

UNITED STATES OF AMERICA
Before the
SECURITIES AND EXCHANGE COMMISSION

FILED

JUL 20 1972

SECURITIES & EXCHANGE COMMISSION

INITIAL DECISION

In the Matter of :

NEW ENGLAND ELECTRIC SYSTEM :
20 Turnpike Road :
Westboro, Massachusetts 01581 :

EASTERN UTILITIES ASSOCIATES :
225 Franklin Street :
Boston, Massachusetts 02110 :

BOSTON EDISON COMPANY :
800 Boylston Street :
Boston, Massachusetts 02199 :

EASTERN ELECTRIC ENERGY SYSTEM :
225 Franklin Street :
Boston, Massachusetts 02110 :

(70-4663) :

(Public Utility Holding Company Act of 1935) :

Sidney L. Feiler
Hearing Examiner

UNITED STATES OF AMERICA
Before the
SECURITIES AND EXCHANGE COMMISSION

In the Matter of :

NEW ENGLAND ELECTRIC SYSTEM :
20 Turnpike Road :
Westboro, Massachusetts 01581 :

EASTERN UTILITIES ASSOCIATES :
225 Franklin Street :
Boston, Massachusetts 02110 :

BOSTON EDISON COMPANY : INITIAL DECISION
800 Boylston Street :
Boston, Massachusetts 02199 :

EASTERN ELECTRIC ENERGY SYSTEM :
225 Franklin Street :
Boston, Massachusetts 02110 :

(70-4663) :

(Public Utility Holding Company Act of 1935) :

APPEARANCES: Allen O. Eaton, George H. Lewald, John J.
Glessner III, and Thoman G. Dignan, Esqs.,
of Ropes & Gray, 225 Franklin Street, Boston,
Mass. 02110, for New England Electric System,
Eastern Utilities Associates, Boston Edison
Company, and Eastern Electric Energy System.

Richard B. Dunn, Esq., Room 4390, Prudential Tower,
Boston, Massachusetts 02199, for New England
Electric System.

Malcolm D. Perkins and John P. Weitzel, Esqs.,
of Herrick, Smith, Donald, Farley & Ketchum,
294 Washington St., Boston, Mass., for Boston
Edison Company.

Andrew M. Wood, Esq., of Gaston, Snow, Motley &
Holt, 82 Devonshire St., Boston, Mass. 02109,
for Eastern Utility Associates.

George Spiegel and James F. Fairman, Jr.,
Esqs., 2600 Virginia Ave., N.W., Washington,
D. C. 20037, and Worth Rowley, Esq., 1730
Rhode Island Ave., N.W., Washington, D. C.
20036, for Electric Light Plant, Town of
Shrewsbury; Municipal Lighting Plant, City
of Taunton; Municipal Light Department,
Town of Wakefield; Electric Light Department,
Town of Braintree; Municipal Electric Light
Department, Town of Marblehead; Municipal Elec-
tric Plant, City of Peabody; Municipal Electric
Light Department, Town of Ipswich; Municipal
Lighting Plant, Town of West Boylston; Municipal
Light Plant, Town of North Attleboro, Massachu-
setts; Power Planning Committee of Municipal
Electric Association of Massachusetts.

Kenneth C. Anderson and Milton J. Grossman, Esqs.,
for the Department of Justice, Anti-trust Division,
Washington, D. C. 20530.

Aaron Levy, Robert E. Anderson, R. Moshe Simon,
and Frank Field, Esqs., for the Division of
Corporate Regulation.

BEFORE: Sidney L. Feiler, Hearing Examiner

I. THE PROCEEDINGS

This is a joint application-declaration filed by New England Electric System ("NEES"), Eastern Utilities Associates ("EUA"), both Massachusetts business trusts and registered public utility holding companies, and Boston Edison Company ("BECO"), a non-associate electric utility company, pursuant to the Public Utility Holding Company Act of 1935 ("Act"). The joint application-declaration relates to the proposed acquisition of the assets of NEES and EUA and the outstanding common stock of BECO in exchange for the common shares of Eastern Electric Energy System ("EEES"), a Massachusetts business trust organized by the aforementioned constituent companies for this purpose (these companies and EEES are sometimes jointly referred to herein as "Applicants").

The stated purpose of the proposed affiliation is to make possible the integration of the complete resources of BECO, NEES, and EUA, whose service territories are contiguous, and whose transmission facilities are interconnected. Affiliation, it is claimed, will provide more efficient management, financing, engineering and construction, particularly with respect to the large new generating units and bulk transmission facilities that are required under today's technology to meet economically and reliably the constantly increasing demand for electric energy. Thereby, efficiencies and economies will be achieved greater than can be realized under present conditions, including substantial economies which can be obtained in no other way.

Thereafter the Commission issued its Notice Of Filing And Order For Hearing Regarding Proposed Formation Of A Holding Company System, setting the time and place of hearing. It directed that particular

attention be directed in said hearing to the following matters and questions, without prejudice, however, to the presentation of additional evidence required upon further examination:

(1) Whether the proposed transactions meet the standards of Sections 7 and 10 of the Act.

(2) Whether exemption from compliance with the competitive bidding requirements of Rule 50 should be granted as to the common shares to be issued pursuant to the exchange offer.

(3) Whether the fees, commission and other expenses to be incurred are for necessary services and reasonable in amount.

(4) What terms or conditions, if any, the Commission's Order should contain.

(5) Whether the accounting entries proposed to be made in connection with the plan are proper and in accord with sound accounting principles.

(6) Generally, whether the proposed transactions are in all respects compatible with the provisions and standards of the applicable sections of the Act and of the Rules and Regulations promulgated thereunder.

Pursuant to the aforementioned notice a hearing was held in Washington, D. C. Appearances were filed on behalf of the Applicants; the Department of Justice, Anti-Trust Division, the Division of

Corporate Regulation of the Commission, and a group of municipalities in Massachusetts ("Mass Municipals"). The Power Planning Committee of the Municipal Electric Association of Massachusetts was granted leave to be heard. After the evidentiary hearing, all parties filed proposed findings of fact, conclusions of law, and briefs in support thereof.

On the basis of the entire record, including his evaluation of the testimony of the witnesses, the undersigned makes the following:

II. FINDINGS OF FACT AND LAW

Contentions of the Parties

Applicants contend that the affiliation will serve the public interest by tending towards the economical and efficient development of an integrated public utility system, the affiliation will have a beneficial effects on consumers and investors, it will not be detrimental to the public interest or the interest of investors or consumers, and there are no viable alternatives.

The Division contends that the proposed acquisition is governed by the statutory standards set forth in Section 10 of the Act and that Applicants have failed to meet those requirements. The Department of Justice takes this same position and further argues that the proposed affiliation threatens the survival of smaller independent utilities in New England.

Mass Municipals assert that the proposed plan of affiliation does not comport with the standards under the Act and the public interest would not be served by granting the application.

In their reply brief the Applicants propose the imposition of conditions pursuant to Section 10(e) of the Act which, they contend, will meet the major objection to the proposed affiliation.

Applicable Statutory Standards

Unless an order is obtained from the Commission permitting a declaration to become effective, it is unlawful for any registered holding company to issue or sell any security of such company (Sec. 6 and 7 of the Act), and, unless the acquisition has been approved by the Commission, it is unlawful for any registered holding company to acquire, directly or indirectly, any securities or utility assets or any other interest in any business (Sec. 9).

The standards for the approval of an acquisition are set forth in Section 10. The particular portions whose application is in contention here are:

10(b) ". . . the Commission shall approve the acquisition unless the Commission finds that--

(1) such acquisition will tend towards interlocking relations or the concentration of control of public-utility companies, of a kind or to an extent detrimental to the public interest or the interest of investors or consumers;

"(c) Notwithstanding the provisions of subsection (b), the Commission shall not approve--

(2) the acquisition of securities or utility assets of a public-utility or holding company unless the Commission finds that such acquisition will serve the public interest by tending towards the economical and efficient development of an integrated public-utility system. . ."

The Commission, in any order approving the acquisition of securities or utility assets, may prescribe such terms and conditions in respect of such acquisition as the Commission may find necessary

or appropriate in the public interest or for the protection of investors or consumers [Sec. 10(e)].

BACKGROUND

The Electric Power Industry

A few basic facts may be helpful in placing the issues in perspective. The electric power industry includes three fields-- generation, transmission, and distribution.^{1/} There are a multiplicity of utility systems, totalling approximately 3500 individual enterprises.^{2/} As of 1968, there were 405 investor-owned or private utilities (sometimes referred to as IOUS), 2,075 Public Non-Federal (principally municipalities), 960 REA cooperatives, and 5 federal systems (excluding certain military and other installations).^{3/} While smaller in number, the investor-owned segment is by far the largest, accounting for 77 per cent of the nation's total generating capacity and 78 per cent of the retail customers served. Nearly all of the approximately 200 major investor-owned utilities are vertically integrated and operate generation, transmission, and distribution systems. Approximately an equal number of IOUS are engaged

^{1/} Annexed hereto is a Glossary of Abbreviations and Definitions of industry technical terms which appear in the record.

^{2/} "The 1970 National Power Survey," Federal Power Commission, p. I-1-10. The survey is hereinafter referred to as "Power Survey." An earlier survey made in 1964 will be referred to by date.

