEPOOL Model-Based Forecast of New England Electric Energy and Peak Load 1980-1995", copies of which will be available to regulatory bodies from NEPLAN or the individual NEPOOL Participants.

B. Forecasting Methodology

The NEPOOL electric energy and peak load forecasting Model is a dynamic simulation model composed of two major sectors: an economic/demographic sector, and a power sector. The incorporation of an economic/demographic sector in the Model provides the internal capability to develop forecasts of the basic factors which determine the growth of electric energy use for a geographic region. The following description of the sequential steps performed by the Model is presented in the interest of creating a basic comprehension of the Model. Exhibits III through VII provide a visual description of the Model structure.

The Model is initialized (i.e., all variables assigned beginning values) at a given point in time, namely the year 1970. For each year after 1970, the levels of population, labor force and employment are determined in the demographic/economic sector of the Model. (Actual values are used for key Model "variables" from 1970 to the latest date for which data is available. In calculating values for these items, it is assumed that the geographic region's economy and demography will not, in the long run, maintain a separate existence but, rather, the region's economy will function at a level of activity that will just support the population levels, and vice versa. Therefore, the population forecast is not only based upon expected future birth and death rates, but also upon net migration. It is the net migration component of the population growth logic in the Model which links the demographic subsector with the economic subsector. The Model treats the demographic subsector as the source of labor supply and the economic subsector provides the demand for labor. In broad terms, when the demand for labor exceeds supply, the migration logic simulates the movement of people into the region, and out of the region when labor supply exceeds demand.

The population forecast developed in the demographic subsector is used to produce a forecast of the number of households via application of national projections of household formation trends. In addition, household income is determined from the employment forecasts and forecasted future wage rates. The household and income projections are combined with income/appliance saturation functions to yield residential appliance saturations and the total number of appliances for most appliance types. Energy consumption by appliance type is determined using the number of appliances, average unit connected load and appliance daily load profiles. Other factors included

in the residential energy consumption calculations are federal appliance efficiency standards, electricity price, heating oil price, price elasticity, and long-term (30 year average) expected temperature conditions (for heating and cooling type loads).

It is important to note that the Model is driven by national employment growth rates by industry for the forecast period. The forecasted national employment growth rates currently used to drive the Model are secured from Wharton Econometric Forecasting Associates. Employment is forecasted in two separate components--manufacturing and nonmanufacturing.

Manufacturing employment is forecasted based upon the national employment growth rates by industry modified by a regional cost index. The cost index measures the cost of doing business in a state relative to the United States. The manufacturing employment projections developed in the economic subsector are transformed into dollars of value added by industry using regional productivity growth rates and production employee information. Industrial electric energy consumption (excluding self-generation) is calculated using value added and electric energy use per dollar of value added by industry. Electricity prices and price elasticity factors are also included in the calculation.

Nonmanufacturing employment is forecasted as a function of state population levels (from the demographic subsector) and expected national employment and population trends. Nonmanufacturing employment from the economic subsector is used as the measure of energy activity in the commercial class of service. The number of employees, the electric energy use per employee, electricity prices, price elasticities, heating oil and gas prices and long-term temperatures are used in calculating commercial electric energy consumption.

Total electric energy consumption is determined by summing usage in the residential, industrial, commercial, and miscellaneous classes. Seasonal (summer and winter) peak loads are forecasted by specifying a long-term peak temperature profile for a day-type and month, and then summing the forecasted load for each of some 50 end-use components for each hour of the day (Exhibit VIII). Annual system load factor is calculated directly from the forecasted energy (including line losses) and forecasted peak load.

A more detailed description of the Model and its development is presented in the "Report on a Model for Long-Range Forecasting of Electric Energy and Demand" by NEPOOL and Battelle Columbus Laboratories, June 30, 1977. In addition, Model documentation on Model changes since June, 1977 is available to the NEPOOL Participants for distribution to the agencies who received the original report.

C. Generation

The current New England generation mix (as a percentage of total capacity) for the winter of 1979/80 and the projected generation mix for the winter of 1995/96 are as follows:

	1979/80 MW	1979/80 %	1995/96 MW	1995/96 %
Base Load (not capable of daily on-line/ off-line cycling)				
Conv. Steam-Oil	2356		1714	
-Coal	337		978	
Nuclear	4314		8926	
Subtotal	7007	31.9	11618	42.8
Intermediate Cycling				
Conv. Steam(&CC)-Oil	9669		9280	
-Coal	119		1208	
	9788	44.5	10488	38.7
Hydroelectric Peaking				
Conv. & Pumped Storage	2919	13.3	2975	11.0
Internal Combustion Peaking				
Gas Turbines & Diesels	1717	7.8	1860	6.8
Firm Purchases				
Net Purchases-Sales	539	2.5	179	0.7
Total Capacity	21970	100.0	27120	100.0

The current long-range economic generation planning guidelines as a percentage of system capacity remain the same as reported in 1978 & 1979. The guidelines are:

56 to 62% - Base Load Capacity (all additions to be nuclear)
16 to 20% - Intermediate Cycling Units (fossil-fired)
8 to 11% - Hydroelectric Peaking, Including Pumped Storage
9 to 12% - Internal Combustion Peaking

As indicated in these tabulations, New England will not have achieved its generation mix guidelines by the winter of 1995/96. Further 27,120 MW is not sufficient capacity to maintain system reliability in that year. More coal fired capacity capable of daily on-line/off-line cycling is under study by the member companies to meet the 1995/96 system load.

The winter and summer rating of the existing system capacity as of January 1, 1980 is shown in Exhibit IX . The scheduled reratings, retirements, authorized additions, purchases, and sales which are projected to occur during the period beginning January 1, 1980 and ending with the Winter of 1995/96 are shown in Exhibits X through XIII-A. Exhibits XIV and XV each respectively reflect the New England generation resources to meet forecasted winter and summer seasonal demands for the period 1980 through the winter of 1995/96.

D. Transmission

Shown in Exhibit XVII is the backbone of the New England bulk power Transmission system, a network of 230 and 345 kV transmission lines. The New England 345 kV grid is interconnected to the rest of the United States with two 345 kV ties to New York, one from Massachusetts and one from Connecticut, and an additional 230 kV tie to New York from Massachusetts. These ties to New York are further augmented by four 115 kV ties, three in Vermont and one in Connecticut. A 345 kV tie from Maine to New Brunswick connects the New England grid with the Maritime Power Pool in Canada. Transformers interconnect the 345 kV grid to the underlying lower voltage grid at numerous locations throughout New England.

Future 345 kV additions are listed on Exhibit XVI and are shown geographically on Exhibit XVII. These lines are required to satisfy three general criteria as follows:

- To provide transmission capability to deliver output of new generation to the transmission grid.

- To fulfill the need to supply power to load growth areas.

- To maintain system reliability standards throughout the expanding transmission system.

The lines listed on Exhibit XVI are cross-referenced in Exhibit XVIII, which lists the major reason for their need. When a line provides more than one function, it is listed under more than one category. The planned system provides an integrated transmission grid, which is necessary for NEPOOL operations, with resulting benefits such as: reserve sharing, economy interchange and mutual assistance during emergencies.

EXHIBIT I

New England Seasonal Peak Loads and Energy Requirements
Actual Metered Vs. Model Derived and Weather Corrected
Summer and Winter Peaks Vs. Model Forecast

	Net Energy for Load (GWH)		Summer Peak Loads (MW)				Winter Peak Loads (MW)			
	Actual	3/1/79 Forecast	Actual Metered	3/1/79 Model Calibration	Weather Corrected Actual	3/1/79 Model Forecast	Actual Metered	3/1/79 Model Calibration	Weather Corrected Actual	3/1/79 Model Forecast
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1970	61470	60402	10305	10972	10596	10674	11643	11052	11708	11183
1971	65208	63343	10915	10966	10856	11069	12135	11730	12514	12115
1972	70587	68638	11837	10963	11987	11918	13548	13013	13629	12979
1973	76202	73585	13079	13119	13167	12741	12852	12330	12770	12624
1974	73216	71531	12141	12399	12821	12143	12891	12406	13376	12677
1975	73700	71470	12842	12573	12514	12161	13908	13912	13812	13614
1976	78310	77000	13116	13320	13575	13125	14739	14395	14859	14379
1977	79781	81589	14234	14523	13712	13918	14846	14930	15363	15364
1978	32500	87375	14458	14588	14954	14896	15111		15500	16037
1979	84000	91861	14341		14150	15569	15311		15750	16595
		4/1/80 Forecast				4/1/80 Forecast				4/1/80 Forecast
1980		86220				14190				16110
1981		87240				14210				16250
1982		89090				14400				16590
1983		91130				14630				16960
1984		93480				14910				17390
1985		95830				15180				17870
1986		98530				15530				18420
1987		101490				15920				18960
1988		104410				16300				19500
1989		107300				16660				20040
1990		110200				17020				20650
1991		113310				17420				21280
1992		116670				17850				21930
1993		120150				18300				22620
1994		123820				18770				23370
1995		127750				19280				24170

Compound Annual Growth Rates (%)

	Energy	Summer Peak		Winter Peak
1970-1973	7.4	7.5	1970/71-72/73	7.9
1974-1979	2.8	2.0	1973/74-79/80	3.6
1979-1995	2.6	2.0	1979/80-95/96	2.7

Sources: Cols. 1, 3, 5, ., 9 are from NEPOOL records; Cols. 4 and 8 are from NEPOOL Model run with actual economic, demographic and weather data;
Cols. 2, 6, 10 are from NEPOOL Model runs with expected long-term peak weather conditions.

