THE FEASIBILITY OF PUBLIC POWER IN MAINE

Report of a Study by the

JOINT STANDING COMMITTEE ON PUBLIC UTILITIES

to the

111th Maine Legislature

January, 1984

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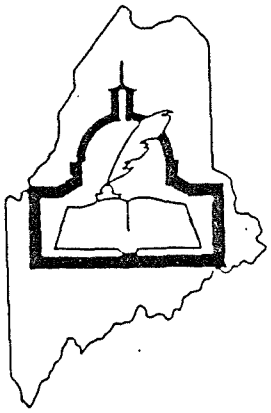

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SUMMARY

ID 923, An Act to Provide a Feasibility Study and a Referendum on Public Power in Aroostook County was introduced in the 111th Legislature and heard by the Joint Standing Committee on Public Utilities. The bill was withdrawn by the sponsor; however, the Committee requested permission, which was granted by the Legislative Council, to study the feasibility of public power in Maine with specific attention to Aroostook County. A subcommittee of five members was established and met several times to develop the information contained in this report, which the full Committee received and transmitted to the Legislature.

This study reviews the present experience with public power in Maine and the relative merits of the public and investor-owned approaches to meeting electric power needs. Information was solicited and received from both public and privately owned utilities as well as the Public Utilities Commission, the Office of Energy Resources, the Public Advocate and the American Public Power Association. Four options were investigated

1. A multi-function public power system covering northeastern Maine;

2. A statewide public generation and transmission agency;

3. Further development of the capabilities of existing public power utilities; and

4. A statewide public agency to carry out conservation and demand management initiatives.

The Subcommittee found no present shortage of electric power exists in Maine, but that projected future growth is expected to require the development of new generating facilities. The subcommittee identified the following methods of reducing future costs: conservation, choice of fuel or mode of generation, closer control of construction programs, cancellation of Seabrook II, and public financing.

The Subcommittee's investigation of a Northeastern Maine Public Power System indicated that, at the present time, there would not appear to be financial advantages to establishing such a system. Public financing can often save 2 to 3% in interest rates, but that advantage probably would not be experienced in this system for two reasons. The existing debt was financed when all interest rates were lower. And, the biggest utility in the area, Maine Public Service is eligible for tax exempt financing under the Maine Public Utility Financing Bank. Therefore, no further study of a Northeastern Maine Public Power System is recommended at this time.

The Subcommittee found that there might be some advantages in public management of construction and operation of new generating facilities, primarily in the nature of financing costs, tax exemptions and the lack of the necessity to ensure a return to shareholders. And there might be cost advantages in introducing an element of competition into the construction of needed generation and transmission facilities.

The Subcommittee recommends the establishment of a Maine Public Power Generation Study Commission to study the creation of a public agency to compete with privately-owned utilities in the development of new electric generating facilities. The Commission is also directed to study methods of electric energy conservation to reduce the need for future development. The Subcommittee further recommends that the Seabrook II nuclear facility be cancelled as soon as possible and that the authority of the Public Utilities Commission to purchase electricity from sources outside the State be expanded to include instate sources. Proposed legislation is included.

ELECTRIC POWER IN MAINE

I. INTRODUCTION

ID 923, AN ACT to Provide a Feasibility Study and a Referendum on Public Power in Aroostook County was introduced in the 111th Legislature and heard by the Joint Standing Committee on Public Utilities. This bill provided for the establishment of a Joint Select Committee on Public Power and for the appropriation of $25,000 to study the "feasibility of establishing a public electric power authority in Aroostook County to generate and sell electricity, to develop alternate energy sources, but not to engage in distribution of electricity for public use." It also provided for a referendum question to be placed on the ballot in 1984 regarding the establishment of a public electric power authority in Aroostook County. ID 923 was withdrawn by the sponsor; however the Committee on Public Utilities requested permission, which was granted by the Legislative Council, to study the feasibility of public power in Maine with specific attention to Aroostook county. A subcommittee of five members was established and met several times to develop the information contained in this report.

II. BACKGROUND

The issue of public vs. private power has existed as long as the electric utility industry itself. As the uses of electric power became apparent, some communities facilitated the growth of private companies by granting franchises to existing enterprises. Other communities saw electric power as an appropriate activity of government and preferred to develop publicly owned and operated utilities. Throughout the twentieth century the battle has been waged to determine which form of energy delivery system makes the most sense. Early on, small municipally owned systems competed with the growth of privately owned public utilities. In the 1930's a change in federal policy resulted in a large increase in public involvement in the development of massive electric power generating facilities especially in the south and west. In Maine, federal involvement has never reached fruition; however, long standing consideration of a federal project in Maine still lingers.

The most recent statewide esperience with the issue of public power in Maine was a hard fought referendum battle in 1973 on whether AN ACT Creating the Power Authority of Maine should become law. The referendum question, originated by Senator Peter Kelley of Caribou was defeated by a 3 to 2 margin in November of that year.

The Power Authority of Maine (PAM) would have established a public agency with the power to establish electric generating and transmission facilities through the use of tax exempt revenue bonds. PAM would have also had the power to acquire property through eminent domain, except for the property of any other electric utility system.

In the past ten years many events have occurred which affect the viability of a proposal such as PAM. Increased energy costs as a result of oil shortages have stimulated a search for lower-cost financing alternatives. Increasing energy conservation and the development of alternative renewable energy sources have drastically reduced the need for electricity that would have been forecast in 1973. Increased environmental

costs and more demanding energy regulatory agencies have made the job of private companies both more complicated and more subject to public scrutiny than in the time period immediately prior to 1973. How these changes affect the public/private power decision is somewhat unclear. The preliminary investigation conducted by this Subcommittee resulted in the findings discussed below.

III. THE STUDY

The purpose of the study was to review the existing experience with public power and study the merits of the public and investor-owned approaches to meeting elective power needs, with special attention to the feasibility of establishing a public electric power authority in Aroostook County.

The resources available for this study were quite small relative to the scope of the problem. Therefore, this report can serve only as an introduction to the question of the advisability of public power and to assist in the determination of whether some public power options merit more detailed study now.