^{3/} Power Survey, I-2-2. Very good descriptions of the industry, its technology, and legal problems can be found in Miller, "A Needed Reform of the Organization and Regulation of the Interstate Electric Power Industry," 38 Fordham Law Review 635-651 (1970); and Meeks, "Concentration in the Electric Power Industry: The Impact of Antitrust Policy," 72 Columbia Law Review 64-75 (Jan. 1972).

in distribution only. The federally-owned systems focus on generation, accounting for 11.5 per cent of the nation's total generating capacity. Power is supplied in bulk for local distribution and sale by others. Public (non-Federal) systems are the most numerous. Of a total of approximately 2100 systems, about two-thirds are engaged solely in the distribution and resale of electricity purchased from bulk power suppliers. The other one-third operate generating facilities, either as part of an integrated system or to supply power for distribution by others. This non-Federal group accounts for 10.5 per cent of the nation's generating capacity and serves 13 per cent of all retail customers. The cooperatives are smaller, generating less than 2 per cent of the nation's capacity and reaching 8 per cent of the ultimate customers.^{4/}

The history of the industry has been characterized by tremendous growth and development from small generating units serving local customers to very large systems serving many thousands. While all segments of the industry have seen great change, the most far-reaching developments have occurred in generation and transmission ("G&T"). Very large generating plants are in use and the trend is to still larger units, many of them nuclear-fueled since it is generally agreed that there are economic advantages of scale (if certain problems, such as reserve requirements, are met). The need to transport this energy

^{4/} Power Survey, I--1--10-12, Hearings on Competitive Aspects of the Energy Industry Pursuant to S. Res. 334 before the Subcomm. on Anti-trust and Monopoly of the Senate Comm. on the Judiciary, 91st Cong., 2d Sess. pts. 1&2 (1970), P. 215 (hereinafter cited as Hearings Pursuant to S. Res. 334).

from one location to another in ever-increasing amounts has led to development of higher and higher transmission voltages.^{5/} Many of the extra high voltage lines (EHV--345 kilovolts or higher) are linked together to form area-wide grids to facilitate transmission of power among utility systems.

The trends in transmission and the desire to prevent "brown-outs" and to minimize other service interruptions has led to the formation of power pools whereby utilities are interconnected and coordinated to a greater or lesser degree to supply, in the most economical manner, electric power for their combined loads. These arrangements may include common ownership or sharing in the output of large generation plants and the building of high voltage transmission lines in a coordinated grid to supply an area. In turn there is a decided trend to tie power pools into a national system. There are 21 power pools now in operation, representing 60 per cent of installed capacity.^{6/}

The trend is for great increase in demand, larger and larger generating units and plants, stronger transmission lines of large kilovolts (kV), able to carry heavier loads longer distances, and closer interties among the major power systems in the country. Emphasis today is on the development of nuclear-powered plants, but

^{5/} The cost per unit of energy transfer decreases with escalation of voltage levels, even though capital costs increase because the capacity of transmission lines increases approximately as the square of voltage, while total cost increases at a lower rate (Power Survey, I-13-7).

^{6/} Power Survey, I--1--21-22

research may lead to drastic changes in current industry concepts, such as the source of energy (the sun as a future source of electrical energy--Wall Street Journal--3/30/72), the supply of fuel to generating plants (fuel plants built specifically to supply the needs of utilities--Wall Street Journal--4/6/72), and the transmission of power (use of frozen underground cables--Washington Evening Star--4/10/72).

The New England Area

The Northeast Region is one of six regions established for statistical studies by the Federal Power Commission. It includes eleven states and besides the New England States includes Delaware, Maryland, New Jersey, New York, and Pennsylvania.^{7/} In terms of the electric power industry, the Region is known as the electrical combination of the New England Power Pool (NEPOOL), the New York Power Pool and the Pennsylvania-New Jersey-Maryland Interconnection. These pools are interconnected into a regional network to improve service reliability.^{8/} However, each of these areas constitutes a separate market with special relationships among the power companies in each area.

The history and development of the power industry in New England parallels that in most of the other areas in the United States in that there has been a trend of consolidation from many small companies serving local communities to larger ones serving wider areas.

^{7/} Detailed information on the Region is contained in the Power Survey, I & II, especially II-1-1-135.

^{8/} They also have arrangements with Canadian power companies.

As of December, 1968, 144 organizations operating as 126 separate systems were engaged in the electric power industry in New England.^{9/} However, in G&T a few companies are dominant. In generation, Northeast Utilities (NU), a holding company, NEES, and BECO have more than 50 per cent of total installed generating capacity.^{10/} Private or investor-owned utilities have 97 per cent of total installed generating capacity.^{11/}

In generation, the major utility systems of each of the six New England States are completing the interconnection of large-scale generating units by an extensive 345 kilovolt backbone transmission network, known as the Big-Eleven Power Loop.^{12/} Eventually, this loop will become part of a 765 kV interconnection. Central dispatching is now occurring through Nepex (New England Power Exchange) and other subsidiary exchanges. NEPOOL, which will be referred to later, is attempting to coordinate G&T throughout New England, including the output of nuclear-fueled plants which are beginning to be major factors in fulfilling the growing needs of the area.

^{9/} App. Exs. 63, 65 (p. 10), "A Study of the Electric Power Situation in New England 1970-1990 for the New England Regional Commission," H. Zinder & Associates et al (1970), p. 40 ("NERC Report"). This report and the Power Survey are studies in depth of the New England power industry.

^{10/} Power Survey, II--1--128-9.

^{11/} Id, NERC Report, p. 41.

^{12/} Power Survey, II--1--63-5

THE APPLICANTS

New England Electric System

NEES is the largest of the three companies involved in the application. It is a public utility holding company registered under the Act. It conducts operations through a wholesale generating and transmitting subsidiary (NEPCO); three retail electric subsidiaries, Massachusetts Electric Company, The Narragansett Electric Company, and Granite State Electric Company; and a service company, New England Power Service Company, (NEPSCO). Through NEPSCO it owns 30%, 15%, 20%, and 20% respectively of Yankee-Rowe, Conyak, Vermont Yankee, and Maine Yankee, nuclear plants (App. Ex. 7B).

The electric properties of NEES' operating subsidiary companies are located in Massachusetts, Rhode Island, New Hampshire, and Vermont, and are connected electrically. The geographical areas served are approximately 4,534 square miles. Its areas of concentration are Massachusetts and Rhode Island (see map in Div. Ex. 4B, reproduced in Brief of Applicants, Appendix E, also App. Ex. 34 A & B). Generating capability within the System as of June 30, 1967 was 1,812,650 kilowatts (App. Ex. 7A, p. 14). Additions since then have brought the 1972 estimated system capability to 3430 megawatts (1971 Annual Report, p. 14, File 1-3446-2-9). Approximately 1,000,000 ultimate electric customers are served by the System. In addition there are sales for resale to 76 wholesale customers from whom approximately \$18,000,000 is received yearly. The System is connected with BECO and EUA, has approximately 1100 miles of major transmission lines, and is committed to build 150 miles of 345 kV transmission lines as part of the 1300 mile New England area grid.

The present system is the result of a process of acquisition, consolidation, and reorganization which began at the turn of the century. There is now a single holding company, a single retail electric utility in each of the states of Rhode Island, Massachusetts, and New Hampshire, a generating and transmitting wholesale electric utility and a service company.

The functional organization of the system is along operating lines, with five vice-presidents charged with the responsibility for the over-all operations both in the central organization and in the field throughout the System. Management responsibility moves from the central organization to regional executives, district managers, and local managers.

NEPSCO is a qualified subsidiary service company under the Act. It serves all of the operating NEES subsidiaries with technical, financial and accounting, construction, managerial, engineering and other services at cost. It also provides certain services for the holding company. It employs about 1500 regular employees, of whom approximately 400 are construction workers and approximately 500 operate the computing and accounting center at Westboro, Mass.

Boston Edison Company

BECO is a fully-integrated operating utility company. It supplies electricity at retail to Boston and an area within a thirty mile radius of Boston, including 40 cities and towns.

In addition to its retail sales, BECO supplies energy at wholesale for resale to five municipal light departments in Massachusetts, Boston Gas Company, and NEPCO. It has a special contract with the Town of Braintree. It supplies bulk power to other New England utilities and also purchases power.

It has nuclear power generating facilities of its own and owns interests in others (Yankee-Rowe, 9.5% and CONYAK, 9.5%). Total peak capability is now 2,312,000 kW (1971 Report, p. 32 in Comm. File 1-2301-2-8).

It is physically connected with EUA and NEES and is committed to build 54 miles of 345 kV transmission lines as part of the New England area grid. Approximately 500,000 customers are served.

BECO is subject to the jurisdiction of the Massachusetts Department of Public Utilities, FPC, Atomic Energy Commission, and if there is affiliation, it would be subject to the Commission under the Act.

Eastern Utilities Associates

EUA, a Massachusetts voluntary association, is a registered holding company under the Act. It supplies electricity at retail through subsidiaries, Blackstone Valley Electric Company, Brockton Edison Company, and Fall River Electric Light Company, in southeastern Massachusetts and in northern and eastern Rhode Island. These three subsidiaries own all the stock and long-term debt of Montaup Electric Company, their generating and transmission subsidiary. As of December 31, 1967, EUA and its subsidiaries had total gross gen-

erating capability of 394,450 kW. It now has a capability of 452,000 kW (EUA Annual Report, 1971, p. 9). Customers served now total 207,360. Sales for resale are also made to 11 other electric utilities, including two municipal electric departments. EUA and its subsidiaries are subject to the jurisdiction of the Commission. The FPC also has jurisdiction, in certain respects. Massachusetts and Rhode Island authorities also exercise appropriate jurisdiction.

Montaup is interconnected with BECO and NEPCO. It also is participating in construction of the 345 kV New England grid.

Eastern Electric Energy System

EEES was organized as a Massachusetts business trust on December 13, 1968. To achieve the proposed affiliation EEES would acquire substantially all of the assets of EUA and NEES in exchange for shares of EEES and the assumption by it of substantially all their liabilities. (App. Ex. 4B). It would simultaneously make an offer to holders of common stock of BECO to acquire their shares in exchange for shares of EEES. The basis on which shares would be issued is set forth in detail in the application-declaration and has been the subject of testimony at the hearing. If the shareholders of each company approve the plan, it will become effective. EUA and NEES will be liquidated. BECO would become a subsidiary of EEES.^{13/}

^{13/} If a minority interest remained in BECO a plan for its elimination would be submitted to the Commission pursuant to the provisions of Section 11(b)(2) of the Act. All the aforementioned steps by EEES to proposed affiliation would, of course, be subject to the provisions of an order by the Commission.