EXHIBIT II

NEPOOL MODEL FORECAST SUMMARY, 1980-1995

	Actual		Forecast																Compound Annual Growth Rates	
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1979-1995	1980-1995
Coincident Peak Load (MW)																				
Recorded: Winter*	15111	15311																		
Summer	14458	14341																		
Weather (a)																				
Corrected: Winter*	15560	15750	16110	16250	16590	16960	17390	17870	18420	18960	19500	20040	20650	21280	21930	22620	23370	24170	2.71	2.74
Summer	14954	14150	14190	14210	14400	14630	14910	15180	15530	15920	16300	16660	17020	17420	17850	18300	18770	19280	1.95	2.06
Energy Sales to Ultimate Customers (GWH)																				
Total	75289	n/a	79100	80040	81730	83600	85760	87920	90400	93110	95790	98440	101100	103960	107030	110230	113500	117200		2.66
Residential	28813	n/a	29620	29970	30650	31460	32350	33190	34070	35030	35940	36770	37570	38370	39250	40130	41050	42050		2.36
Industrial	20740	n/a	22700	23450	24080	24630	25240	25850	26580	27400	28250	29200	30200	31200	32260	33350	34540	35770		3.08
Commercial & Misc.	25736	n/a	26780	26620	27000	27510	28170	28880	29750	30680	31600	32470	33330	34390	35520	36750	38010	39380		2.60
Net Energy for Load (GWH) (b)	82500	84000	86220	87240	89090	91130	93480	95830	98530	101490	104410	107300	110200	113310	116670	120150	123820	127750	2.65	2.66
Annual Load Factor (%) (c)	60.76	60.88	61.10	61.29	61.30	61.34	61.36	61.22	61.06	61.11	61.12	61.12	60.92	60.78	60.73	60.64	60.48	60.34		
Economic/Demographic																				
Population (000's)	12267P	12291P	12380	12470	12570	12690	12800	12910	13020	13120	13200	13270	13340	13390	13440	13480	13520	13570	0.62	0.61
Households (000's)	4259P	n/aP	4380	4470	4560	4660	4750	4850	4930	5010	5090	5160	5230	5290	5340	5390	5430	5480		1.50
Employment (000's) (d)	5575	5758P	5660	5710	5790	5870	5960	6040	6130	6210	6280	6340	6400	6460	6520	6570	6630	6680	0.93	1.11
Manufacturing (000's)	n/a	n/a	1440	1460	1460	1460	1460	1460	1460	1460	1460	1460	1470	1470	1470	1460	1460	1450		0.05
Nonmanufacturing (000's)	n/a	n/aP	4200	4230	4310	4390	4480	4560	4650	4730	4800	4860	4910	4970	5030	5090	5150	5210		1.45
Unemployment Rate (%)	5.7P	5.5P	8.2	8.4	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.2	7.0	6.8	6.5	6.2	5.9	5.7		
Personal Income (mil.$69)	54424P	n/a	52560	54160	55760	57450	59160	60900	62560	64180	65730	67250	68770	70270	71800	73320	74870	76470		2.53

n/a - Not Available
P - Preliminary
* - Winter beginning
(a) Load correction based on long-term historical peak weather conditions.
(b) Based on energy sales to ultimate customers and nine percent transmission and distribution line losses.
(c) Based on weather-corrected peak load.
(d) Total employment includes approximately 21 thousand jobs outside New England (i.e., New York and Canada).