There were four options that seemed representative enough for a first look:

1. Creation of a multi-function public power system covering a major geographic region. This is discussed below under the Model Northeastern Maine Public Power System.

2. Creation of a statewide public generation and transmission agency. This is outlined below under Maine Electric Generation and Conservation Agency.

3. Further development of the capabilities of the existing public power utilities. This is the purpose of the Dirigo Electric Cooperative and the Maine Municipal and Rural Electric Cooperative Association. Map 1 shows the existing consumer owned (public power) systems in Maine.

4. Creation of a statewide public agency to carry out conservation and demand management initiatives. The American Public Power Association is showing increasing interest in the demand side. This is duscussed along with option (2).

The Subcommittee was authorized by the Legislative Council to meet on three occasions. One meeting served as an introduction to the subject and an opportunity for the Subcommittee to receive general information regarding the nature of the electric power system in Maine and the background of public power. Presentations were made by Subcommittee staff, the Public Utilities Commission, the Office of Energy Resources, the Public Advocate and Gordon Weil, general manager of Dirigo Electric Cooperative, Inc., an organization representing most of the municipal and cooperative electric utilities in Maine. Staff was directed to investigate and develop a model for a public power agency in Northeastern Maine. At the second meeting the staff report regarding the above options was presented and comments were received from Central Maine Power Company, Bangor Hydro Electric Company,

Maine Public Service Company, Dirigo Electric Cooperative and the same government agencies mentioned previously. In addition a presentation was made by Laurence Hobart, Deputy Executive Director, of the American Public Power Association of Washington, D.C..

The Subcommittee decided that the available information indicated that a public power agency restricted to Northeastern Maine was not economically advisable at the present time, but that there might be some potential benefits to the other options. Section IV contains the Subcommittee's recommendations which were presented to the full Committee when the Subcommittee met for the third time.

IV. ELECTRIC POWER NEEDS & OPPORTUNITIES

The Committee investigated the availability of electric power in Maine and in the Northeast region of the State to determine if existing utilities have been able to provide sufficient power to their areas. The Committee found that there is no present shortage of electric power in Maine or in any particular region. It would appear that the problem that exists in the Northeastern region is, in part, the result of overinvestment in electric capacity on the part of some utilities in the Seabrook Nuclear Power project managed by Public Service Company of New Hampshire. The cost of Seabrook power will be very high compared to the present average cost of electric power. When Seabrook I power becomes available in 1986 or 1987 and utilities are able to account for those costs in their rates, it is certain that rates for utilities that have invested heavily in Seabrook will rise dramatically. In addition about 40% of our power comes from oil and the price of oil has been escalating rapidly. Therefore, cost, rather than availability, is the concern which is causing the most difficulty at this time.

Although availability of electric power is not a present concern, it is projected that additional generating capacity may be required in the medium and long term future. The amount needed from the utilities will depend on the growth in electricity demand and the offsetting effects of increased conservation, cogeneration, and small power production in the state.

The peak demand for electricity in Maine in the winter of 1982 was 1560 Megawatts. The electric generating capacity that was available to meet that need totalled 2067 Megawatts, including 100 Megawatts from Canada. This provided a reserve margin of 33%, which was more than sufficient. NEPOOL's peak demand during the 1982 winter was 15,619 MW, while the capacity available to New England was 21,631 MW This provided a reserve margin throughout New England of 38%. Twenty percent is considered adequate by the industry.

The Office of Energy Resources in its Comprehensive Energy Resources Plan, September 1983, has projected the future need for electric energy to the year 2000. The OER report concluded that by the year 2000, the Maine's electric energy needs will rise to 13,250 Gigawatt* hours (Gwh), as compared to 8,700 Gwh actually used in 1980. This represents a rise in generating capacity from 1,660 Megawatts (MW) in 1980 to 2520 MW in the year 2000.

However, commercial and residential electricity rates increased by 74% between 1978 and 1982, due particularly to large increases in the price of oil and interest rates as well as general inflation. Industrial rates have wwincreased even more (100% since 1978).

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* A Megawatt is a unit of electrical generating capacity equal to 1,000 kilowatts, normally used to measure the size of a power plant. A Gigawatt-hour is a unit of electrical energy equal to 1,000,000 kilowatt-hours or 1000 Megawatt-hours, normally used to measure amount of electricity generated or used in a period of time. A one Megawatt generator running for 1000 hours generates 1000 Megawatt-hours or 1 Gigawatt hour. The same amount of energy would be generated by a 10 Megawatt generator operating for 100 hours etc.. There are 8760 hours in a year. A typical base load power plant might run 5250 hours (60% of the time). In that case, a plant with 1 Megawatt capacity would deliver 5250 Megawatt hours or 5.25 Gigawatt hours of energy during the year.

This load growth will require additional sources of power with about 860 MW capacity. In addition, there is a national policy to reduce dependence on oil (sometimes called "oil back out") because of oil's insecurity and high price. OER projects a reduction of Maine's oil dependence from 45% to 20% of the energy mix for electric generation by the year 2000. That would require replacement energy of 1400 Gigawatt hours and capacity of 270 MW more. Together this means that 1130 MW of new capacity will be needed by the year 2000. Where will it come from?

One possible scenario is presented in the OER forecast, including:

PROJECTED NEW ELECTRIC CAPACITY by 2000 (MAINE)

	Energy (Gwh)	Capacity (MW)
Existing hydro additions	247	47
New hydro	1500	285
Seabrook I	585	111
Millstone III	151	29
Mason Coal conversion	525	100
New Coal plant	1576	300
Canadian purchases	1265	200
Cogeneration purchases	100	145

What will be the cost of electricity from these new facilities? In a word - high. Electricity from the 19 Megawatt Brunswick Topsham dam (CMP) which went on line in 1982-83 costs 10 cents kwh and electricity from Seabrook I in the mid-1980's is expected to cost 20 cents/kwh, compared with present residential rates of 7 cents and a wholesale cost from Maine Yankee of about 2 cents/kwh. Canadian purchase contracts are frequently tied to alternatives - typically 80% of the cost of electricity from oil. Under federal policy as represented by the Public Utilities Regulatory Policies Act of 1978 (PURPA), small hydro & cogeneration sources are entitled to compensation equal to full avoided operating cost, that is, the cost of electricity from oil. The rate of compensation for cogeneration is set by the Public Utilities Commission. The current short term rate is 5 cents per Kwh. A long term rate of approximately 9.3 cents will soon be established.