EEES will have nine direct subsidiaries. These will consist of New England Power Service Company ("NEPSCO")--NEES' service company subsidiary; New England Power Company ("NEPCO")--NEES' generating and transmission subsidiary; Massachusetts Electric Company ("Mass. Electric"), The Narragansett Electric Company ("Narragansett") and Granite State Electric Company ("Granite")--NEES' retail subsidiaries; BECO; Blackstone Valley Electric Company ("Blackstone"), Brockton Edison Company ("Brockton Edison") and Fall River Electric Light Company ("Fall River")--EUA's retail subsidiaries. (App. Exh. 4B, Exh. H-3). It will have an indirect subsidiary--Montaup. Through it and other subsidiaries it will own interests in major New England nuclear companies--44% of Yankee Atomic Electric Company ("Yankee-Rowe"), 29% of Connecticut Yankee Atomic Power Company ("Conyack"), 24% of Maine Yankee Atomic Power Company ("Maine Yankee") and 22.5% of Vermont Yankee Nuclear Power Corporation ("Vermont Yankee"). (App. Ex. 4B).

The EEES System service area would consist of the combined service areas of BECO, NEES and EUA Systems. ^{14/} The area comprises 5,675 square miles. The EEES system would be interconnected and also would be connected with the transmission facilities of other electric utilities in New England.

^{14/} The areas are shown on two maps (App. Exh. 4B, Exhs E-1.1, E-1.2) reproduced as Appendix E to Applicants' brief. App. Ex. 34A also indicates the areas served. The operating companies are shown on App. Ex. 34B.

EEES would combine the installed generating capacity of the second, third, and seventh largest generating systems in New England and would control almost forty per cent of the total New England generating capacity. The following table illustrates the 1968 situation with regard to investor-owned utilities in New England.^{15/}

(OVER)

^{15/} From "New England Electric Utility Industry--Statistical Abstract," May 1970, p. 12 (App. Ex. 65). The table does not include any non-investor-owned utilities. However, these only total approximately 3% of total area generating capacity. The largest of these would rank twelfth overall. (Power Survey, II-1-128 (as of 1967))

	<u>Annual Revenues (\$Millions)</u>	<u>Number of Customers (Thousands)</u>	<u>Annual Kwh Sales (Millions)</u>	<u>Kw Capacity Name-Plate (Thousands)</u>	<u>Net Generation (Millions of kwh)</u>
Northeast Utilities	\$247	873	12,004	2,517	12,839
New England Electric System	221	902	9,340	1,748	8,236
Boston Edison	156	512	6,005	1,982	9,082
United Illuminating	66	238	3,507	920	3,480
Central Maine Power	63	288	3,096	655	3,480
Public Service Co. of New Hampshire	50	205	2,375	795	3,474
Eastern Utilities Associates	42	198	1,942	358	1,815
New England Gas & Electric Assn.	42	185	1,837	768	1,850
Central Vermont Public Service Corp.	20	83	972	90	205

If the table were revised to give effect to the combination for

EEES the results for the top IOUS in New England would be as follows:

	<u>Annual Revenues (\$Millions)</u>	<u>Number of Customers (Thousands)</u>	<u>Annual Kwh Sales (Millions)</u>	<u>Kw Capacity Name-Plate (Thousands)</u>	<u>Net Generation (Millions of Kwh)</u>
EEES	419	1,612	17,287	4,088	19,133
Northeast Utilities	247	902	9,340	1,748	8,236
United Illum- inating	66	238	3,507	920	3,480
Central Maine Power	63	288	3,096	655	3,480
Public Service Co. of New Hampshire	50	205	2,375	795	3,474
New England Gas & Electric Assn.	42	185	1,837	768	1,850
Central Vermont	20	83	972	90	205

Thus EEES would be the largest system in New England, substantially larger than Northeast Utilities (NU), another holding company. Both systems would control approximately two-thirds of the generating capacity of New England with EEES having over forty per cent of the total.^{16/}

The functional organization of EEES, like NEES, would be along operating lines. The service company subsidiary of NEES would be re-organized as the service company subsidiary of EEES. System operation would be centralized and performed on a single company basis consolidating such functions as engineering, system planning and design, service and property management, purchasing and stores, legal, accounting and financial planning.

Local management would follow present NEES policies. Local companies would continue to function as they do now with the same offices and personnel as prior to affiliation.

The EEES System as of 1967 would have served approximately 1,594,000 ultimate electric customers. Its total forecasted capability, pro-forma, was 5,433 MW with a peak load of 4700 MW (App. Ex. 8B, Sched. 39). Expected major additions to present generating mix includes conventional steam, pumped storage, and shares in nuclear generating plants.

NEPOOL and NEPEX

Investor-owned utilities began discussions among themselves commencing in 1962 or 1963 for the purpose of planning a central power

^{16/} Power Survey, supra, (1967 figures).

pool for New England, later dubbed NEPOOL. Drafts of a proposed agreement were circulated, commented upon, and revised. After a 1968 draft was unacceptable to a number of utilities, a NEPOOL Working Committee, comprised of all sectors of the industry was formed to attempt to reach a NEPOOL agreement.

An agreement was reached and dated as of September 1, 1971. It has been signed by most of the utility industry in New England, including all the large generating companies. It has been filed as a rate schedule with the Federal Power Commission. ^{17/} The stated objectives of NEPOOL, as set forth in the Agreement, are:

"..... through joint planning, central dispatching, cooperation in environmental matters and coordinated construction, operation and maintenance of electric generation and transmission facilities owned or controlled by the Participants and through the provision of a means for more effective coordination with other power pools and utilities situated in the United States and Canada,

(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 such bulk power supply and to provide for equitable sharing of the resulting benefits and costs." (p. 10, Sec. 4.1)

Some of the key provisions in this complex and detailed document are that any entity engaged in the electric utility business in New England is eligible to become a Participant. Provision is made for a Planning Committee to gather data and to study and evaluate alternative programs for purchases or sales of power and/or additions to and/or changes in generating and transmission facilities which it may

^{17/} Official Notice has been taken of this document in this proceeding.

deem appropriate for meeting the objectives of NEPOOL. An Operations Committee would have the responsibility of scheduling and coordinating, through the New England Power Exchange (NEPEX), the day-to-day operations of the bulk supply facilities of the Participants, determine costs to each Participant and fix appropriate billing procedures. A Management Committee would periodically review the need for and recommend additions to and changes in generating and transmission facilities of the Participants, or Pool-Planned Units. However each Participant would have the right to determine whether, and to what extent, additions to and changes in its generating and transmission facilities should be made, giving due consideration to the recommendations of the Management Committee. Provision is also made for a Participant who will have excess capability to offer the excess to others on a Unit Contract basis (generally a contract for the purchase for resale of the capability of a specific electric generating unit).

Counsel for the Power Planning Committee of the Municipal Electric Association of Massachusetts, Inc., and Municipal Electrical Departments and Plants of North Attleboro, Shrewsbury and Wakefield has filed objection to the acceptance for filing of the New England Power Pool Agreement.

Coincident with studies for the formation of NEPOOL, nine major electric systems generating 95% of the electric energy in New England

^{18/} Northeast Utilities, NEES, BECO, United Illuminating Company, Central Maine Power Company, Public Service Company of New Hampshire, EUA, New England Gas and Electric Association, and Central Vermont Public Service Corporation.

undertook the planning of a central dispatching facility. An Interim New England Power Exchange Agreement (NEPEX) was concluded and became operational in 1970. All the large utilities, most of the small investor-owned utilities and many of the municipals and cooperatives are parties to the Agreement. There is centralized dispatching and common use of existing transmission facilities. NEPEX has been included in the NEPOOL arrangement.

RECENT DEVELOPMENTS IN THE NEW ENGLAND AREA

Of the many developments which have occurred in recent years, two stand out as having special significance here.

The first is the emergence of Northeast Utilities as the largest utility system in New England. It includes Connecticut Light and Power, Western Massachusetts Electric Company, and Hartford Electric Light Company, Holyoke Water Power Company (the latter was added in 1967). (HCAR 15448, 1966; and HCAR 15825, 1967). NU is now the largest utility system in New England and serves Massachusetts and Connecticut.^{19/}

In 1966 two companies, Vermont Yankee Nuclear Power Corporation ("Vermont Yankee") and Maine Yankee Atomic Power Company ("Maine Yankee") were incorporated by separate groups of investor-owned utilities for the purpose of constructing, owning, and operating large nuclear-fueled electric generating plants to supply low-cost electric energy to their respective sponsors. The sponsors would pur-

^{19/} Power Survey, II-1-128

chase the total output of the plants in proportion to their stock ownership. Certain Massachusetts cities and Municipal Electric Association of Massachusetts ("Municipals") contended before the Commission that the sale of common stock by the Vermont and Maine Yankees and the acquisition thereof by the sponsors should not be approved because the joint undertakings from which the Municipals were excluded were contrary to Federal anti-trust policies, and that accordingly the proposed stock acquisition by the sponsors should not be approved under the standards of Section 10(b)(1) of the Act unless such approval was made subject to the condition that the Municipals be afforded an opportunity to participate in the projects on the same or equivalent basis as the sponsor companies.^{20/}

When the case reached the Court of Appeals, it was held that the exclusion of the Municipals was a relevant matter for consideration under Section 10(b)(1) of the Act and the anti-trust policies which it embodied and that Municipals should have an opportunity at a full hearing to establish their contentions.^{21/}

In later proceedings, the proposals were amended to include in the participation of the projects, non-shareholder utility systems.