EXHIBIT II

NEPOOL MODEL

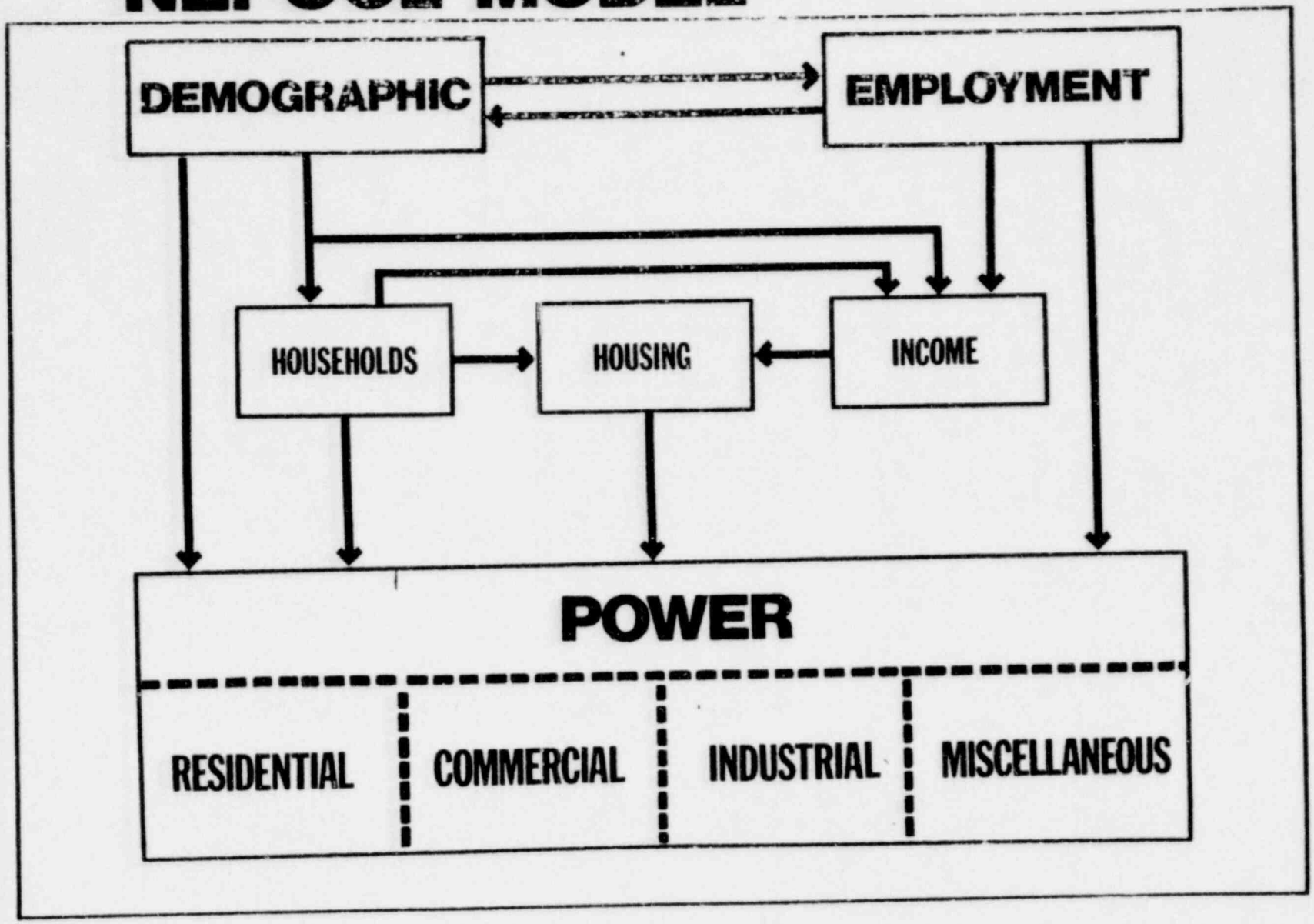


EXHIBIT III

Economic and Demographic Module

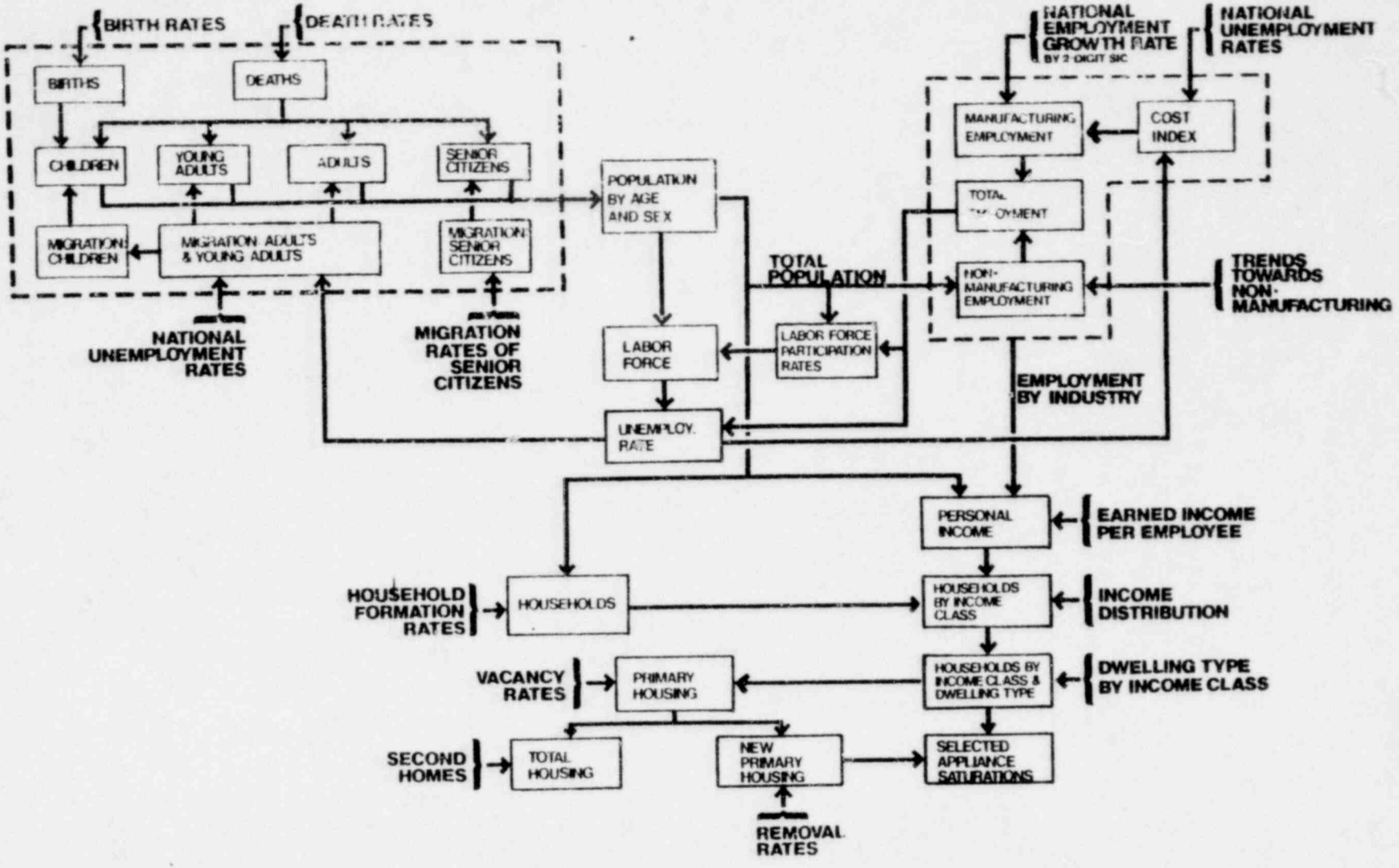


EXHIBIT IV

Residential Submodule

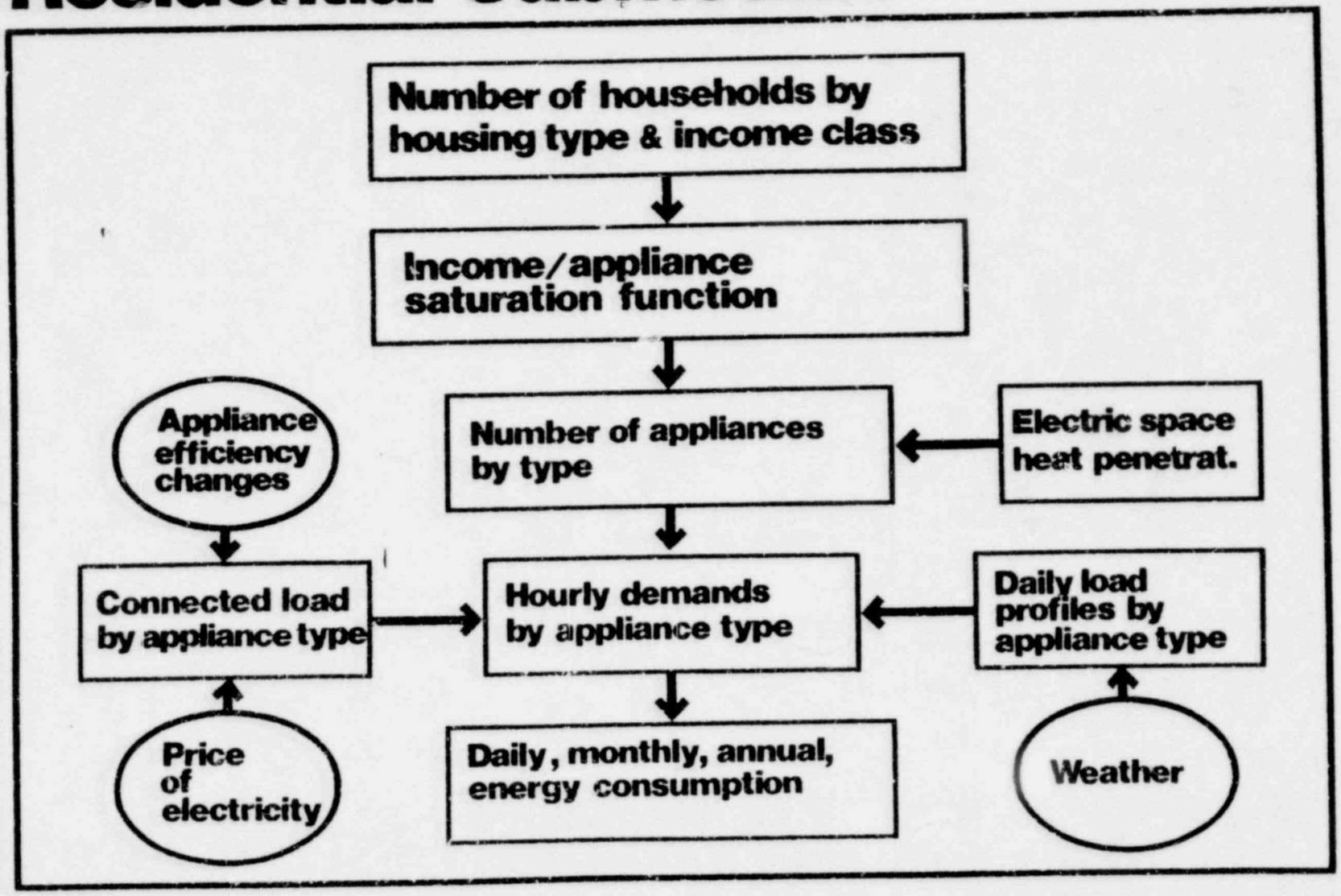


EXHIBIT V

Commercial Submodule

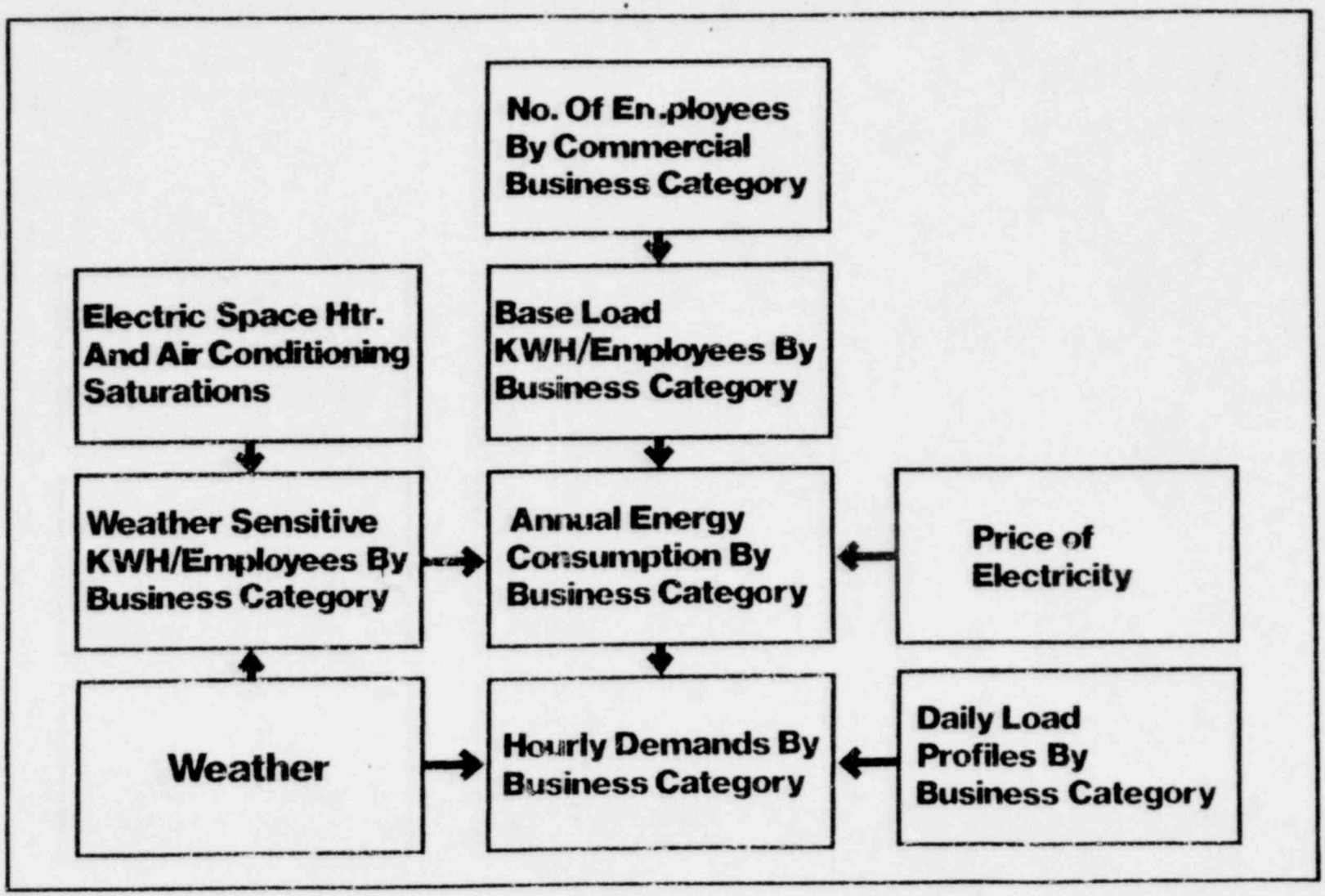