What can be done about the cost? The most important step is conservation, to reduce the need for additional capacity. Studies have shown that a kilowatt of conservation costs far less (1/5) than a kilowatt of generation. Conservation has already taken place. Annual growth in electricity consumption dropped from 6.5% per year in the 1960-78 period to 1.1% per year in 1978-82. And, future growth is projected to be modest: about 2.3% per year.

Another step is careful choice of the mode of generation: here the questions of cost, security of supply and environmental impact must all be balanced. The OER forecast would have a mix of: 23% hydro; 23% nuclear; 20% oil; 15% coal; 6% cogeneration; and 9% Canadian purchases. Others may suggest different choices, and PUC must weigh these questions when any proposed facility is reviewed for licensing. In addition, present law provides some tools to encourage diversity of supply: The Rivers Policy (12 MRSA §401) identifies certain rivers for protection, leaving others for

hydro development. The Small Power Production Facilities Act encourages cogenerators and small power producers (less than 80 Megawatts) and allows PUC to set their rates up to full avoided cost. And, the law authorizes the State (through the PUC) to purchase and resell electric energy generated outside the State (35 MRSA §2328). It might be useful to extend this concept to purchase and resale of power generated within the State. (See page 12).

Another step is the avoidance of building new facilities before they are needed to meet load growth. For example, in 1981, the PUC did not approve CMP's application to build a 600 MW coal-fired plant at Sears Island because the agency did not believe the capacity was needed at that time. And, in 1982, Boston Edison cancelled the Pilgrim II nuclear power plant which was in the construction process. Similar steps are being taken nationwide to adjust construction programs devised in the '60's to the realities of decreased load growth in the '80's. The newly enacted energy forecasting (5 MRSA §5005) and PUC prior approval (35 MRSA §13-B) laws are assisting in this process in Maine.

One further step that could be taken to reduce the future increase in the cost of electric power through the avoidance of new construction would be the cancellation of the Seabrook II nuclear power facility. This facility, along with Seabrook I was planned by Public Service Company of New Hampshire at a time when it appeared that the need for electric power would be increasing rapidly. Maine utilites invested heavily in Seabrook in order to meet perceived future demand. Utilities investing in Seabrook were required to invest in both Seabrook I and Seabrook II. Although Seabrook I is near completion and scheduled to begin producing power in 1986, Seabrook II is now postponed with no date on line scheduled. Enormous cost overruns have brought into question the economic advisability of large nuclear projects and have jeopardized the financial condition of those companies that have invested heavily in them. Several public utility companies that invested heavily in Seabrook have been ordered by their regulatory agencies to sell a portion of their investment in that facility in order to improve their financial condition. As yet no buyers have come forth. The evidence suggests that cancellation of Seabrook II would be beneficial, relieving the utilities of a heavy present financial burden, and reducing the coming rate shock when Seabrook costs are reflected in rates.

Finally, a very important step could be public financing of new generation facilities. This can reduce interest rates by 2 to 3% on the bonds needed to finance those facilties. For example, this concept could be applied to some of the 285 MW of projected hydro development in the Comprehensive Hydro Power Plan. Additional savings might be available through sales and income tax exemptions as a public agency. (See section V, subsection 2.)

Public financing is already used by the 13 existing consumer owned electric systems, but these utilities are small in the Statewide picture. They could band together on a large project under the Maine Municipal & Rural Electrification Cooperative Agency Act (MMRECA), but have not done so. It is possible that $50,000 seed money would result in more action from that agency.

Another route to public financing is the Maine Public Utility Financing Bank which can make the benefits of public bond issues available to investor owned utilities serving 2 counties or less. Maine Public Service Co. has received a December 5, 1983 ruling from the Internal Revenue Service which confirms their eligibility to take advantage of this financing for certain proposed local additions and improvements.

A new approach would be to establish a Maine State Power Agency (MSPA), with authorization to construct and operate generation and transmission (and possibly conservation) facilities and sell the electricity to the electric utilities for distribution to end users. This could introduce the benefits of competition into electric generation, while leaving in place the current monopoly of the electric distribution system. The Subcommittee recommends detailed study of this option.

V. PUBLIC POWER OPTIONS

1. A Northeastern Maine Public Power System

In this portion of this report, a model is constructed which is intended to represent the way a regional public power agency in Maine would look. (See map page 25) The northeastern region of the state was chosen because the order establishing this study indicated that specific attention be given to Aroostook County. During the course of research, it became apparent that it would be reasonable to extend the coverage of the model to eastern areas of the state which are currently covered by municipal or cooperative electrical utilities. In addition, it seemed advisable to include some of the fringe areas of the Bangor Hydro Electric service which may not be economical to BHE and which might be logically transferred to a public power entity. The model could be established by the Legislature as a district with the ability to perform essentially the same functions as currently belong to public utilities in Maine. Alternatively, it could be formed as a cooperative, or as a State agency.

The geographical boundaries of the model were drawn somewhat arbitrarily, mostly by following the boundaries of the regions of currently functioning utilities. When incorporating areas from the BHE region, lines were drawn with the intention of severing municipalities or other areas which are so far from the core of the BHE system that service by another utility might be more logical and economical if another entity was prepared to provide service there. Neither BHE nor the other existing utilities were consulted in defining the model, because of its purely hypothetical nature.

The region to be included in the Northeastern Maine Public Power System (NEMPPS) included the areas currently served by

* Maine Public Service Company (investor owned)
* Van Buren Light and Power (municipal)
* Houlton Water Company (municipal)
* Eastern Maine Electric Cooperative (cooperative)
* Lubec Water and Electric District (municipal)

* Union River Electric Cooperative (cooperative)

* portions of Bangor Hydro Electric Company (investor owned) in Washington County and Penobscot County roughly north and east of Lincoln.