^{20/} Vermont Yankee, HCAR 15958 (Feb. 6, 1968) and 16053 (May 1, 1968); Maine Yankee, HCAR 16006 (March 15, 1968).

^{21/} Municipal Electric Association of Massachusetts v SEC, 413 F. 2d 1052 (C.A.D.C. 1969).

Different formulas were used for different groups but the common basis was availability of energy to groups on the basis of kWh sales of each of the groups as a percentage of total sales of the offering sponsors and of all offerees, with certain limitations. The proposals were accepted by the Commission. ^{22/}

STATUTORY STANDARDS

A. Integration Aspects of the Proposed Acquisition

Under the provisions of Section 10(c)(2) of the Act the Commission cannot approve "the acquisition of securities or utility assets of a public-utility or holding company unless the Commission finds that such acquisition will serve the public interest by tending towards the economical and efficient development of an integrated public-utility system."

The term "integrated public-utility system" is defined in Section 2(a)(29)(A) of the Act as follows:

"As applied to electric utility companies, a system consisting of one or more units of generating plants and/or transmission lines and/or distributing facilities, whose utility assets, whether owned by one or more electric utility companies, are physically interconnected or capable of physical interconnection and which under normal conditions may be economically operated as a single interconnected and coordinated system confined in its operations to a single area or region, in one or more States, not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation; . . . "

There is no dispute that the EEES system would be physically interconnected and would operate as a single coordinated system in the New England area. The parties are in disagreement as to the claimed economies and efficiency resulting from that affiliation.

Three officials of the Applicants testified in detail on claimed dollar savings from the affiliation. These were Francis M. Staszsky, Executive Vice President of BECO, R. Leigh FitzGerald, Financial Vice President of NEES, and Charles F. Avila, Chairman of the Board of BECO. They testified as to claimed savings in the areas of engineering and operations (Staszsky), financial and accounting (FitzGerald) and executive salaries, benefits and expenses (Avila). Under their direction study teams were established to consider savings which might result from the affiliation. Estimated savings and benefits were reported in three categories: Class I--those dollar savings which could be measured with assurance; Class II--those savings which were probable; Class III--those benefits which would result from the affiliation but on which no dollar value could be placed. (Staszsky--App. Ex. 13A, p. 4). The conclusions reached after the studies were compiled (App. Ex. 13-1) were that there would be Class I annual savings of \$5,543,000 by the 5th year, which would increase to \$9,050,000 by the 10th year. Class II savings were estimated at \$2,989,000 by the 10th year. (Avila--Tr. 838-840; see also schedule annexed to App. brief as Appendix D. A detailed breakdown is contained in Div. Ex. 8A and 8B). A good portion of the estimated

savings are expected to flow from the use of a single service company and a diminution of necessary staff.

The Division attacks the demonstrations of attainable savings as far too extensive and complex and that estimates and projections over a ten-year span are much too speculative to provide a reliable guide as to savings. It also points out that the massive reorganization which will be required will admittedly be a formidable task and many unanticipated problems may arise.

While most of the studies were done under the direction of Messrs. FitzGerald and Staszsky, the Division maintains that they accepted the judgment of the authors of the Task Force Reports with little or no revision.

It focuses on one report, "Task Force Report 16--Purchasing and Stores Departments," because it constitutes a significant part of total savings and partly because these claimed savings present special analytical problems. Here anticipated firm annual savings in consolidated purchasing of \$2,573,984 by the fifth year were submitted by the Task Force based on the use of one Central Purchasing Unit.

A sampling of 97 items in general use by the six companies involved (NEES, BECO, and the 4 EUA constituent companies, all of which have separate purchasing departments) was tabulated, showing for each item the Annual Usage for the period studied, the Unit Price, as carried on the books of the company, and the estimated Savings, based on the lowest unit price. The total of the "savings" on a

ratio basis was applied to total purchases then running around \$52,000,000 to reach the savings figure claimed.

Mr. Staszsky testified in detail concerning the Report and his opinion on anticipated savings in this field. It appears that as to each item studied, while the item had the same end use, the specifications were not identical, nor were the purchases made at the same time. (Tr. 323-325). Staszsky's approach was that savings were possible and reasonably to be anticipated because the expertise in each of the combined departments would be shared, so that lowest prices should be attainable. (Tr. 330-339).

The Department of Justice asserts that the claimed savings are substantially inflated, are of dubious reliability in some cases, and in many instances could be substantially achieved absent affiliation. While it concedes that some savings are possible it points out that the Class I savings claimed after ten years would amount to approximately 2% of electric operating revenues and would be much smaller, based on future revenue projections. Mass Municipals also claim that the claimed savings are de minimus.

The undersigned recognizes the validity of the criticism of the estimated cost savings in Purchasing and Stores. Staszsky himself reduced the claimed savings in Purchases by 25% to reach a more conservative estimate. However, this field was one of 22 studied by the Task Forces and reported to Messrs. Staszsky, FitzGerald and Avila. They in turn reviewed the reports and testified from their years of experience in their respective fields of specialization. Their

approach received endorsement from outside experts, including Abraham Gerber, a recognized authority in the general field.^{23/} The undersigned concludes that the evidence establishes that savings may be reasonably anticipated from the affiliation and the use of a single service company. Conceding that many problems would arise in the course of the ten-year projected adjustment period, it is also concluded that savings in the estimated amounts are and would be attainable.

Applicants also claim that increased benefits will accrue in the areas of scale economies, services, reliability, and increased corporate financial strength. EEES will be substantially larger than its constituent units. This, Applicants assert, will enable the new system to build more and larger units and achieve economies of scale, especially in generation and transmission. Mr. Gerber testified that by 1980 the average size of new generating units will be 1000 MW, which would be within the capability of EEES. The Division contends that the existence of economies of scale is very much in dispute in view of questionable reliability of large generating units. The undersigned is satisfied from the testimony of Gerber and Avila and literature in the field that economies of scale are reasonably to be expected from large generating units. Recent developments in New England and elsewhere have all been directed towards the construction of large units. Trouble has developed in determining the outer limits

^{23/} See, Hearings Pursuant to S.334 where Gerber was so recognized and testified at length.

to which current technology can be pushed, both in the conventional and the nuclear field, but the general thesis cannot be challenged successfully today.

Applicants propose single system planning for G&T and claim that economies and efficiencies will result therefrom. At the present time each system must plan for its own needs and plan many years in advance. In the field of generation it must seek to have a mix of available power as base load and back-up in reserve by its own generation or contract arrangements to meet its anticipated needs. If it has excessive generation capability, it has made some wasteful expenditures unless it can dispose of the excess; if it has not reached its goal, it has not fulfilled its obligations. Single system planning, according to Applicants' witnesses (Avila and Gerber) would permit planning for larger units throughout the area, heavier transmission systems, and possible savings in distribution. The single system planning should result in an increase in reliability of the entire system since back-up could be coordinated.

A question has been raised as to whether Applicants have either waived or not claimed any economies from large generating units (Div. Brief, pp. 67-68; D. Justice Brief, pp. 39-41). Applicants made such a claim in their original Application-Declaration (App. Ex. 4B). It was referred to in the Notice of Hearing. No fixed dollar savings in Class I or II were claimed, but Applicants' officials testified to expected savings (Avila, Staszeky and Galligan) and were corroborated

by their outside expert, Gerber. The undersigned concludes that there was no waiver, but that these claimed advantages which have been established, rank at least as important in total efficiency and economy as actual claimed dollar savings.

Integrated Public-utility System

In order for the acquisition of the securities and assets to be approved, the Commission must find that the acquisition " . . . will serve the public interest by tending towards the economical and efficient development of an integrated public-utility system." (Sec. 10(c)(2)). The definition of the term "integrated public-utility system" has been quoted previously.

There is no dispute that the proposed system is now and would be physically interconnected and under normal conditions would be operated as a single interconnected and coordinated system confined in its operations to a single area or region, in one or more states. The question of economic operation has been discussed previously. There is disagreement over the rest of the requirement "not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation." Applicants' proposal contemplates that the present operating companies involved will continue in existence, there would be one holding company instead of two, and BECO would become subject to Commission regulation. The pattern of regulatory supervision now existing would continue. Main operating and administrative offices would remain in New England.

While there is agreement that the decision in each case depends upon the facts and specific considerations applicable,^{24/} the Department of Justice argues that questions of policy for EEES will have to be resolved at top corporate levels remote from those who will be affected and that alternative methods of achieving the goals sought by the Applicants should be studied.

The Department relies on the testimony of Charles R. Ross, a former Chairman of the Vermont Public Service Commission and a former Commissioner of the Federal Power Commission, who testified that state commissions have difficulty regulating operating companies which are part of a multi-state system, since they have no control over the interstate operations of the system, its charges and its expansion plans. Moreover, he testified, state commissions are often not strong enough in staff to cope with the problems of effective regulation. He also alluded to the limited jurisdiction of the Federal Power Commission, and stated that there would be a loss of competing management philosophies if there were the unification.

Many of the problems pointed to already exist today in the area, in that there are holding companies, operating companies, and interstate transmission lines and service companies. However, the proposed system will be smaller in size than many existing systems (App. Ex. 59), and is compact (except for one operation in the north). While there might be a theoretical loss of different management or rate-making phil-

^{24/} American Gas and Electric Company, 22 S. E. C. 808, 816 (1946).

osophies, it is conceded that there are available other statistics reflecting different approaches which may be more significant than information currently available from the systems. The undersigned concludes that the proposed system would not be so large as to impair the advantage of localized management, efficient operation, and the effectiveness of regulation.