EXHIBIT VI

Industrial Submodule

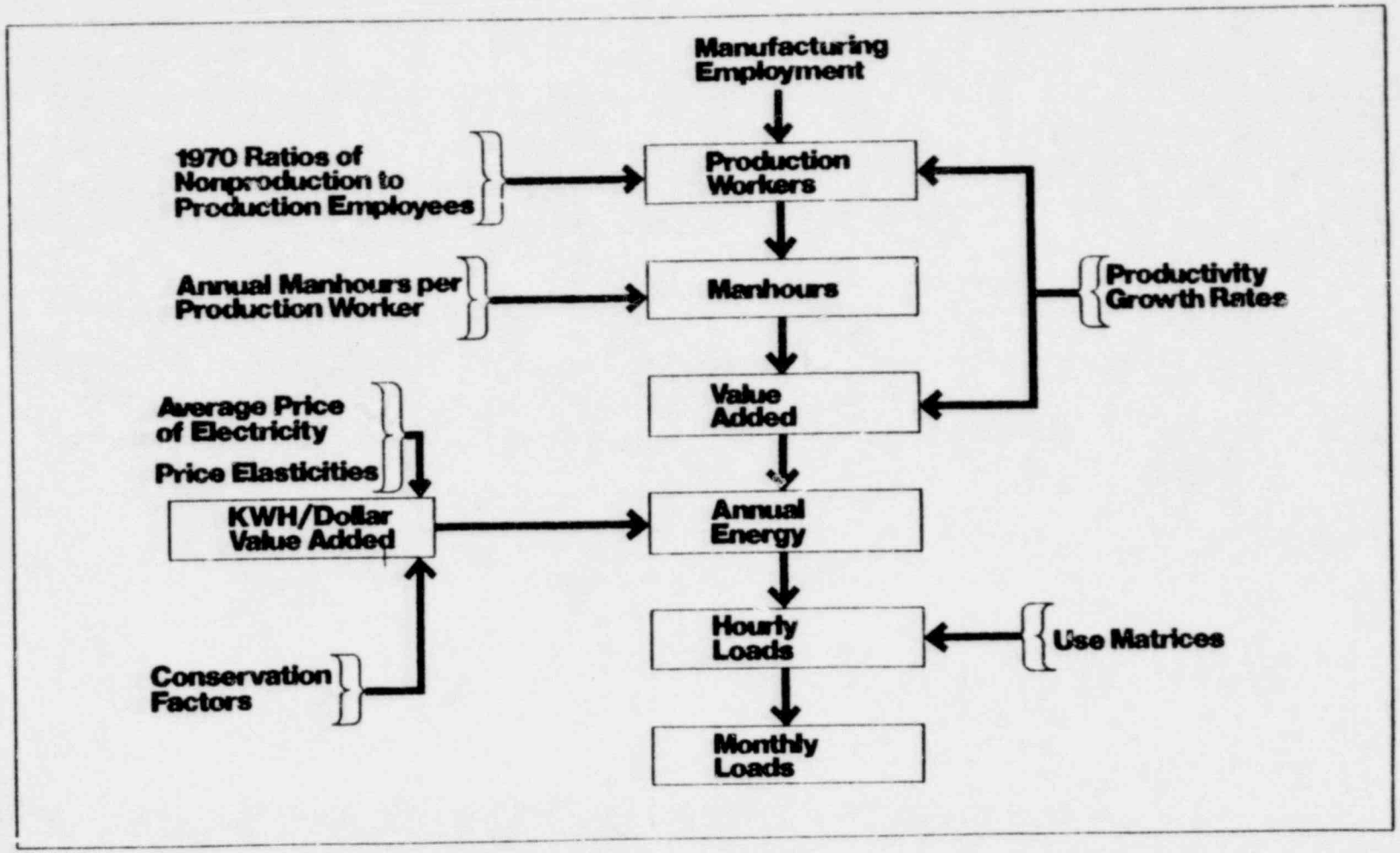


EXHIBIT VII

Total Energy Consumption and System Peak Loads

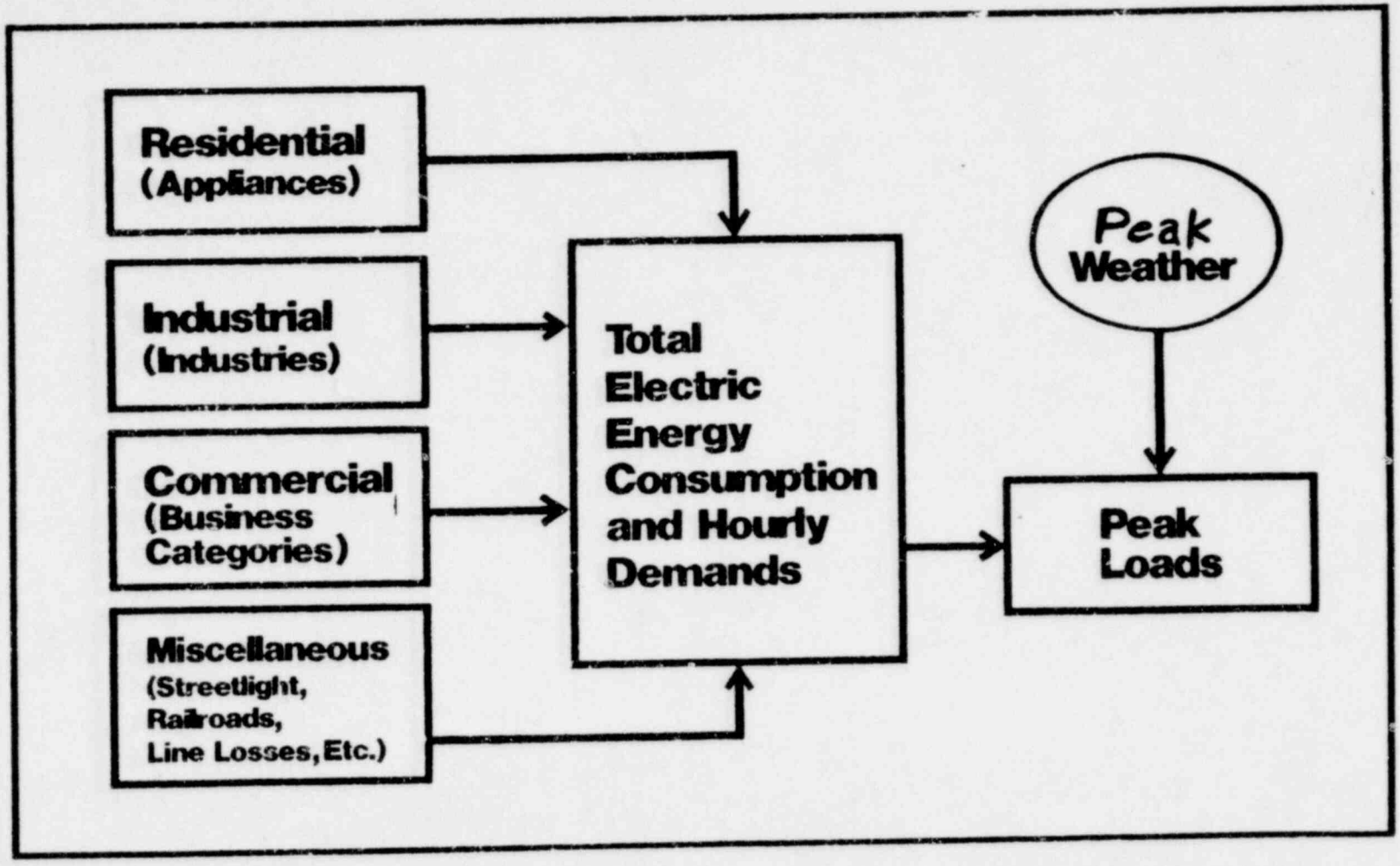


EXHIBIT VIII

EXHIBIT IX

COMPOSITION OF NEW ENGLAND SYSTEM CAPACITY FOR JANUARY 1980

(MW)