The operation of this region as a public power system would be possible in at least two modes. One would create a public entity which would act much like a holding company and operate each of the areas in the system as a separate unit. Cost savings would be derived from the tax exempt status of the entity and its ability to develop new sources of power in a way that takes advantage of economies of scale. Rates could be determined for each area or costs could be combined to develop a region wide rate. The latter choice would lead to lower rates for those areas in the system which currently have higher than average rates (EMEC, Union River, Lubec) but might also bring higher rates for those areas in the system which currently have lower-than-average rates (Houlton, Van Buren, Maine Public Service).

A second mode, complete integration of the region, would require connecting the Maine Public Service transmission area to the southern and eastern areas of the state. Currently MPS is connected to the rest of Maine only through New Brunswick. In order for electricity to be transmitted from other locations in Maine to the MPS lines, the electricity must travel through the Maine Electric Power Company line to New Brunswick, with the attendant wheeling charges, then back into Maine. Maine Public Service has, in the past, investigated the cost of connecting to the MEPCO line in Maine to avoid the necessity of electricity travelling through New Brunswick. The connection has never been made because the cost was too high to make the investment appear worthwhile. A 1980 evaluation of the economic feasibility of MPS joining NEPOOL and connecting to the MEPCO line would indicate that MPS fares well in its relationship with New Brunswick, and that there is little reason to believe that the relationship will not continue favorably. However, more recently, a utility task force has been established to study the technical and economic feasibility of an additional high or medium voltage interconnection between MPS and southern Maine in order to take advantage of 60 megawatts of potential congeneration in MPS territory. (ref. from D. Moskowitz, Director of Technical Analysis, PUC Appendix B.).

One of the advantages usually noted for public power is the availability of lower cost financing. In order to get a feel for the possibilities in the NEMPPS region a preliminary financial analysis was done for the area served by Maine Public Service, comparing a public and private approach.

The approach selected for acquisition of MePS was purchase of 100% of the stock at book value. Then, as long term debt matures it would be replaced by tax-exempt bonds. The details were worked out by Steven Buchsbaum, economist for the Office of Energy Resources.

SELECTED FINANCIAL DATA NEMPPS REGION
(1982) $ in Millions

	Net Plant in Service	Construction CWIP	Operating Revenue	Net Income
Maine P. S.	30.6	41.7	31.0	4.7
EMEC	9.9	.12	5.2	(.5)
Houlton Water Co.	1.7	.02	3.1	(.1)
Van Buren L&P	.3	---	.9	(.05)
Union River Coop.	.7	.02	.3	.02
Lubec W&E Dist.	.3	---	.6	(.001)
part of BHE(20%)	13.3	10.6	16.1	1.3
Total Consolidated	56.8	52.4	57.2	5.4

(i) Present Operations

Maine Public Service operating revenues in 1982 were $31 million. The average residential rate was 7.1cent/kwh. If the NEMPPS purchased the stock and then refinanced the long-term debt with tax exempt bonds as existing debt reaches maturity, the following changes could be expected.

- Savings in financing $40 million long-term debt due to issuing tax exempt bonds vs. present taxable bonds at 2 1/2% differential (after present debt is rolled over in 2008)	$1 million/year
- Savings in dividends which would not have to be paid (700,000 shares at $2.12/share in 1982)	$1.5 million/year
- Savings in property taxes not paid	$1 million/year
- Savings (loss) in state income taxes not paid	($141 thousand tax credit)
- Savings (loss) in federal income taxes not paid	($132 thousand tax credit)
- Added cost of financing acquisition (700,000 shares at book price of $33/share, well above the market of $21. $23 million..borrowed at 11% tax exempt bond.	($2.5 million/year)
- Added cost of building up operating reserves to finance Seabrook	(unknown)
NET DECREASE in revenue requirements	$0.7 million/year or less

This is spread over 500 million kwh per year power sales in the region. Thus, at best a saving of 0.2 cent/kwh would occur for the consumer.

In addition, it should be noted that under the Maine Public Utility Financing Bank Act (35 MRSA c. 10, enacted in 1981) that Bank may issue tax exempt bonds and loan for money to public utilities, thereby making the benefits of tax exempt financing available to them. This provision is restricted by federal IRS regulations to utilities serving no more than 2 counties, but as mentioned previously, Maine Public Service would qualify.

Finally, it is fair to note that the $1 million savings in property taxes under a public power district would be savings to the ratepayers, but would probably result in an equal increase in the property taxes of the property owners in the district.

Based on this preliminary study, it is the opinion of the Subcommittee that this option does not presently deserve further consideration.

2. Statewide Public Generation

The preliminary investigation of the Subcommittee indicated that there might be some advantages in public management of construction and operation of new generating facilities. Public financing of new facilities could provide a 2 to 3% advantage in debt costs. Additional savings for ratepayers would be available because a public agency would not be required to provide a return to shareholders.

This system would operate selected projects statewide, but would not engage in retailing of electricity. The simplest approach to financing would be through tax-exempt revenue bonds. These could be used to finance new construction or to acquire existing facilities where there was a willing seller and the economics was favorable for public acquisition.

Some examples of proposed projects that could be considered for this purpose are:

- Madison Dam (existing dam) 7 MWe
- Lewiston Canal (upgrade existing generation) 24 MWe
- Basin Mills (new site) 30 MWe
- Castle Hill (new site) 18 MWe
- Worumbo (upgrade existing generation) 14 MWe
- Gordon Falls (new dam) 20 MWe
- A major cogeneration facility
- A major cogeneration/district treating plant
- A major Canadian power import contract
- Half Moon Cove (tidal power)
- A major conservation effort to "back out" some oil-generated electricity
- Mason Station (existing oil) possibly convert to coal 147 MWE
- Wyman 4 (existing oil) acquire and improve efficiency 619 MWe
- A portion of Seabrook(nuclear, under construction)

Gains from tax exempt status as a public agency are somewhat speculative. Taxes on utilities take many forms, primarily income taxes, sales taxes and property taxes. The savings comes from the exemption of public

entities from most forms of taxation.