As to the applicable legal standard, it had been urged that to make the affirmative findings under Section 10(c)(2) it is necessary to find that economies and efficiencies will result from the acquisition and that these must be derivable solely through the proposed acquisition and be of sufficient magnitude to support the affirmative findings required under the Section. While the Commission has found in certain cases that a proposed acquisition is expected to achieve substantial savings in costs,^{25/} it has not departed from the statutory standard of "tending toward the economical and efficient development of an integrated public utility system." Moreover there is no authority for requiring that the requisite economies and efficiencies must be derivable solely through the proposed acquisition. In American Gas and Electric Company, 22 S. E. C. 808 (1946), the Commission considered an application by A. G. & E. to acquire the stock of Columbus and Southern Ohio Electric Company. The Commission had previously ordered a disposition of all interests by A. G. & E. except those in its Central System, pursuant to Section 11. (21 S. E. C. 575,

^{25/} Northeast Utilities, HCAR No. 15448 (1966).

1945). After noting that the Central System was an aggregate of utility properties throughout seven states and that it had previously stated that the Central System approached the maximum size consistent with the standards in Section 2(a)(29) of the Act, and also acknowledging that each case depended upon the facts and specific considerations applicable to each case, the Commission ruled that the application should be denied. It stated,

"All we now decide is that, taking into account the state of the art and the area or region affected, the substantially enlarged group of properties that would result from the acquisition of C. & S. O. by the Central system cannot be found to be 'not so large as to impair . . . the advantages of localized management and the effectiveness of regulation.' Consequently, we cannot find that the end product of the proposed acquisition would conform with the definition in Section 2(a)(29)(A) of an 'integrated public utility system' and we cannot, because of the size of the resulting combination of properties, find that the acquisition 'will serve the public interest by tending towards the economical and efficient development of an integrated public-utility system' within the meaning of Section 10(c)(2)." (pps. 816-817)

It then noted that some of the claimed advantages of affiliation could be achieved by coordination and pooling and that C. & S. O. could effectively operate as an independent system. This dicta is far from interposing an absolute requirement. It is therefore concluded that the statutory requirements of 10(c)(2) have been met and the proposed acquisition would tend towards the economical and efficient development of an integrated public utility system.^{26/}

26/ Eastern Gas and Fuel Associates, HCAR No. 15887 (1967).

B. Requirements of Section 10(b)(1)

It is provided in Section 10(b)(1) of the Act that "If the requirements of subsection (f) are satisfied, [compliance with applicable state laws], "the Commission shall approve the acquisition unless the Commission finds that--(1) such acquisition will tend towards interlocking relations or the concentration of control of public-utility companies, of a kind or to an extent detrimental to the public interest or the interest of investors or consumers , . ." Applicants urge that these negative findings should not be made; the other parties take the opposite position.^{27/}

Applicants argue that the affiliation will not restrain or eliminate any meaningful competition. They point out that in the retail field, because of the heavy investment involved and state regulatory laws, it is impossible to have competition for retail business except in a rare instance where a customer is located on the borderline between retail service areas of different suppliers and that the principal activity of the three proposed affiliates is the sale of electricity at retail. They further maintain that actual or potential competition for industrial systems among the three proposed affiliates

^{27/} This case was tried on the basis outlined and the basic briefs were addressed to the contentions of the parties. In their reply brief, Applicants proposed that there be incorporated a condition pursuant to Section 10(e) of the Act which they claim would obviate objections to their original proposal. This proposed condition will be dealt with later.

is de minimis because in most industries the cost of electricity is not paramount. The affiliation, it is urged, will actually enhance the ability of the new system to compete nationwide for business.

Applicants maintain that there can be little competition for wholesale sales except where a wholesale customer utility is not served by any supplier and desires inter-connection or where a major change in the type of service is sought. Applicants rely on certain studies, App. Exs. 9 S-V, designated as the Galligan Study purporting to show that it would be impossible to have meaningful competition for the wholesale business of the Mass Municipals. They also rely on the testimony of Gerber and other witnesses that the public interest will be served by the proposed service company, integrated management and the savings and efficiencies which will flow from the affiliation.

Applicants further argue that there will be no undue concentration of control within the meaning of the Act. Based on the 1968 figures for the three proposed affiliates, the EEES System will have 1.4% of the generation and 1.4% of the sales to ultimate customers in the United States. It would rank thirteenth in kilowatt hours sales in the United States (Div. Ex. 11-A, 1967 fig.) and sixth in number of customers (Div. Ex. 11-B), eighth in assets (Div. Ex. 11-C), and seventh in operating revenues (Div. Ex. 11-D). Based on 1968 figures the EEES System would have approximately 36.5% of the sales to ultimate customers and 36.1% of the generating capacity in New England (App. Ex. 59). These percentages, they maintain, are smaller than those found in utilities in comparable areas.

Finally it is argued that the affiliation is not an alternative to NEPOOL but is a necessary complement to it, that the NERC Report indicates that there may very well be problems of coordination in securing the building of NEPOOL planned units and that the larger units which would be feasible under the affiliation would make NEPOOL stronger.

The Division contends that the standards of Section 10(b)(1) of the Act would not be met by the proposed affiliation, that the legislative history of the Act indicates that it was aimed at the concentration of power by large holding companies, ^{28/} and that it is, in effect, a specialized anti-trust statute. Decisions under the Sherman and Clayton Acts in non-electric power cases are fully applicable, it is asserted. If the share of the market (which may be a geographic, as well as product market) is so large that it approaches monopoly proportions the Anti-trust Acts will have been violated, the Division contends. ^{29/} It argues that the proposed affiliation would result in a concentration of control detrimental to the public interest, viewed from three geographic market perspectives--concentration in New England as a whole, concentration in the tri-state area of Southern New England and concentration in each of the three states served by Applicants. This, it claims, is evidenced by the following table, among other items (1967 figures):

(OVER)

^{28/} American Gas and Electric Company, 22 S.E.C. 808, 817-818 (1946).

^{29/} Brown Shoe Co., Inc. v. U.S., 370 U.S. 294, 327 (1962).

TABLE 1/

	Massachusetts		Rhode Island		New Hampshire		New England	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Square Miles - Total	7,867		1,058		9,014		63,126	
NEES Retail Area	3,247	41.3	869	82.1	418	4.6	4,534	7.2
BECO Retail Area	587	7.4					587	.9
EUA Retail Area	391	5.0	147	13.9			538	.9
Total - EEES	4,225	53.7	1,016	96.0	418	4.6	5,659	9.0

Ultimate Customers (Average)

	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Industry	1,879,003	(A)	318,965	(A)	281,167	(A)	4,024,481	(A)
Investor Owned Industry	1,641,604	(B)	316,768	(B)	249,294	(B)	3,654,863	(B)
NEES	649,019	34.5	223,393	70.0	18,255	6.5	880,600	22.1
BECO	507,104	27.0					507,104	12.6
EUA	124,720	6.7	71,058	22.3			195,778	4.9
Total - EEES	1,280,843	68.2	294,381	92.3	18,255	6.5	1,593,487	39.6

Miles to Ultimate Customers
(millions of kilowatthours)

	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Industry	19,294	(A)	3,663	(A)	2,682	(A)	43,361	(A)
Investor Owned Industry	17,160	(B)	3,048	(B)	2,526	(B)	39,903	(B)
NEES	6,358	33.0	2,009	65.6	154	5.7	8,548	19.7
BECO	5,540	28.7					5,540	12.8
EUA	993	5.1	790	25.8			1,783	4.1
Total - EFES	12,891	66.8	2,799	91.4	154	5.7	15,871	36.6

Revenues from Ultimate Customers
(Thousands of Dollars)

	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Industry	\$465,419	(A)	\$71,710	(A)	\$51,978	(A)	\$978,177	(A)
Investor Owned Industry	416,998	(B)	71,341	(B)	57,597	(B)	902,250	(B)
NEES	\$153,349	32.9	\$49,360	68.8	\$4,087	6.6	\$407,122	21.2
BECO	146,933	31.6					146,933	15.0
EUA	23,974	5.2	16,426	22.9			40,400	4.1
Total - EEES	\$324,256	69.7	\$65,786	91.7	\$4,087	6.6	\$394,455	40.3

Installed Generating Capacity
(Nameplate - Megawatts)

	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Industry	4,519	(A)	400	(A)	753	(A)	9,383	(A)
Investor owned Industry	4,311	(B)	393	(B)	749	(B)	9,066	(B)
NEES	962	21.3	336	84.0	325	43.2	1,726	18.4
BECO	1,982	43.8					1,982	21.1
EUA	374	7.2	34	8.5			358	3.8
Total - EFES	3,268	72.3	370	92.5	325	43.2	4,066	43.3

Electric Utility Plant in Service
(Thousands of Dollars)

	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Class A & B Utilities	\$1,670,142		\$224,009		\$300,695		\$3,723,624	
NEES	552,074	33.1	178,962	79.9	72,699	24.2	845,282	22.7
BECO	633,606	37.9					633,606	17.0
EUA	111,672	6.7	33,232	14.8			144,904	3.9
Total - EES	\$1,297,352	77.7	\$212,194	94.7	\$72,699	24.2	\$1,623,792	43.6

Affiliation also would have an adverse effect on yardstick competition and the opportunities of smaller utilities to participate in capital investment in large new plants and remain viable.

The Department of Justice also argues that the proposed affiliation threatens to destroy actual and potential competition, threatens the survival of smaller independent utilities in New England, and may frustrate efforts to establish a comprehensive regional power pool. Mass Municipals also oppose the application, contending that the existence of EEES will be detrimental to the structure of the utility industry in New England in that increased concentration of control of bulk power facilities and supply threatens the future of independent smaller systems and that competition at all levels will suffer. They assert that the public interest in New England is better served by inter-utility cooperation than by affiliation and that NEPOOL can assure a pluralistic industry structure in New England.