EXISTING SYSTEM	SUMMER RATING		WINTER RATING	
Conventional Thermal	12,010.37*		12,274.53*	
Nuclear	4,228.47		4,313.70	
Gas Turbines	1,156.04		1,459.20	
Combined Cycle	183.00		206.00	
Internal Combustion	250.93		258.20	
Conventional Hydro	1,269.77**		1,286.57**	
Pumped Storage	1,632.60		1,632.60	
Total Existing System:		20,731.18		21,430.80
CAPACITY PURCHASED:				
Within New England				
Boston Edison Co. (From M.D.C.)	1.00		1.00	
Central Maine Power Co. (From Industrials)	4.50		4.50	
Outside New England				
Maine Public Serv. Co. (From Me. & NBEPCo., LTD)	31.00		31.00	
Maine Elec. Pwr. Co. (From N.B. Pwr. Com.-C. Cove)	400.00		400.00	
Vermont Group-Citizens (From Hydro Quebec)	24.50		24.50	
Vermont Group (From P.A.S.N.Y.)	147.50		147.50	
Vermont Group (From Ontario Hydro)	30.59		30.59	
Total Purchases:		639.09		639.09
CAPACITY (SALES):		0		100.00
TOTAL NEW ENGLAND SYSTEM CAPACITY		21,370.27		21,969.89
* Contains units in deactivated reserve totaling:	300.50		291.07	
** Contains a unit in deactivated reserve rated:	5.00		5.00	

EXHIBIT X

AUTHORIZED RERATING OF EXISTING NEW ENGLAND GENERATING CAPACITY AND IDENTIFICATION OF UNITS IN DEACTIVATED RESERVE

(January 1980 through January 1996)

SYSTEM	STATION & UNIT	UNIT TYPE#	FUEL TYPE##	CHANGES IN MAX. CLAIMED MW SUMMER	CHANGES IN MAX. CLAIMED MW WINTER	EFFECTIVE DATE MONTH-DAY-YEAR
Authorized Reratings						
New England Electric System	Bellows Falls #3	HY	--	+1.00	+1.00	March 1, 1980
New England Electric System	Wilder #2	HY	--	+2.00	+2.00	March 1, 1980
Fitchburg Gas & Electric Light	#7	GT	FO2	+0.31	+2.40	May 1, 1980
Northeast Utilities	Turners Falls	HY	--	+0.60	+0.60	May 1, 1982
Vermont Yankee	--	NB	UR	+12.00	+12.00	Nov. 1, 1982
Fitchburg Gas & Electric Light	-- #7	GT	FO2	-1.10	-0.50	Nov. 1, 1984
Fitchburg Gas & Electric Light	-- #6	ST	FO6	+0.70	+2.10	Nov. 1, 1986
Fitchburg Gas & Electric Light	-- #7	GT	FO2	-1.00	-1.50	Nov. 1, 1986
Fitchburg Gas & Electric Light	-- #7	GT	FO2	+2.10	+2.00	Nov. 1, 1989
Fitchburg Gas & Electric Light	-- #7	GT	FO2	-1.10	-0.50	Nov. 1, 1993
Deactivated Reserve Units (Included in Total Capability)						
Eastern Utilities Associates	Somerset #1	ST	FO6	36.50	37.50	May 1, 1976
	Somerset #2	ST	FO6	40.90	44.00	May 1, 1976
	Somerset #3, 4	ST	FO6	61.20	64.77	Jan. 1, 1980
				138.60	146.27	
United Illuminating Company	Steel Pt. #1-8, 10	ST	FO6	105.80	105.80	Jan. 1, 1976 & Aug. 12, 1977
New England Gas & Electric Co.	Cannon St. #7	ST	FO6	16.40	17.90	July 1, 1977
Fitchburg Gas & Electric Light	#6	ST	FO6	20.70	21.10	Nov. 1, 1978
Northeast Utilities	Turners Falls	HY		5.00	5.00	May 1, 1975
Braintree Electric Light Dept.	Allen #1	ST	FO6	10.00	0.00	Dec. 1, 1979
	Allen #3	ST	FO6	9.00	0.00	Dec. 1, 1979
				19.00	0.00	
Total Deactivated Reserve (1/1/80)				305.50	296.07	
Deactivated Units Returned to Service						
Northeast Utilities	Turners Falls	HY		5.00	5.00	May 1, 1982
Fitchburg Gas & Electric Light	#6	ST	FO6	20.70	21.10	Nov. 1, 1986
Deactivated Units Retired						
New England Gas & Electric Company	Cannon St. #7	ST	FO6	16.40	17.90	Nov. 1, 1982

EXHIBIT XI

RETIREMENTS OF NEW ENGLAND GENERATING CAPACITY

(January 1980 through January 1996)

SYSTEM	STATION & UNIT	UNIT TYPE#	FUEL TYPE##	CHANGES IN MAX. CLAIMED MW SUMMER - WINTER		EFFECTIVE DATE MONTH-DAY-YEAR
Central Maine Power Company	Farmingdale	GT	FO2	2.90	3.70	March 31, 1980
Newport Electric Company	W. Howard 1-3	ST	FO6	13.00	13.50	May 1, 1980
Bangor Hydro Electric	Graham	GT	FO2	0.00	4.50	Nov. 1, 1981
Vermont Group	Milton	ST	FO6	4.00	4.00	Nov. 1, 1981
Vermont Group	Rutland #1	GT	FO2	4.54	5.55	Nov. 1, 1981
Hudson Municipal Light Dept.	Cherry St. #5	IC	FO2	0.75	0.75	Nov. 1, 1982
New England Gas & Elec. Assoc.	*Cannon St. #7	ST	FO6	16.40	17.90	Nov. 1, 1982
Holyoke Gas & Electric Dept.	Cabot #9	ST	FO6	4.80	4.80	Nov. 1, 1983
Vermont Group	Rutland #2	GT	FO2	4.67	5.85	Nov. 1, 1984
Northeast Utilities	Danielson #1	GT	FO2	4.50	6.00	Dec. 31, 1986
Northeast Utilities	Thompsonville #1	GT	FO2	3.80	5.20	Dec. 31, 1986
Northeast Utilities	Thompsonville #2	GT	FO2	4.50	6.10	Dec. 31, 1986
Central Maine Power Company	Mason #1	ST	FO6	21.40	22.90	Nov. 1, 1987
Northeast Utilities	Devon #4	ST	FO6	50.00	52.00	Dec. 31, 1987
Northeast Utilities	Devon #5	ST	FO6	48.00	51.00	Dec. 31, 1987
Central Maine Power Company	Mason #2	ST	FO6	22.20	22.80	Nov. 1, 1992
New England Gas & Electric Assoc.	Blackstone #1	ST	FO6	13.50	16.00	Nov. 1, 1992
New England Gas & Electric Assoc.	Blackstone #3	ST	FO6	1.80	2.90	Nov. 1, 1992
New England Gas & Electric Assoc.	Blackstone #4	ST	FO6	2.00	2.90	Nov. 1, 1992

* Deactivated Reserve Unit Retired

EXHIBIT XI

EXHIBIT XII

AUTHORIZED ADDITIONS TO NEW ENGLAND GENERATING CAPACITY

(January 1980 through January 1996)

SYSTEM	STATION & UNIT	UNIT TYPE#	FUEL TYPE##	NOMINAL CAPABILITY - MW SUMMER	NOMINAL CAPABILITY - MW WINTER	EFFECTIVE DATE MONTH-DAY-YEAR
Northeast Utilities	Dwight #2-4	HY	--	1.50	1.50	Jan. 1, 1980
Central Maine Power Company	Barkers Mill	HY	--	1.50	1.50	Feb. 1, 1980
Northeast Utilities	Bantam	HY	--	0.32	0.32	June 1, 1980
Chicopee Municipal Light Plant	-- #1, 2, 3	IC	FO2	8.25	8.25	Nov. 1, 1980
New England Electric System	Lawrence #1 & 2	HY	--	17.00	17.00	July 1, 1981
Mass. Municipal Wholesale Electric	Stony Brook	CC	FO2	279.00	341.00	Nov. 1, 1981
Public Serv. Co. of New Hampshire	Garvins #1 & 2	HY	--	6.00	6.00	Nov. 1, 1981
Central Maine Power Company	Brunswick/Topsham	HY	--	12.00	12.00	March 1, 1982
Mass. Municipal Wholesale Elec.	Stony Brook	GT	FO2	130.00	170.00	Nov. 1, 1982
Public Serv. Co. of New Hampshire	Seabrook #1	NP	UR	1150.00	1150.00	Apr. 1, 1983
Northeast Utilities	Hadley Falls #2	HY	--	15.00	15.00	June 1, 1983
Public Serv. Co. of New Hampshire	Seabrook #2	NP	UR	1150.00	1150.00	Feb. 1, 1985
Boston Edison Company	Pilgrim #2	NP	UR	1150.00	1150.00	Dec. 1, 1985
Northeast Utilities	Millstone Pt. #3	NP	UR	1150.00	1150.00	May 1, 1986
Central Maine Power Company	Sears Island	ST	COL	568.00	568.00	Nov. 1, 1989

EXHIBIT XII

EXHIBIT XIII

CHANGES TO NEW ENGLAND CAPACITY PURCHASES & SALES

(January 1, 1980 through January 1996)