Income tax savings could take two forms. Income from the bonds of a publicly owned utility would be exempt from federal income tax. Since this results primarily in a savings in financing costs, this aspect was discussed in that section. In addition, the income of a publicly owned utility would not be subject to federal or state income tax. Therefore, there would not be any income tax cost to pass on to the ratepayers through higher rates. The amount of income tax savings that would result from the income tax exemption would depend upon the taxable income of the utility, if privately owned. Private utilities which have been able to arrange their affairs in order to avoid federal taxable income, may already be paying no income tax at the state or federal level.

Sales taxes are paid by private utilities on many, though not all of their purchases. Several types of purchases are currently exempt, even if the utility is privately owned. These include new machinery and equipment and water and air pollution facilities. Major savings could result from utilities which purchase fossil fuel to generate electricity. These sales, currently subject to a state sales tax, would be exempt if purchased by a publicly owned utility.

Most publicly-owned utilities make payments in lieu of property taxes to the communities in which their property is located; however, this does not necessarily have to be the case. Exemption of a publicly owned utility from property tax would result in a savings to ratepayers. The savings to ratepayers can be estimated by evaluating the amount of property taxes paid by the utilities in the area that would become public. In addition, any new property acquired by a publicly owned utility would be exempt.

Other costs frequently identified as taxes might provide the opportunity for some savings for a publicly owned utility. Employer unemployment taxes as well as workers compensation costs can be self-insured by a public entity. It is unclear if this flexibility would result in any savings. Further investigation, beyond the resources available to this study, would be necessary to identify any potential savings.

The full impact of tax exemptions for a publicly owned utility cannot be fairly represented without considering that the tax exemption results in a shift of the tax away from ratepayers to some other group. Property taxes will most likely be shifted to other property tax payers in the municipality, or payments in lieu of taxes will be made. Income and sales taxes will either be foregone or shifted to other taxpayers, or other forms of taxation, nationwide for federal taxes, or statewide for state taxes.

The Subcommittee believes that this form of public power deserves further investigation. The Subcommittee envisions a public agency with the authority to construct and operate new facilities and which would compete with privately owned utilities for the right to develop future generating facilities. Application would be made to the PUC for permission to develop such facilities in the same manner that privately-owned utilities currently apply. The PUC would consider which plan contained the lowest cost, based upon realistic assumptions, and the best management capacity. This method would provide competition in what has previously been a private monopoly arena. It would encourage privately-owned utilities to submit lower cost

proposals. Review by the Public Utilities Commission would ensure that proposals are based upon realistic assumptions. While it is likely that a public agency would be able to construct a generating facility at a lower cost than a privately owned utility, review by the PUC would provide an opportunity for a privately owned utility to demonstrate that it would be able to develop the facility at a lower cost or with better management ability. The public agency should be a separate independent agency under the executive department, not connected with the Public Utilities Commission or the Public Advocate's office.

The Committee recommends that this form of public power agency receive further investigation.

Another method of extending State involvement in the field of electric energy would be to extend the authority of the PUC, with the approval of the Governor, to purchase power from sources outside of the State for resale to include the authority to make instate purchases. This is particularly important in encouraging the development of cogeneration in areas where the purchase price of such electricity would be low because the utility such as the MPS service area has little need for additional power and where avoided costs would be low. This recommendation would permit the PUC to purchase the power and sell it in areas where it is more needed.

3. Conservation

The Committee received considerable information from several sources, and especially from Laurence Hobart of the APPA, that conservation and load management activities conducted by utilities can have a decisive effect upon cost savings through avoiding the need for construction of new and expensive generating facilities. Conservation programs could consist of providing free or shared cost insulation, weatherstripping, thermostat controls, etc., to consumers, or load managment activities to reduce peak demand. Some conservation efforts have been started by Maine's privately-owned utilities, but, as yet, they have not experienced a great deal of participation. Conservation efforts by a public agency might be better organized to attract public attention and receptivity.

The Subcommittee believes that this alternative deserves further investigation.

VI. RECOMMENDATIONS

(1) Establishment of a public power system to replace the existing system in Aroostook and Washington Counties would not be economically advantageous at this time. No further study is recommended.

(2) Work on the Seabrook II facility should be stopped as soon as possible to avoid the necessity of any additional costs being passed along to future consumers of electricity.

(3) Establishment of a State Power Agency with authority to compete for construction and operation of new generation and transmission facilities in the State, or elsewhere for import, could reduce costs because of the advantages of public financing. Further study of this option is recommended.

(4) Opportunities exist for cost savings through demand side measures including conservation and demand management. A demonstration program by an existing consumer owned utility with fully amortized funding should be investigated.

(5) The authority granted to the Public Utilities Commission under 35 MRSA §2328 to purchase electricity from sources outside the State should be expanded to include in-State sources.

SECOND REGULAR SESSION

ONE HUNDRED AND ELEVENTH LEGISLATURE

Legislative Document No.

H.P. House of Representatives,

EDWIN H. PERT, Clerk

STATE OF MAINE

IN THE YEAR OF OUR LORD
NINETEEN HUNDRED AND EIGHTY-FOUR

AN ACT to Promote Competition in the Electric Power Industry.

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 35 MRSA §2328, as enacted by PL 1981, c. 482, is amended to read:

§2328. Purchase and resale of electric energy or capacity by Public Utilities Commission

The Public Utilities Commission, when authorized by the Governor, shall represent the State in negotiating, contracting for and purchasing electric energy whether generated inside or outside of the State, and in reselling the purchased energy to electric companies serving this State, as defined in chapter 1, when the commission determines that the purchases and resales will serve the energy needs of the State in a manner consistent with the public interest. As used

in this section, the term electrical energy shall include capacity. All resales of electric energy under this section shall be on a nonprofit basis without preference or discrimination, and may include, subject to the approval of the Governor, costs incurred by the commission in its negotiating, contracting and purchasing activities under this section. In the case where no purchase-sale agreement is made, the Governor shall be responsible for proposing a method of paying the costs he has approved in conjunction with the negotiations. The commission may resell purchased energy or capacity under this section to electric utilities operating outside of the State if the resale is reasonably incidental to the resale of power within the State. In addition, the commission may contract for the transmission of energy purchased under this section to the place of resale, and shall have all implied and incidental powers which are reasonably necessary and proper to enable it to carry out the purpose of this section. No electric company may refuse to transmit energy purchased under this section via its facilities at reasonable rates if it has capability to transmit the energy.