Applicants in their reply brief contend that the Division has misinterpreted the scope of Section 10(b)(1) and that while the Commission must take into account the policies underlying the Clayton Act in deciding whether to approve a stock acquisition, the Commission is still free to determine what is required in the public interest rather than to apply Section 7 of the Clayton Act inflexibly.

A good portion of the transcript of these proceedings was devoted to the presentation, by the parties objecting to the applica-

tion, of evidence of the relationships between the Applicants and the Mass Municipals and the other IOUS in New England over a period of many years. In view of the fact that the undersigned is in agreement with the position of the objectors on this portion of the case, it is not deemed necessary to review this evidence in detail. Certain matters need mention, however.

The Mass Municipals own very little installed generating capacity.^{30/} For years they have attempted unsuccessfully to purchase ownership or output interests in large new plants jointly built and/or owned in New England. Whether they were held to have applied too late, had not made a definite proposal, or had state law barriers to overcome, the fact remains that they had no success in these efforts. However, the litigation over the Maine and Vermont Yankee projects and the resulting settlement will give them direct access to some nuclear power.

For a number of years representatives of investor-owned utilities in New England met to exchange information and make joint plans. The Municipals were not included in these meetings. Applicants argue that their fundamental interests differed. In any event, the later stages of NEPOOL planning were open to all utilities and membership in NEPOOL is open to all.

The smaller IOUS also have had problems in maintaining their competitive status in New England. The aim of many of them, as appears from the testimony, is to obtain ownership interest in large genera-

^{30/} See, Power Survey, II-1-128, "Structure of Industry Structure of the Northeast Power Supply."

ting plants, thus enlarging their rate base and also enabling them to remain competitive in the rates they charge their customers. Otherwise they become distributors of wholesale power acquired from other utilities and possible eventual candidates for merger. The problem these utilities face is that they cannot finance large plants or use the resulting output themselves. They have to join with other utilities to further their aims. When they can make arrangements with the few large utilities in New England which build large plants, matters work out satisfactorily. When they attempt to take the lead in organizing such a project, they can run into difficulties.

The Seabrook project of Public Service Company of New Hampshire (PSNH) is illustrative of the complications which can develop. PSNH after studying its future power requirements determined after a study completed in 1967 that it would have a shortage of 400 megawatts in ^{31/}1974. It decided to construct an 850 MW nuclear unit with owner-^{32/}ship participation by other utilities. On March 18, 1968, representatives of NEES and BECO met with Mr. Tallman and suggested that they were willing to take a fifty per cent participation, with PSNH taking the rest. Tallman said that he had made commitments to United Illuminating Company ("UI") and Central Maine Power (the fourth and fifth largest area utilities). Negotiations were dropped, but there was

31/ PSNH is the largest utility in New Hampshire and is sixth in size of all utilities in New England.

32/ The findings herein are based primarily on the testimony of William C. Tallman, president of PSNH. Others involved in the planning of the project will be indicated.

feeling that the "big three" (NEES, NU, and BECO) were discriminating or trying to squeeze out the smaller utilities from large projects.

PSNH, UI and Central Maine proceeded with planning for Seabrook, with PSNH having a 55% ownership interest and the other two companies dividing the remainder. Vermont Electric Power Company ("VELCO") was given a right of first refusal on 150 to 250 megawatts of capacity. However, trouble developed when Central Maine Power withdrew from the project in August 1968. In July 1969 the parties reviewed the construction schedule with particular reference to equipment delivery dates and receipt of regulatory approval. It was decided that the plant would have to be planned for 1975 service. This left the parties with estimated power deficiencies in 1974 and power surpluses in 1975. They then wrote to all utilities in New England selling electricity at retail, offering up to 28 per cent ownership participation on the life of the unit and sale of three hundred megawatts of unit power over a ten-year period. On September 24, 1969 they sent a second letter to the utilities, notifying them that the goal of ownership participation could be achieved but that there had not been sufficient commitment for the surplus power. The final blow to the project was notice given by VELCO that it would have to cut in half its estimate of power it could take from the Seabrook project. On November 5, PSNH and UI agreed that the project should be deferred and all utilities were so notified. They then concentrated on filling their 1974 needs which they had not been able to fill from other companies. Both PSNH and UI lost approximately \$2.7 million after tax loss because of the inability to proceed with the project.

The contention has been made that after NEES and BECO were unsuccessful in obtaining a one-half interest in Seabrook they engaged in a planned conspiracy not to assist PSNH and UI, so that they refused to commit themselves in 1969 to take excess power from Seabrook and also refused to assist them to meet their 1974 deficiencies. There was no showing that NEES or BECO, after they had not been successful in their Seabrook negotiations in 1968, had not taken care of their 1975 requirements otherwise. There is evidence that all other systems in New England were short in 1974, except NEES and BECO, and their available power were of no interest to PSNH. Tallman expressly disclaimed any allegation of a conspiracy.

What the record does establish is that the smaller utilities in New England can have and have had difficulties in planning and building large units when the large utilities are not participating. When there is such participation, while there are financial and operational problems, projects are successful (a large plant built by New England Gas and Electric Company with the participation of larger companies illustrates such a situation).

The municipals face a similar and probably more difficult problem when they try to plan construction of large plants. In 1968, Braintree, a generating municipal utility inter-connected with BECO, attempted to develop interest among municipalities and IOUS in a 400 MW unit as a source of low cost power supply. BECO, although it was solicited, was lukewarm to the project and an organization of investor-owned utilities, Massachusetts Gas and Electric Association,

opposed necessary legislation, and the project died. BECO maintained that it was not interested in the project because there were many obstacles to its success, but the history of the project does indicate that municipalities in New England would have a difficult time in planning and contracting large generating projects without the help of other segments in the industry.

The parties are in sharp conflict, as previously indicated, on the anti-competitive principles applicable here. This subject has received careful scrutiny in recent years. In Northern Natural Gas Company v. F.P.C. 399 F. 2d 953 (C.A.D.C. 1968) the Court, by Judge Wright considered a challenge to an order of the Federal Power Commission based in part on an asserted failure to give proper consideration to anti-trust issues raised at the hearing. Judge Wright used the decision to restate the relevance of anti-trust law to regulatory agencies in general in the following language (footnotes and citations omitted):

Even though the Commission concedes that it must consider the antitrust implications of its action, in order to determine the required extent of that consideration we think it helpful to examine the overall relationship between anti-trust law and regulatory agencies. Despite a continuing debate, it appears that the basic goal of direct governmental regulation through administrative bodies and the goal of indirect governmental regulation in the form of antitrust law is the same--to achieve the most efficient allocation of resources possible. . .

This theory of complementary regulation appears to be borne out by the Supreme Court cases holding that regulated industries must, to some degree at least, accommodate the antitrust laws. . . Moreover, the Court has held that even

where there are specific statutory exemptions for regulated industries from the antitrust laws, such exemptions are to be very narrowly construed. . .

This is not to suggest, however, that regulatory agencies have jurisdiction to determine violations of the antitrust laws. . . Nor are the agencies strictly bound by the dictates of these laws, for they can and do approve actions which violate antitrust policies where other economic, social and political considerations are found to be of overriding importance. In short, the antitrust laws are merely another tool which a regulatory agency employs to a greater or lesser degree to give "understandable content to the broad statutory concept of the 'public interest.'" . . . But because competitive considerations are an important element of the "public interest," we believe that in a case such as this the Commission was obliged to make findings related to the pertinent antitrust policies, draw conclusions from the findings, and weigh these conclusions along with other important public interest considerations. (p. 959-961)

In the Yankee cases, previously referred to (413 F. 2d 1052, C.A.D.C. 1968), the Court dealt directly with anti-trust considerations under Section 10(b)(1). It held that ". . . violations of the anti-trust laws bear upon" the public interest or the interest of investors or consumers, "terms used in Section 10(b)(1) of the Act . . ." (p. 1057), and that the exemption from Section 7 of the Clayton Act to transactions consummated pursuant to authority given by the Commission in the exercise of its jurisdiction under Section 10 of the Act is indicative of a Congressional intent that the Commission take into account the policies underlying the Clayton Act in deciding whether to approve a stock acquisition. The Court remanded the case to the Commission for reconsideration whether the plan of the sponsors would tend to a type of control violative of the standards of Section 10(b)(1). "Approval of the stock acquisitions would depend upon the outcome of a

weighing of such control with any factors which favor the projects in the particular terms proposed by the applicants" (p. 1059).

In the case of City of Lafayette, Louisiana v. S.E.C. (454 F. 2d 941, C.A.D.C. 1971), Judge Leventhal in reviewing certain actions by the Commission and the Federal Power Commission stated:

The regulatory library includes a host of decisions establishing that when an agency is called upon to determine whether a proposal or condition satisfies the "public interest," or another similar broad standard, the agency has the authority and typically the responsibility to consider a challenge based on the asserted anti-competitive purpose or consequence of the proposal. . .

However it is a fair consensus of the cases cited that the nation's profound and pervasive devotion to competition as a fundamental economic policy, and conviction that the public interest is disadvantaged when private enterprises are permitted to engage in anti-competitive agreements and restraints, is applicable at least presumptively even in the case of monopolies or quasi-monopolies characterized by various degrees of government control and protection, subject of course to offset or rebuttal on analysis by the cognizant agency. (footnotes omitted) p. 948-49. -

If the instant case were in the posture as originally presented in the application-declaration the undersigned would have to conclude that in the application of the principles excerpted from the decided cases the acquisition could not be approved because it would tend towards the concentration of control of public-utility companies, of a kind or to an extent detrimental to the public interest.