RECEIVING SYSTEM	SUPPLYING SYSTEM	UNIT TYPE#	FUEL TYPE##	NET CAPABILITY SUMMER	NET CAPABILITY WINTER	EFFECTIVE DATE MONTH-DAY-YEAR
PURCHASES						
Vermont Group	PASNY	PP		-2.50	-2.50	Jan. 1, 1980
Vermont Group	So. Canada (HQ)	PP		+4.60	+4.60	Feb. 1, 1980
Vermont Group	Ontario Hydro #2	PP		-18.80	-18.80	March 3, 1980
Vermont Group	Ontario Hydro #1	PP		+1.96	+1.96	Nov. 1, 1980
Vermont Group	So. Canada (HQ)	PP		-9.20	-29.10	Jan. 1, 1981
Vermont Group	Ontario Hydro #1	PP		+1.97	+1.97	Nov. 1, 1981
Vermont Group	So. Canada (HQ)	PP		+1.60	0.00	May 1, 1982
Vermont Group	Ontario Hydro #1	PP		+1.96	+1.96	Nov. 1, 1982
Maine Public Service Company	Me.&NBEPCo, LTD	PP		-1.00	-1.00	Nov. 1, 1982
Vermont Group	So. Canada (HQ)	PP		+1.60	0.00	May 1, 1983
Vermont Group	Ontario Hydro #1	PP		+1.96	1.96	Nov. 1, 1983
Vermont Group	So. Canada (HQ)	PP		+1.70	0.00	May 1, 1984
Vermont Group	Ontario Hydro #1	PP		-19.64	-19.64	Nov. 1, 1984
Vermont Group	So. Canada (HQ)	PP		+2.30	0.00	May 1, 1985
Vermont Group	PASNY	PP		-1.75	-1.75	July 1, 1985
Maine Electric Power Company	N.B.E.P.C.	PP	FO6	-200.00	-200.00	Nov. 1, 1985
Vermont Group	So. Canada (HQ)	PP		+1.50	0.00	May 1, 1986
Maine Electric Power Company	N.B.E.P.C.	PP	FO6	-200.00	-200.00	Nov. 1, 1986
Maine Public Service Company	Me.&NBEPCo, LTD	PP		-1.00	-1.00	Nov. 1, 1987
Maine Public Service Company	Me.&NBEPCo, LTD	PP		-1.00	-1.00	Nov. 1, 1993
SALES						
N.Y.S.E.&G.	Northeast Util.	SP	FO6	0.00	100.00	By Jan. 1, 1980
N.Y.S.E.&G.	Northeast Util.	SP	FO6	0.00	-50.00	Nov. 1, 1980
N.Y.S.E.&G.	Northeast Util.	SP	FO6	0.00	+92.00	Nov. 1, 1981
N.Y.S.E.&G.	Northeast Util.	SP	FO6	0.00	-142.00	April 30, 1982

EXHIBIT XIII

EXHIBIT XIII-A

LEGEND

Description of abbreviations used under UNIT TYPE

PP	=	Purchase Power
SP	=	Sale of Power
ST	=	Steam turbine - non-nuclear
GT	=	Combustion Turbine
IC	=	Internal Combustion (Diesel)
NP	=	Steam-PWR Nuclear
NB	=	Steam-BWR Nuclear
CC	=	Combined Cycle
FC	=	Fuel Cell
HY	=	Conventional Hydro
PS	=	Pumped Storage Hydro

Description of codes used under FUEL TYPE

COL	=	Coal (general)
REF	=	Refuse (solid waste)
OIL	=	Oil (general)
FO1	=	No. 1 Fuel Oil
FO2	=	No. 2 Fuel Oil
FO6	=	No. 6 Fuel Oil
JF	=	Jet Fuel
UR	=	Uranium
WOD	=	Wood

EXHIBIT XIII-A

EXHIBIT XIV

NEW ENGLAND GENERATION RESOURCES TO MEET FORECAST DEMAND
WINTER - MW

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96
Existing Generation[1]	21435	21435	21447	21447	21447	21447	21447	21447	21447	21449	21449	21449	21449	21449	21449	21449
Annual Additions[2]	12	364	182	1165	0	2300	1150	0	0	568	0	0	0	0	0	0
Cumulative Additions	12	376	558	1723	1723	4023	5173	5173	1573	5741	5741	5741	5741	5741	5741	5741
Annual Retirements	(17)	(14)	(19)	(5)	(6)	(0)	(17)	(126)	(0)	(0)	(0)	(0)	(45)	(0)	(0)	(0)
Cumulative Retirements	(17)	(31)	(50)	(55)	(61)	(61)	(78)	(204)	(204)	(204)	(204)	(204)	(248)	(248)	(248)	(248)
Capacity Purchases	598	600	601	603	583	381	181	180	180	180	180	180	180	179	179	179
Capacity Sales	(50)	(142)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Available Capacity[3]	21977	22237	22556	23718	23692	25790	26723	26596	26596	27166	27166	27166	27122	27120	27120	27120
Projected Peak Loads	16110	16250	16590	16960	17390	17870	18420	18960	19500	20040	20650	21280	21930	22620	23370	24170
Reserve Capacity	5867	5987	5966	6758	6302	7920	8303	7636	7096	7126	6516	5886	5192	4500	3750	2950
Reserve Capacity %	36.4	36.8	36.0	39.8	36.2	44.3	45.1	40.3	36.4	35.6	31.6	27.7	23.7	19.9	16.0	12.2

(1) Includes Reratings
(2) Authorized Units Only
(3) All figures are shown rounded to the nearest whole number. Thus, the sum of the rounded capabilities may differ from the indicated totals.

EXHIBIT XIV

EXHIBIT XV

NEW ENGLAND GENERATION RESOURCES TO MEET FORECAST DEMAND
SUMMER - MW

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Existing Generation[1]	20733	20733	20734	20746	20746	20744	20744	20744	20744	20744	20746	20746	20746	20746	20745	20745
Annual Additions[2]	3	25	297	1295	0	1150	2300	0	0	0	568	0	0	0	0	0
Cumulative Additions	3	29	326	1621	1621	2771	5071	5071	5071	5071	5639	5639	5639	5639	5639	5639
Annual Retirements	(16)	(0)	(9)	(17)	(5)	(5)	(0)	(13)	(119)	(0)	(0)	(0)	(0)	(40)	(0)	(0)
Cumulative Retirements	(16)	(16)	(24)	(42)	(46)	(51)	(51)	(64)	(183)	(183)	(183)	(183)	(183)	(223)	(223)	(223)
Capacity Purchases	625	618	621	624	627	608	410	210	209	209	209	209	209	209	208	208
Capacity Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Available Capacity[3]	21345	21363	21656	22948	22947	24072	26174	25961	25840	25840	26410	26410	26410	26371	26369	26369
Projected Peak Loads	14190	14210	14400	14630	14910	15180	15530	15920	16300	16660	17020	17420	17850	18300	18770	19280
Reserve Capacity	7155	7153	7256	8318	8037	8892	10644	10041	9540	9180	9390	8990	8560	8071	7599	7089
Reserve Capacity %	50.4	50.3	50.4	56.9	53.9	58.6	68.5	63.1	58.5	55.1	55.2	51.6	48.0	44.1	40.5	36.8

(1) Includes Reratings.
(2) Authorized Units Only.
(3) All figures are shown rounded to the nearest whole number. Thus, the sum of the rounded capabilities may differ from the indicated totals.

EXHIBIT XV

AREA: NEW ENGLAND
DATE: JANUARY 1, 1980

SCHEDULED AND PROPOSED CHANGES
TRANSMISSION LINES SIGNIFICANT TO INTERCONNECTED OPERATION
JANUARY 1, 1980 - DECEMBER 31, 1989

COMPANY OR COMPANIES	TERMINUS FROM STATION + TOWN	TERMINUS TO STATION + TOWN	STATUS #	VOLTAGE	CIRCUITS	CIRCUIT MILES	CONDUCTOR SIZE	CURRENT SCHEDULED OR PROPOSED DATE OF SERVICE	MAP KEY
NU	CHESTNUT JCT. MIDDLETOWN, CT	BLACK POND JCT. MERIDEN, CT	P	345 KV	1	7.5	2-954ACSR	6/80	A
MMWEC	STONYBROOK STA. LUDLOW, MA	LUDLOW S/S LUDLOW, MA	P	345 KV	1	4.5	2-1113ACSR	6/80	B
PSNH	SEABROOK STATION SEABROOK, NH	NEWINGTON STATION NEWINGTON, NH	A	345 KV	1	18.5	2-1113ACSR	6/81	C
NU	NU, BLOOMFIELD S/S BLOOMFIELD, CT	MEEKVILLE JCT. MANCHESTER, CT	P	345 KV	1	14.5	2-954ACSR	5/81	D
NEP	TEWKSBURY S/S TEWKSBURY, MA	GOLDEN HILLS S/S SAUGUS, MA	A(A)	345 KV	1	17.3	2-1590ACSR	5/82	E
NU	SCOVILL ROCK S/S MIDDLETOWN, CT	RIVER CROSSING EAST HAMPTON, CT	P	345 KV	2	.7	REPL OVERHEAD 3500CUCABLE	6/82	F
NU	MILLSTONE STA. WATERFORD, CT	MILLSTONE R/R WATERFORD, CT	S	345 KV	1	.4	2-954ACSR	6/82	G
PSNH	SEABROOK STATION SEABROOK, NH	NH/MA STATE LINE SOUTH HAMPTON, NH	P	345 KV	1	7.3	2-2156ACSR	7/82	H
NEP	NH/MA STATE LINE AMESBURY, MA	TEWKSBURY S/S TEWKSBURY, MA	A	345 KV	1	31.9	2-1590ACSR 2-2156ACSR	7/82	I