Sec. 2. Study authorized. There is established a Maine Public Power Generation Study Commission. The commission shall consist of 11 members as follows: One representative of the Public Utilities Commission; one representative of the Office of Energy Resources; one representative of the Office of Public Advocate; one representative of a publicly-owned utility; one representative of a privately-owned utility; one expert in the area of public utility financing; one expert in the field of electric generating capacity planning or construction; one member of the Senate; one member of the House of Representatives; and 2 consumers of electrical energy. The member of the Senate shall be appointed by the President of the Senate. The member of the House of Representatives shall be appointed by the Speaker of the House. All other members shall be appointed by the Governor.

Sec. 3. Powers. The commission shall employ consultants to evaluate the advantages and disadvantages of alternative methods of providing for planning, construction and operation of new electric gen-

eration and transmission facilities. The commission shall consider the creation of a public agency which may compete with private utilities in those activities. The commission shall also investigate methods of electric energy conservation which reduces the need for future generating capacity, including a demonstration program by an existing consumer-owned utility with fully amortized funding.

Sec. 4. Report. The commission shall report its recommendations and implementing legislation to the First Regular Session of the 112th Legislature by January 1, 1985.

Sec. 5. Compensation. The members of the commission, other than state employees, shall be entitled to compensation for their reasonable expenses in carrying out the duties of the commission.

Sec. 6. Appropriation. The following funds are appropriated from the General Fund to carry out the purposes of this Act.

	1984-85
MAINE PUBLIC POWER GENERATION STUDY COMMISSION	
All Other	$50,000

STATEMENT OF FACT

This bill expands the authority of the Public Utilities Commission to purchase electricity from out-of-state sources to include in-state sources. It also provides for a study of the feasibility of establishing a public power agency with authorization to plan, construct and operate generation, and possibly conservation, facilities and sell the electricity to the electric utilities for distribution to end users. Such an agency promotes competition for the right to construct new generating facilities as they are needed. The result should be cost savings for the people of this State.

5467011184

APPENDIX A

STATE OF MAINE

Inter-Departmental Memorandum Date November 22, 1983

To Haven Whiteside, Julie Jones Dept. Legislative Asst.

From Steven Buchsbaum Dept. OER

Subject Acquisition Cost and Financing of NEMPPD

In response to your memo of November 3rd, I have looked into the acquisition cost and financing of the model NEMPDD you proposed. This memo summarizes what I have learned about various financing options for the acquisition of the assets of the Maine Public Service Company. This is a complex issue and one that deserves more financial expertise and experience than I can bring to bear on it. I suggest that a more detailed investigation be undertaken by financial consultants.

There are several strategies for acquiring the existing utility assets. The NEMPPD could purchase the total assets (debt and equity) or the net assets (equity). Total assets of the Company are approximately $89 million including $42 million of construction work in progress (as of 12/31/82). According to the Wall Street financial people I have talked to, the purchase of the equity appears to be preferable to purchase of total assets because of the low cost of the embedded debt (some as low as 3.35%). This is one approach I have chosen to analyze. Under this approach NEMPPD would purchase the equity portion of the assets, retain the existing debt and issue new debt required to meet future financial requirements.

There are currently approximately 700,000 shares of common stock. The stock price on 11/15 was $26.89 per share. Acquisition of the common stock at the current market price would cost approximately $19 million. It is uncertain what the market reaction to an acquisition would be. From what I have learned, it appears that a tender offer at book value is a reasonable method for estimating the purchase price of the net assets. The book value of these shares is approximately $35 per share or a total of $25 million. I believe this is a reasonable estimate of the cost of acquiring the net assets.

The acquisition of these assets would have to be financed through the sale of bonds. I have investigated several possibilities. The Rural Electrification Administration (REA) has financed much of the rural electric utility development with low cost (2%) loans. According to Milton Wright, Chief, Borrowers Management Branch - Electric Loans at the REA, the REA is prohibited from financing acquisitions, so this low cost source of financing is unavailable. He did suggest that the acquisition could be financed through the National Rural Utilities Cooperative Finance Corporation. The cost of this money is

currently about 11% -- approximately the same cost as tax exempt bonds of the same quality on Wall Street. This is a reasonable estimate for the cost of money needed to finance the purchase.

The cost of the debt issued by NEMPPD would probably be 2-3 percentage points below the cost of comparable corporate debt because of its tax exempt status. The lower cost of debt for the public entity would save ratepayers money as the existing debt is retired. The total existing long term debt is $40 million. If all of this were eventually re-financed at rates 2% lower than taxable bonds, the savings would be approximately $800,000 per year. All of the existing debt will mature by 2004.

This calculation covers the debt side of the existing capitalization. Purchase of the equity at book value would cost $25 million, or $2.75 million per year with 11% bonds. Savings on dividends would be $1.64 million per year (the dividend is presently $2.32 per share). Present equity earnings not returned to shareholders in the form of dividends are retained by the company and act as an internal source of financing. In 1982, earnings per share of common stock were $5.95 and retained earnings of $3.63 per share provided approximately 10% of the funds needed for the Company's participation in Seabrook 1 & 2. The remainder is financed through new debt. The coverage ratio (earnings before tax and interest divided by interest payments) is currently very low (1.86) and it appears likely that the public entity would be required to increase its operating margin in order to improve its financial condition. This means that the public entity would not be able to reduce revenue requirements after the acquisition. It would probably have to build up its operating reserves. The commitments to Seabrook construction present a formidable problem for the region. Given the small population base, the commitment to Seabrook is very large. The region's share of Seabrook construction work in progress is currently approximately $50 million. This is larger than the entire existing net plant in service of $39 million. Future construction requirements could bring the total investment in Seabrook to more than $100 million, or three times the existing assets of the company. This commitment to future construction costs would probably make the public entity a relatively unattractive investment in the eyes of Wall Street.