EEES, the proposed new company which would succeed the three applicants, would control approximately forty per cent of the generating capacity in the New England area. With Northeast Utilities controlling approximately another twenty-five per cent, two-thirds of the total New England generating capacity would be in the hands of these two com-

panies. Moreover, the evidence establishes that the remaining utility systems in the New England area would have a difficult time gaining direct access to large, low-cost generation units by ownership or otherwise without the cooperation of EEES or NU. This would place those systems at a competitive disadvantage and their retail customers also would be disadvantaged. This gap could be expected to widen over the years as EEES and NU increased their share of generation facilities. These anti-competitive disadvantages would outweigh the benefits of economy and efficiency which would accrue from the acquisition.

Further consideration of the arguments originally advanced on this issue is not warranted because of certain proposals advanced by the Applicants in their reply brief. There, it was stated that,

"In order to put to rest concern as to the intent of this vital program, to bring its purpose into plain and clear focus under Section 10(b)(1), and to insure its economic equity, the Applicants propose that there be incorporated a condition pursuant to Section 10(e) that other New England utilities, both public and private, be afforded an opportunity, on a reasonable basis and in line with the then regional planning, to participate in the ownership and output of a reasonable number of major new EEES system units unless otherwise provided by a NEPOOL agreement accepted for filing by the FPC." (p.9)^{33/}

33/ Section 10(e) is as follows:

"The Commission, in any order approving the acquisition of securities or utility assets, may prescribe such terms and conditions in respect of such acquisition, including the price to be paid for such securities or utility assets, as the Commission may find necessary or appropriate in the public interest or for the protection of investors or consumers."

The Division filed an Answer to the Reply brief maintaining that imposition of the suggested conditions would in no way obviate the necessity for the Commission to find independent compliance with the requisite standards of Section 10(b) and (c) of the Act, these standards have not been met, and imposition of the suggested conditions would not change this conclusion. The other parties took no position on the proposed terms and conditions.

The Commission does not have jurisdiction over the day-to-day operations of holding companies and their affiliates. (City of Lafayette, La. v. S.E.C., supra p. 955-56). Its authority under Section 10 of the Act relates to the proposed structure of a holding company as measured against the statutory standards. As was pointed out in the Yankee cases, the Commission may decide that without conditions the requirements of Section 10(b)(1) may not be met, but might with conditions (supra, p. 1060). Such conditions may include an allocation of power from a power source. This was the path followed by the parties in arriving at a stipulation which the Commission found met the requirements of Section 10(b)(1) and did not require any adverse findings in those cases.

The Commission, while it has limited jurisdiction in the electric power industry field, cannot ignore certain current developments that require the attention of all regulatory bodies. There is uniform agreement that the demand for electric power is increasing at a great

rate. For the New England area the best estimates are that the demand for electric power will quadruple over the next twenty years.^{34/} A tremendous investment in new large bulk power supply units will obviously be required and the coordination of all segments of the industry is needed. Remedial measures which assist these developments are in the broad public interest.

That does not mean the statutory safeguards should be disregarded in order to further the aforementioned objectives. The undersigned is persuaded that conditions can be prescribed in an order herein which would not require the adverse findings under Section 10(b)(1) and would serve the public interest and the interest of investors and consumers. Such an order stands on a different footing from a "promise of good behavior" or a "commitment. . . to forego the illicit advantages of economic concentration," as the Division characterizes the proposal.

The basic objection to the original proposal of the Applicants is that it would strengthen the Applicants in generation and transmission capacity and tend to leave the smaller systems in New England worse off from a competitive standpoint. If all the systems in New England shared in the ownership or output of major new units in the EEES system they would obtain benefits which they do not have now. They would share in the ^{output}~~output~~ of large units producing low-cost power and the size of their individual systems would be increased.

^{34/} NERC Report, Ch. VI, Power Survey, II-1-1

From the viewpoint of anti-trust considerations, the public interest would be served if these systems remained strong and viable. Their retail customers should benefit from rates more favorable than otherwise available to them.

NEPOOL by itself could not accomplish what is proposed. NEPOOL is a voluntary organization. Basically, it can recommend that certain units be built, but it cannot direct who will share in the ownership or output of new units. Also, as previously pointed out, litigation concerning it is pending before the FPC.

The proposal is not a panacea designed to solve all the problems of the pluralistic organization of the electric power industry in New England. In addition to problems arising from efforts to share in the output of large units, the Mass Municipals and the IOUS are on opposite sides when the Municipals seek to obtain broader powers from the state legislature; the public power group and the IOUS are in opposite camps when congressional approval is sought for large public-financed power projects; and the Mass Municipals have rate conflicts with some of the Applicant companies here which result in formal proceedings before the FPC.^{35/}

Proposals have been made looking to long-range solutions of major industry problems. Thus it has been proposed that a single generation

^{35/} There were 7 such proceedings pending before that agency at the end of the March 1972 quarter. (FPC News, May 19, 1972, p. 5-9).

and transmission company be established for all of New England.^{36/} Whatever course is followed, it would appear that a solution in the public interest is more readily achievable when segments of the industry remain strong. It is concluded that the proposal will serve this condition in the New England area.

Exact terms of the proposal of the Applicants have not been spelled out. Nor, as in the Yankee cases, have the parties arrived at a stipulation. However, the approach used there, KWH sales as a percentage of total sales (although there was some modification of that formula in the final solution) offers a good guide here (HCAR No. 16794, p. 6, July 30, 1970)

The undersigned concludes that a formula used here should include the right of utility systems with generating capacity to share in ownership entitlement or the right to purchase power on the sales formula. This would allow them to maintain their generating capacity, if they so choose. Other systems should be entitled to purchase on the sales formula. This formula should be applied to new large units to be built by EEES, which the undersigned concludes should be units of 500 megawatts capacity minimum.

The rights to ownership or power entitlement shall include the right of wheeling or transmission of power at reasonable rates over the EEES system and over the lines of other systems participating

^{36/} NERC Report, p. 16-18. See also, Miller, op. cit., p. 662-672, where a similar proposal on a national basis is set forth in detail.

in the arrangement. The undersigned concludes that if these terms and conditions are incorporated in an order approving the acquisition of securities and utility assets as requested in the application - declaration, no adverse findings under Section 10(b)(1) will be necessary.^{37/} Since it is difficult to cover all future events in the order herein, jurisdiction will be reserved in the Commission to issue any further orders necessary to implement the terms and conditions specified in the order.

^{37/} It has been urged that the prior course of conduct of Applicants and others in New England constitutes evidence of the kind of abuse that the Act was designed to correct and constitutes an additional basis for denying the application - declaration. (Citing Trucking Unlimited v. Cal. Motor Transport Co., 432 F. 2d 755 (C.A. 9, 1970); Woods Exploration & Production Company, Inc., v. Aluminum Company of America (438 F. 2d 1286 (C.A. 5, 1971)); and Gas Light Company of Columbus v. Georgia Power Company, 440 F. 2d 1135 (C.A. 5, 1971)). These cases deal with anti-trust suits based on conspiracies to eliminate competition by unfair means including certain activities before regulatory bodies and the courts. While this contention has not been detailed in the briefs, it obviously refers to action by the IOUS before the Massachusetts legislature opposing efforts of the Mass Municipals to expand their authority in the field of public power. It is doubtful that the cited cases are applicable to the activities attacked here. Moreover, weight has not been given to instances of cooperation between the IOUS and other segments of the industry - such as NEPOOL and the settlements in the Yankee cases. The undersigned rejects this contention.

C. Other Matters

Issuance of Securities by EEES - Exchange Ratios

It is provided in Section 6 of the Act that it shall be unlawful for any registered holding company to use the facilities of interstate commerce or of the mails to issue or sell any security of such company except in accordance with a declaration effective under Section 7 and pursuant to an order under such section permitting such declaration to become effective. Section 10(b)(2) provides that the Commission shall approve the acquisition unless the Commission finds in case of the acquisition of securities or utility assets, the consideration, including all fees, commissions, and other remuneration paid or to be given in connection with such acquisition is not reasonable or does not bear a fair relation to the sums invested in or the earning capacity of the utility assets to be acquired or the utility assets underlying the securities to be acquired.

EEES has one class of transferable common shares with a par value of \$5 per share. To achieve the proposed affiliation EEES will acquire substantially all of the assets of EUA and NEES in exchange solely for shares of EEES and the assumption by it of substantially all their liabilities (App. Ex. 4B). It will simultaneously make an offer to holders of common stock of BECO to acquire their shares in exchange solely for shares of EEES. The basis on which shares of EEES will be issued is as follows:

1.134 shares of EEES for each outstanding share of EUA, 1 share of EEES for each outstanding share of NEES, and 1.5 shares of EEES for each outstanding share of common stocks of BECO. No fractional shares of EEES will be issued. Shareholders otherwise entitled to fractional shares will be afforded the opportunity to buy and sell fractional interests to round off fractions.

No issue has been raised as to the requirements of Section 7. The undersigned finds that there has been compliance with that Section except as noted below and that the security proposed to be issued or sold by EEES is a common stock having a par value and being without preference as to dividends or distribution over, and having at least equal voting rights with, any outstanding security of EEES, and such security is to be issued or sold solely for the purpose of effecting a consolidation or other reorganization (Sub-section (c)); no State Commission or State securities commission having appropriate jurisdiction has informed the Commission that applicable State laws have not been complied with (Sub-section (g)); and there is no basis for making any adverse findings that the security is not reasonably adapted to the security structure of EEES and other companies in the same holding-company system, that the security is not reasonably adapted to the earning power of EEES, that financing is not necessary to the operations of EEES, or that the assumption of liabilities by EEES is an improper risk for EEES (Sub-section (d)).

With respect to the reasonableness of the fees, commissions or other remuneration to be paid in connection with the issue and sale

of the EEES securities (Sub-section (d)(4)), Applicants will supply the details by amendment and consent to a reservation of jurisdiction of this question by the Commission.