STATUS AUTHORIZED (A) = APPROVED BY UTILITY MANAGEMENT
PLANNED (P) = FACILITIES WHICH HAVE BEEN PUBLICLY ANNOUNCED
UNDER STUDY (S) = FACILITIES IN THE PLANNING STAGES

AREA: NEW ENGLAND
DATE: JANUARY 1, 1980

SCHEDULED AND PROPOSED CHANGES
TRANSMISSION LINES SIGNIFICANT TO INTERCONNECTED OPERATION
JANUARY 1, 1980 - DECEMBER 31, 1989

COMPANY OR COMPANIES	TERMINUS FROM STATION + TOWN	TERMINUS TO STATION + TOWN	STATUS #	VOLTAGE	CIRCUITS	CIRCUIT MILES	CONDUCTOR SIZE	CURRENT SCHEDULED OR PROPOSED DATE OF SERVICE	MAP KEY
PSNH	SEABROOK STATION SEABROOK, NH	SCOBIE POND S/S LONDONDERRY, NH	P	345 KV	1	28.8	2-2156ACSR	9/84	J
PSNH	SCOBIE POND S/S LONDONDERRY, NH	NH/MA STATE LINE PELHAM, NH	P	345 KV	1	18.1	2-1590ACSR	9/84	K
NEP	NH/MA STATE LINE DRACUT, MA	TEWKSBURY S/S TEWKSBURY, MA	P	345 KV	1	6.6	2-1590ACSR	9/84	K
BE	JORDAN ROAD PLYMOUTH, MA	HOLBROOK S/S HOLBROOK, MA	P	345 KV	1	33.2	2-1590ACSR	12/84	M
NEP	TEWKSBURY S/S TEWKSBURY, MA	GOLDEN HILLS S/S SAUGUS, MA	P	345 KV	1	17.3	2-1590ACSR	5/85	N
BE	W.WALPOLE S/S WALPOLE, MA	NEEDHAM S/S NEEDHAM, MA	P	345 KV	1	19.7	2-1113ACSR 1-2500CU	6/85	O
NU	MEEKVILLE JCT. MANCHESTER, CT	MANCHESTER S/S MANCHESTER, CT	P(1)	345 KV	1	2.3	2-954ACSR	9/85	P
NU	HAMPDEN JCT. HAMPDEN, MA	AGAWAM S/S AGAWAM, MA	P	345 KV	1	14.5	2-954ACSR	9/85	Q
NU	MANCHESTER S/S MANCHESTER, CT	HUNTSBROOK JCT. MONTVILLE, CT	P	345 KV	1	38.0	2-1272ACSR	10/85	R

STATUS AUTHORIZED (A) = APPROVED BY UTILITY MANAGEMENT
PLANNED (P) = FACILITIES WHICH HAVE BEEN PUBLICLY ANNOUNCED
UNDER STUDY (S) = FACILITIES IN THE PLANNING STAGES

AREA: NEW ENGLAND
DATE: JANUARY 1, 1980

SCHEDULED AND PROPOSED CHANGES
TRANSMISSION LINES SIGNIFICANT TO INTERCONNECTED OPERATION
JANUARY 1, 1980 - DECEMBER 31, 1989

COMPANY OR COMPANIES	TERMINUS FROM STATION + TOWN	TERMINUS TO STATION + TOWN	STATUS #	VOLTAGE	CIRCUITS	CIRCUIT MILES	CONDUCTOR SIZE	CURRENT SCHEDULED OR PROPOSED DATE OF SERVICE	MAP KEY
NU	HUNTSBROOK JCT. MONTVILLE, CT	MILLSTONE S/S WATERFORD, CT	P	345 KV	1	8.9	2-1272ACSR	10/85	R
BE	MYSTIC STATION EVERETT, MA	LINCOLN ST. S/S BOSTON, MA	P	345 KV	1	4.0	4500CABLE	6/86	T
BE	WOBURN S/S WOBURN, MA	BURLINGTON/BILLERICA TOWN LINE BURLINGTON/BILLERICA TOWN LINE, MA	P	345 KV	1	0.2	2-1113ACSR	6/86	U
NEP	BURLINGTON/BILLERICA TOWN LINE BURLINGTON/BILLERICA TOWN LINE, MA	TEWKSBURY S/S TEWKSBURY, MA	P	345 KV	1	0.0	2-954ACSR	6/86	U
NU	PORTLAND JCT. PORTLAND, CT	BERLIN S/S BERLIN, CT	P	345 KV	1	8.1	2-1272ACSR	6/86	W
VELCO	COOLIDGE S/S CAVENDISH, VT	W. RUTLAND S/S W. RUTLAND, VT	P(2)	345 KV	1	28.0	2-954ACSR	11/86	X
VELCO	W. RUTLAND S/S W. RUTLAND, VT	CHAMPLAIN S/S WILLISTON, VT	S	345 KV	1	62.5	2-954ACSR	11/86	Y
BE	WOBURN S/S WOBURN, MA	WALTHAM S/S WALTHAM, MA	P	345 KV	1	13.4	2-1113ACSR	6/87	Z

STATUS AUTHORIZED (A) = APPROVED BY UTILITY MANAGEMENT
PLANNED (P) = FACILITIES WHICH HAVE BEEN PUBLICLY ANNOUNCED
UNDER STUDY (S) = FACILITIES IN THE PLANNING STAGES

AREA: NEW ENGLAND
DATE: JANUARY 1, 1980

SCHEDULED AND PROPOSED CHANGES
TRANSMISSION LINES SIGNIFICANT TO INTERCONNECTED OPERATION
JANUARY 1, 1980 - DECEMBER 31, 1989

COMPANY OR COMPANIES	TERMINUS FROM STATION & TOWN	TERMINUS TO STATION & TOWN	STATUS #	VOLTAGE	CIRCUITS	CIRCUIT MILES	CONDUCTOR SIZE	CURRENT SCHEDULED OR PROPOSED DATE OF SERVICE	MAP KEY
NU	BERLIN S/S BERLIN, CT	SOUTHINGTON S/S SOUTHINGTON, CT	P	345 KV	1	10.6	2-954ACSR	6/87	AA
BE	NEEDHAM S/S NEEDHAM, MA	NEWTON NEWTON, MA	P	345 KV	1	.0		/87	BB
PSNH	DEERFIELD S/S DEERFIELD, NH	WEBSTER S/S FRANKLIN, NH	P	345 KV	1	38.5	2-1113ACSR	12/87	CC
NARR	SHERMAN RD. S/S BURRIVILLE, RI	BIG RIVER JCT., W. GREENWICH, RI	P	345 KV	1	33.0	2-954ACSR	5/88	DD
NARR	BIG RIVER JCT., W. GREENWICH, RI	KENT COUNTY S/S WARWICK, RI	P	345 KV	1	9.0	2-954ACSR	5/88	EE
NU	BLACK POND JCT., MERIDEN, CT	W.DEVON JCT. S/S STRATFORD, CT	S	345 KV	1	38.3	2-954ACSR	5/88	FF
NU	E. WALLINGFORD JCT., WALLINGFORD, CT	TOTOKET JCT., NORTH BRANFORD, CT	S(S)	345 KV	1	7.6	2-954ACSR	5/88	GG
UI	TOTOKET JCT., NORTH BRANFORD, CT	EAST SHORE S/S NEW HAVEN, CT	S(S)	345 KV	1	6.1	2-954ACSR	5/88	GG
CMP	SEARS ISLAND STATION SEARSPORT, ME	BROOKS S/S BROOKS, ME	P	345 KV	1	15.0	2-954ACSR	11/88	II

STATUS AUTHORIZED (A) = APPROVED BY UTILITY MANAGEMENT
PLANNED (P) = FACILITIES WHICH HAVE BEEN PUBLICLY ANNOUNCED
UNDER STUDY (S) = FACILITIES IN THE PLANNING STAGES

AREA: NEW ENGLAND
DATE: JANUARY 1, 1980

SCHEDULED AND PROPOSED CHANGES
TRANSMISSION LINES SIGNIFICANT TO INTERCONNECTED OPERATION
JANUARY 1, 1980 - DECEMBER 31, 1989

COMPANY OR COMPANIES	TERMINUS FROM STATION + TOWN	TERMINUS TO STATION + TOWN	STATUS #	VOLTAGE	CIRCUITS	CIRCUIT MILES	CONDUCTOR SIZE	CURRENT SCHEDULED OR PROPOSED DATE OF SERVICE	MAP KEY
CMP	MAXCYS S/S WINDSOR, ME	SUROWIEC S/S POWNAL, ME	S	345 KV	1	70.0	2-954ACSR	11/88	JJ
CMP	BROOKS S/S BROOKS, ME	MAXCYS S/S WINDSOR, ME	S	345 KV	1	50.0	2-954ACSR	11/88	KK
VELCO	W. RUTLAND S/S W. RUTLAND, VT	NY-VT STATE LINE FAIR HAVEN, VT	S(3)	345 KV	1	10.0	2-954ACSR	/	LL
PSNH	LITTLETON S/S LITTLETON, NH	C-203 LINE TAP LITTLETON, NH	P	230 KV	1	.4	1-795ACSR	12/83	*