It is possible that financing of the public entity would require ratepayers to begin paying for construction work in progress in order to increase earnings. If this were to happen, present ratepayers would pay more, although the ultimate cost would be less.

There is another option that is possible. That is, the public entity could purchase the existing assets and leave the construction work in progress with MPS. This would bankrupt MPS and eliminate its commitment to Seabrook. This strategy would put the public utility in a very good position - owning the existing operating plant without the future construction obligation to Seabrook. This type of public

buy-out would probably have adverse effects on future financing by the state's other investor owned utilties.

To summarize, it appears that a public entity would be unable to reduce financing costs in the short term. In the long term, lower debt costs would tend to reduce revenue requirements, everything else being equal. If formation of a public entity was predicated upon paying for construction work in progress in order to satisfy financial requirements, this could raise rates in the short term.

The forgoing discussion has focused on purchasing the assets of Maine Public Service Company. Market values and book values have been used to estimate some financial impacts. I am told that normally acquisitions of this type would not be undertaken in the marketplace, through purchase of shares. Acquisition in the market would be preferable for a tax paying corporation due to tax considerations, however, if the purchaser is tax exempt it would probably be preferable to purchase the assets through agreement with the Company or condemnation, rather than purchase of the shares and bonds on the open market.

I hope this information is useful. I have attached a copy of some financial information which should be useful in thinking about the establishment of a Maine Public Electrical Generation, Transmission and Conservation District.

Enc.

cc: Connie Irland
Paul Fritzsche
David Moskovitz
John Kerry

STATE OF MAINE

APPENDIX B

Inter-Departmental Memorandum Date November 17, 1983

To Haven Whiteside & Julie Jones, Leg. Assistants Dept. Legislative Assistant's Office

From David Moskovitz, Dir., Technical Analysis Dept. Public Utilities Commission

Subject Public Power Study

You have asked me to comment on the alternative electrical connections between Maine Public Service Company and the remainder of Maine as opposed to its existing interconnection with New Brunswick Electric Power Commission.

Maine Public Service is not a member of the New England Power Pool (NEPOOL), nevertheless, it enjoys some of the benefits of membership through its ability to participate in the ownership of large plants located outside of its service territory. In particular, Maine Public Service Company owns a portion of Maine Yankee, Wyman Unit 4, and the Seabrook units in New Hampshire. To this extent, partial ownership in "POOL" planned units, Maine Public Service already benefits from a New England power grid. Maine Public Service Company, however, does not enjoy a direct economy interchange agreement with the pool, although it is able to benefit indirectly through economy transactions between the Brunswick Electric Power Commission and NEPOOL.

Electrically, Maine Public Service Company is a part of the Canadian Electric Power Grid. Maine Public Service Company does not have a direct closed connection to Bangor Hydro or Central Maine Power Company. Instead, energy and capacity transactions between Maine Public Service Company and other utilities in New England are accomplished through the 345KV MEPCO line by wheeling through the New Brunswick Electric Power Commission system.

Maine Public Service and New Brunswick Electric Power Commission have entered into a long term economy interchange agreement which provides Maine Public Service Company with the same type of benefits now realized by other New England Electric Companies through the operation of the "POOL". The only significant difference being that the overall lower cost of electricity in New Brunswick System means that the benefits to Maine Public Service Company are greater than they would be if Maine Public Service were instead interconnected on a economy basis with other New England Electric power companies.

Although we have not performed a detailed analysis of the comparative economics of a NEPOOL versus New Brunswick interconnection, I expect that the existing benefits of interconnection with New Brunswick Electric Power Commission outweigh the possible benefits of NEPOOL participation. I also expect that this condition will continue into the forseeable future.

DM/jmd
cc: Paul Fritzsche
Connie Irland
Steve Buchsbaum
Peter Bradford

APPENDIX C

Source: PUC

COMPARATIVE BOND FINANCING COSTS

(1970-1983)

	Treasury Bonds 10 year	Corporate Bonds Aaa	High Grade Municipal Bonds	Savings of Tax Exempt Versus Corp. Bonds
1970	7.35%	8.04%	6.51%	19.0%
1	6.16	7.39	5.70	22.9
2	6.21	7.21	5.27	26.9
3	6.84	7.44	5.18	30.4
4	7.56	8.57	6.09	28.9
5	7.99	8.83	6.89	22.0
6	7.61	8.43	6.49	23.0
7	7.42	8.02	5.56	30.7
8	8.41	8.73	5.90	32.4
9	9.44	9.63	6.39	33.6
1980	11.46	11.94	8.51	28.7
1	13.91	14.17	11.23	20.7
2	13.00	13.79	11.57	16.1
9/28/83	11.34	11.88	9.52	19.9

MAINE ELECTRIC UTILITIES

	1982 Meters	1982 Sales (KWH)
Bangor Hydro-Electric Company (G) (IOU) Thomas A. Greenquist, President 33 State Street Bangor, Maine 04401 Tel: 945-5621	91,639	1,269,768,241
Central Maine Power Company (G) (IOU) Charles E. Monty, President Edison Drive Augusta, Maine 04336 Tel: 623-3521	398,278	6,662,138,585
Eastern Maine Electric Co-operative, Inc. (R) James L. Dean, III, Manager P. O. Box 425 Calais, Maine 04619 Tel: 454-7555	10,107	61,356,325
Fox Islands Electric Co-operative, Inc. (R) Nathaniel James, Manager Vinalhaven, Maine 04863 Tel: 863-4636	1,278	5,078,761
Houlton Water Company (Electric Dept.) (M) Paul W. Coleman, General Superintendent Houlton, Maine 04730 Tel: 531-2259	4,704	58,440,330
Isle au Haut Electric Power Company (Co-op.) (G) Parker Waite, President Isle au Haut, Maine 04645 To Relay Message - Leona Aldrich Tel: 367-2648	67	60,177
Kennebunk Light & Power District (D) (G) Philip R. Davis, General Manager 36 Water Street Kennebunk, Maine 04043 Tel: 985-3311 or 3321	3,212	49,562,782
Lubec Water & Electric District (D) Robert B. Miller, General Manager Lubec, Maine 04652 Tel: 733-5583	1,153	6,867,554
Madison Electric Works Department (M) Norman Sawyer, Superintendent 26 Weston Avenue Madison, Maine 04950 Tel: 696-4401	1,973	18,736,707
Maine Electric Power Company (T) (IOU) Charles E. Monty, President Edison Drive Augusta, Maine 04336 Tel: 623-3521		