Sub-section (d)(6), in effect, raises the question whether the terms and conditions of the issue or sale of the securities are detrimental to the public or the interest of investors or consumers. This relates to an issue raised by the Division under Section 10(b)(2) as to the fairness of the proposed exchange ratios. (Div. br. p. 70-73). The Division points out that an expert witness, L. Sanford Reis, who testified on the fairness of the proposed exchange ratios, stated that he gave consideration not only to historical earnings per share through 1967, but also gave consideration to estimated earnings, total and per share, for the three years 1968 - 1970. It contends that the actual results of operations for these years are now available and show that the per share earnings of EUA and NEES have been significantly less than those estimated, and that BECO per share earnings have consistently exceeded those estimated. It argues that a decision on fairness of the proposed allocation cannot be made without proper evaluation of the materiality and nature of the variances, updated financial data and estimates and that the record should be reopened for inclusion of that data if other issues are decided in favor of the Applicants.

The point raised has not been fully briefed by the parties, but the undersigned concludes that further evidence may be needed on the fairness of the exchange ratios. However, the time to consider this is

not presently, but when all other steps in the proceedings have been concluded and other issues resolved. Otherwise, what would be done now might have to be reviewed later. Jurisdiction will be reserved in the Commission on its own motion or for good cause shown to reopen the record to receive further evidence on the fairness of the exchange ratios.

Exemption from Competitive Bidding

The Applicants have requested an exemption from the competitive bidding requirement of Rule 50 under the Act with respect to the issuance of EEES shares to the common shareholders of BECO. Competitive bidding had been held not appropriate in the case of the issuance of shares to effectuate an exchange offer of the kind proposed here (Northeast Utilities, HCAR No. 15448 (1966); Northeast Utilities, HCAR No. 15825 (1967)).^{38/} The request will be granted.

Accounting Treatment

Upon consummation of the affiliation, it is proposed that EEES will record its investment in the common stock of the NEES and EUA subsidiaries at the carrying values of such assets on the books of NEES and EUA, that the common stock of BECO acquired pursuant to the Exchange Offer will be recorded at the underlying book value of such shares, and that the earned surpluses of NEES, BECO and EUA will be carried forward by EEES, all in accordance with the concept of "pooling of interests".

It is concluded that the accounting entries proposed to be made in connection with the plan are proper and in accord with sound accounting principles.

^{38/} The issuance of EEES shares to NEES and EUA in connection with the liquidation of these two registered holding companies is exempt from the competitive bidding requirements of Rule 50, pursuant to the provisions of clause(a)(3) thereof.

CONCLUDING FINDINGS: ORDER

It has been concluded that subject to certain terms and conditions regarding participation of all other New England utilities, both public and private, in the ownership and output of major new EEES system units, the proposal transactions meet the standards of Sections 7 and 10 of the Act. It has further been found that exemption from compliance with the competitive bidding requirements of Rule 50, promulgated under the Act, should be granted as to the EEES common shares to be offered and issued to BECO shareholders, pursuant to the exchange offer. The accounting entries proposed to be made in connection with the plan are proper and in accord with sound accounting principles.

Jurisdiction will be reserved in the Commission for the entry of further orders with respect to fees, commissions, and other remuneration in connection with the issue and sale of the EEES securities; to receive further evidence and to enter orders as to the fairness of the proposed exchange ratios; and to enter such further orders as the Commission may deem necessary to implement the terms and conditions specified in the order.

Except as delimited herein, the proposed transactions are in all respects compatible with the provisions and standards of the applicable sections of the Act and of the Rules and Regulations promulgated thereunder. Accordingly,

IT IS ORDERED that the aforementioned application-declaration be, and it hereby is, granted and permitted to become effective, subject to the following terms and conditions:

EEES, in the planning and building of new generating units of 500 megawatt capacity or over shall offer to all utilities in New England, both public and private, then owning generating capacity, ownership interest in each of said plants in proportion to the capacity of each system to total New England systems capacity.

All New England utility systems, both public and private, shall be offered the right to purchase power from each of the aforementioned units in the proportion that their then kWh sales bears to total New England sales. Systems with an existing owned generating capacity can take under either formula, but not both.

The right to participate in ownership or generation of the aforementioned units shall include the right to have said entitlement for each system transmitted at reasonable cost over power lines of EEES or other systems participating in this arrangement.

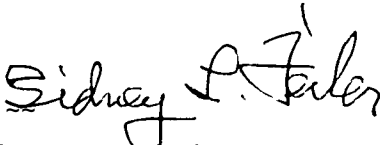
IT IS FURTHER ORDERED that the proposed issue of EEES common shares to BECO shareholders, pursuant to the exchange offer be, and it hereby is, excepted from the competitive bidding requirements of Rule 50.

Jurisdiction is reserved in the Commission with respect to entering further orders as to fees, commissions, and other remuneration in connection with the issue and sale of the EEES securities.

Jurisdiction is also reserved in the Commission with respect to receiving additional evidence and issuing orders as to the fairness of the proposed exchange ratios.

Jurisdiction is also reserved in the Commission to issue such further orders as may be necessary to implement the terms and conditions specified in this Order.

Pursuant to Rule 17(b) of the Commission's Rules of Practice a party may file a petition for Commission review of this initial decision within fifteen days after service thereof on him. This initial decision pursuant to Rule 17(f) shall become the final decision of the Commission as to each party unless he files a petition for review pursuant to Rule 17(b) or the Commission, pursuant to Rule 17(c), determines on its own initiative to review this initial decision as to him. If a party timely files a petition to review or the Commission takes action to review as to a party, this initial decision shall not become final as to that party.^{39/}


Sidney L. Feiler
Hearing Examiner

Washington, D.C.
July 17, 1972

^{39/} All contentions and proposed findings and conclusions have been carefully considered. This initial decision incorporates those which have been accepted and found necessary for incorporation therein.

GLOSSARY OF ABBREVIATIONS AND DEFINITIONS

BACKBONE TRANSMISSION SYSTEM	The principal portion of a transmission system to which other lines connect.
BACK-UP	Reserve generating capacity of a power system.
BASE LOAD	The minimum load over a given period of time.
DISPATCHING	The operating control of generating units, transmission lines, and other facilities including assigning of generator outputs as needed, controlling maintenance and switching operations, and scheduling energy transactions with other utilities.
DISTRIBUTION	The act or process of distributing electric energy.
ECONOMY ENERGY	Energy produced and supplied from a more economical source, substituted for energy that could have been produced by a less economical source.
ENERGY	That which does or is capable of doing work, and is equal to average power multiplied by the interval of time.
ENERGY REQUIREMENTS	The amount of electric energy needed by a utility to serve its customers and to cover system losses.
EXTRA HIGH VOLTAGE (EHV)	Generally used to refer to voltages of 345 kilovolts or higher.
FIRM POWER	Power intended to have assured availability to the customer to meet his load requirements.
FORCED OUTAGE	The shutting down of a generating unit for emergency reasons.
GENERATION, ELECTRIC	The process of transforming other forms of energy into electric energy.
GENERATOR	A machine which converts mechanical energy into electric energy.

INTERCONNECTION	A transmission line joining two or more power systems through which power produced by one can be used by the other. Also--intertie.
KILOVOLT (kV)	One thousand volts.
KILOWATT (kW)	One thousand watts.
KILOWATT-HOUR (kWh)	The amount of electrical energy involved with a one-kilowatt demand over a period of one hour. It is equivalent to 3,413 Btu of heat energy.
LOAD	The amount of power needed to be delivered at a given point on an electric system.
LOAD CENTER	The point in which the loads of a given area are assumed to be concentrated for purposes of analysis.
LOAD FACTOR	The ratio of the average load supplied during a designated period to the peak or maximum load occurring in the same period.
MEGAWATT (MW)	One thousand kilowatts.
MEGAWATT-HOURS (MWh)	One thousand kilowatt-hours.
OUTAGE	The period in which a generating unit, transmission line, or other facility, is out of service.
PEAKING CAPACITY	That part of a system's equipment which is operated only during the hours of highest power demand.
PEAKING LOAD	The greatest amount of all of the power loads on a system, or part thereof, which has occurred at one specified period of time.
PEAKING UNITS	Usually old, low-efficiency steam units, gas turbines, diesels, or pumped storage hydro used primarily during the peak load periods.
POWER (ELECTRIC)	The rate of generation or use of electric energy, usually measured in kilowatts.

POWER POOL	Two or more electric systems which are interconnected and coordinated to a greater or lesser degree to supply, in the most economical manner, electric power for their combined loads.
PUMPED STORAGE	An arrangement whereby electric power is generated during peak load periods by using water previously pumped into a storage reservoir during off-peak periods.
RESERVE GENERATING CAPACITY	Extra capacity maintained to generate power in the event of unusually high demand or a loss or scheduled outage of regular generating capacity.
SERVICE OUTAGE	The shut-down of a generating unit, transmission line or other facility for inspection, maintenance, or repair.
SPINNING RESERVE	Generating units operating at no load or at partial load with excess capacity readily available to support additional load.
STANDBY EQUIPMENT	Generating equipment that is not normally used but is available, through a permanent connection, to replace or supplement the usual source of supply.
SURPLUS POWER	Generating capacity which is not needed on the system at the time it is available.
SYSTEM, ELECTRIC	The physically connected generation, transmission, distribution, and other facilities operated as an integral unit under one control, management, or operating supervision.
TRANSMISSION	The act or process of transporting electric energy in bulk (usually at 69 kVA or higher).
VOLTAGE OF A CIRCUIT	The electric potential difference between conductors or conductors to ground, usually expressed in volts or kilovolts.
WATT	The rate of energy transfer equivalent to one ampere under a pressure of one volt at unity power factor.

WHEELING

Transportation of electricity by a utility over its lines for another utility; also includes the receipt from and delivery to another system of like amounts but not necessarily the same energy.

Source: Power Survey, I--24--1-8