NOTES

(1) INITIAL OPERATION AT 115 KV
(2) INITIAL OPERATION AT 115KV(1983),345KV FALL 1986
(3) DATE OF SERVICE INDEFINITE
(4) INITIAL OPERATION AT 115 KV MAY, 1978
(5) NEEDED ONLY IF HIGH OF FORECAST BAND IS TO BE USED

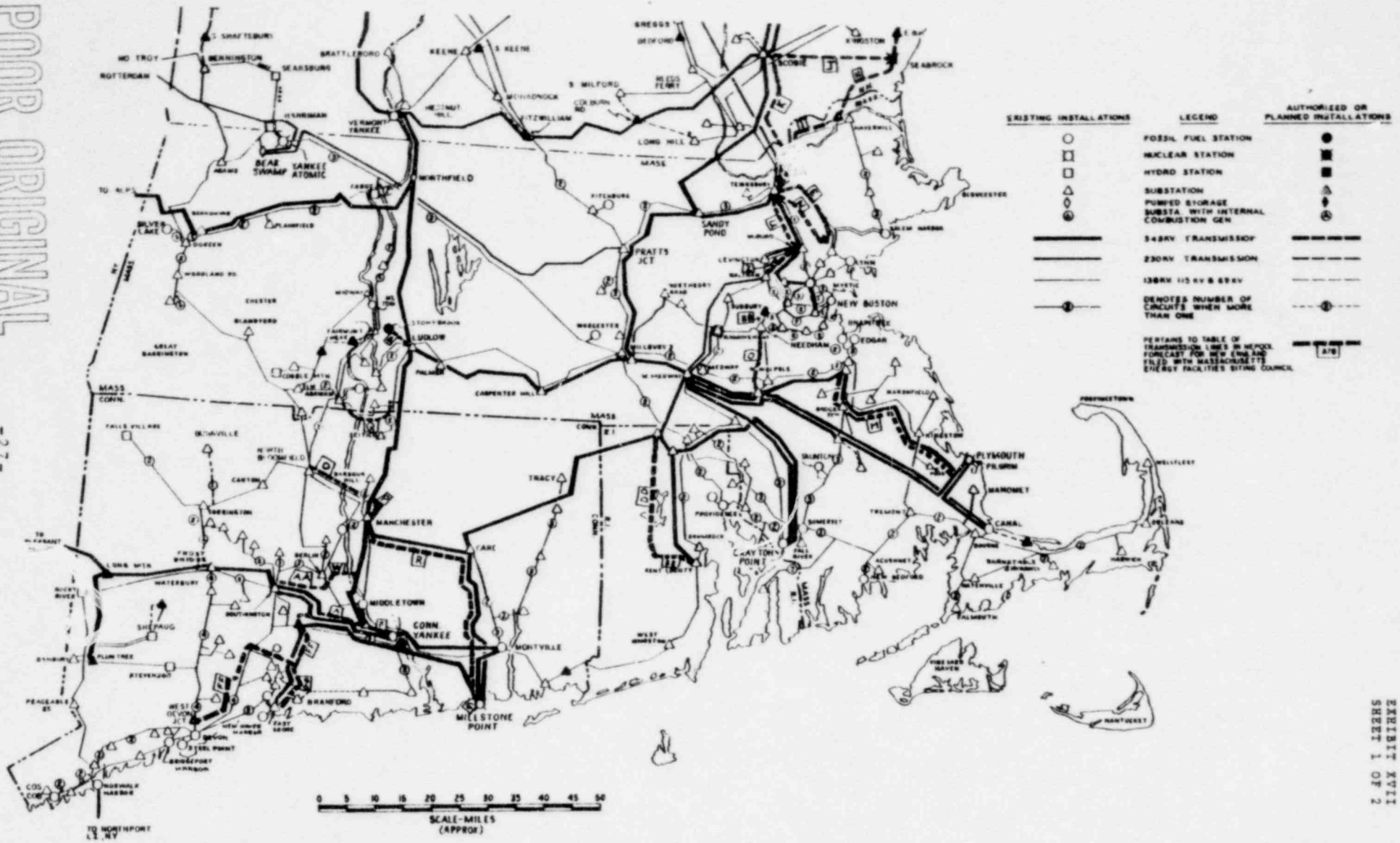
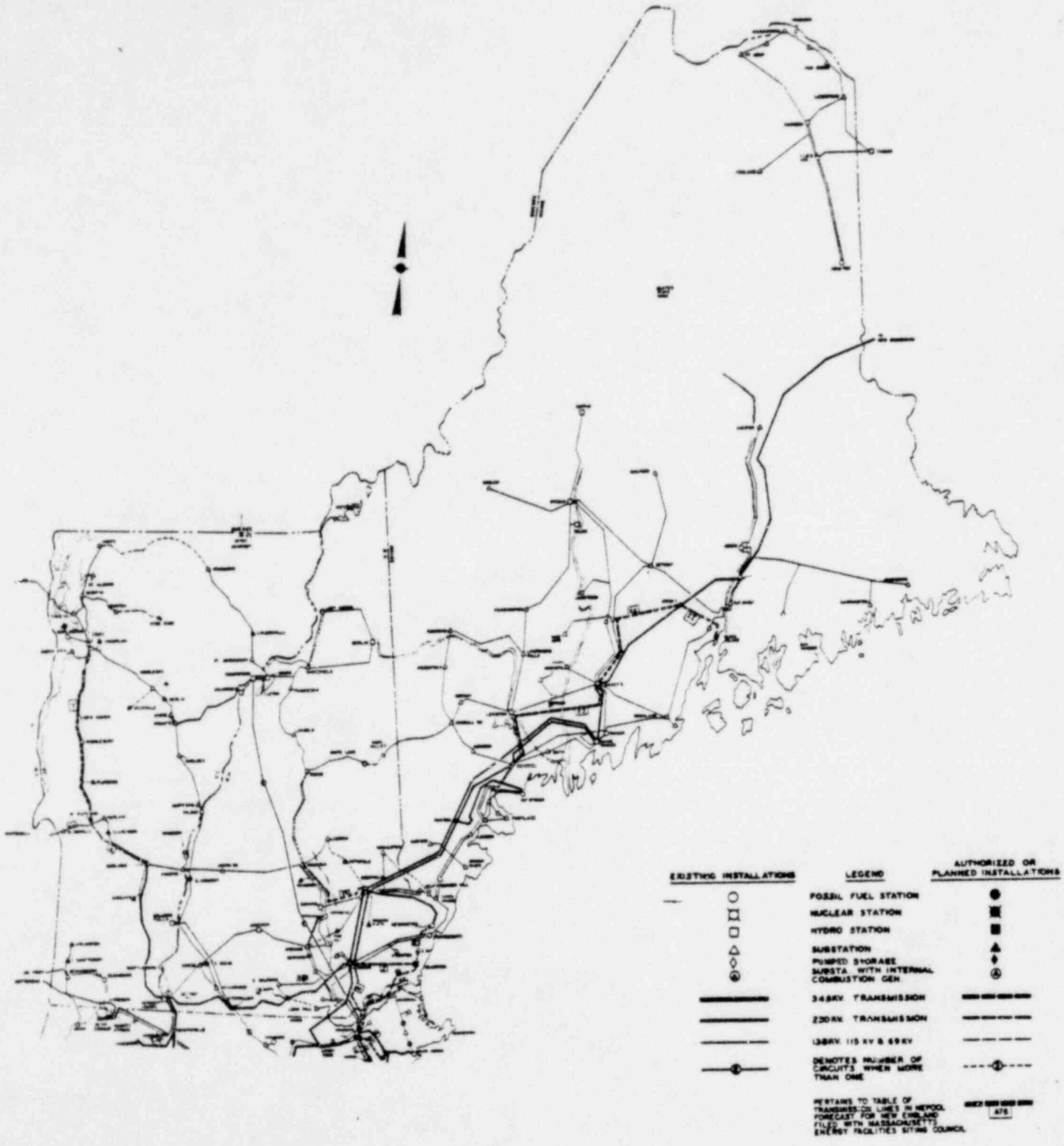


EXHIBIT XVII
SHEET 1 OF 2

	NEW ENGLAND POWER PLANNING
BULK POWER SUPPLY SYSTEM INTERCONNECTED NEW ENGLAND PROPOSED OR UNDER STUDY THROUGH 1989	
UPDATE 1-1-80	NEPLAN 1995 NO WEB DATA



NEW ENGLAND POWER PLANNING

BULK POWER SUPPLY SYSTEM INTERCONNECTED NEW ENGLAND PROPOSED OR UNDER STUDY THROUGH 1985

EXHIBIT XVIII

Additions to 345 kV Transmission Grid

1980-1989

(Refer to Exhibit XVI for cross reference with "Map Key No.")

A. Lines needed to provide transmission capability to deliver output of new generation to the transmission grid:

B, C, H, I, J, M, R, II,

B. Lines needed to supply increased load:

D, E, G, N, P, O, Q, T, U, W, X, Y, AA, BB

CC, DD, EE, FF, GG,

C. Lines needed to maintain system reliability standards throughout the expanding transmission system:

A, F, K, U, W, Z, EE, FF, JJ, KK, LL.