Maine Public Service Company (G) (IOU) G. Melvin Hovey, President P. O. Box 1209 Presque Isle, Maine 04769 Tel: 768-5811		31,971	539,818,000
Maine Yankee Atomic Power Company (WG) (IOU) Charles E. Monty, President Edison Drive Augusta, Maine 04336 Tel: 623-3521			
Matinicus Plantation Electric Company (M) (G) Elizabeth Long Burr Matinicus, Maine 04851 Tel: 366-3870		98	138,995
Stonington & Deer Isle Power Company (IOU) Robert C. Haskell, Manager Sunset, Maine 04683 Tel: 348-6032		2,030	8,424,763
Swans Island Electric Co-operative, Inc. (R) David Honey, Manager P. O. Box 8 Minturn, Maine 04659 Tel: 526-4336		367	1,263,580
Union River Electric Co-operative, Inc. (R) Gordon Treadwell, Manager Aurora, Maine 04408 Tel: 584-3200		1,511	4,282,476
Van Buren Light & Power District (M) Louis F. Parent, Manager Van Buren, Maine 04785 Tel: 868-3321		1,445	15,577,727
	Totals	549,833	8,701,515,003

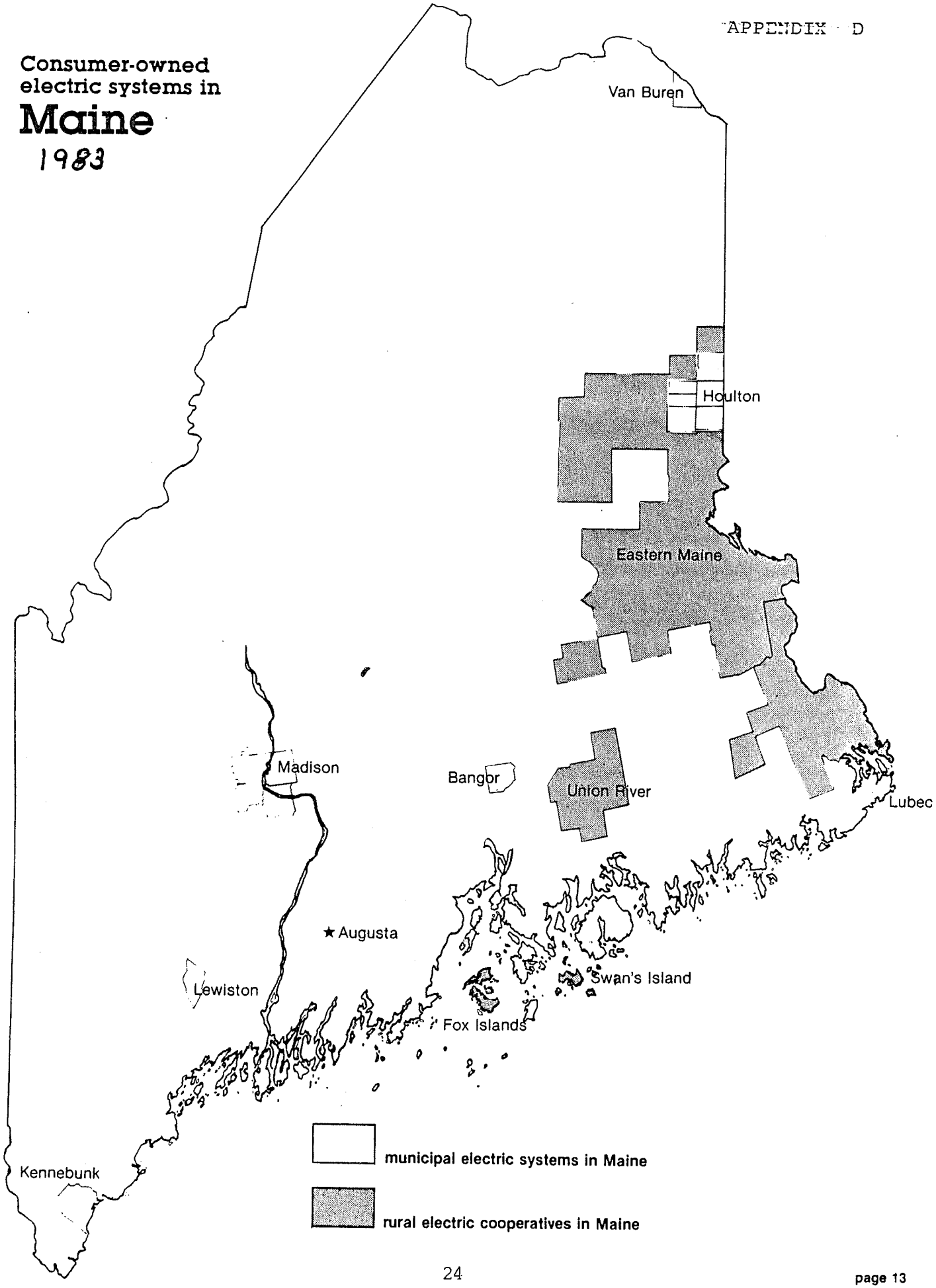
M - Municipality
D - District
R - R.E.A. Co-op.
G - Generating Utility
WG - Wholesale Generating only
IOU - Investor Owned Utility
T - Transmission & Brokering

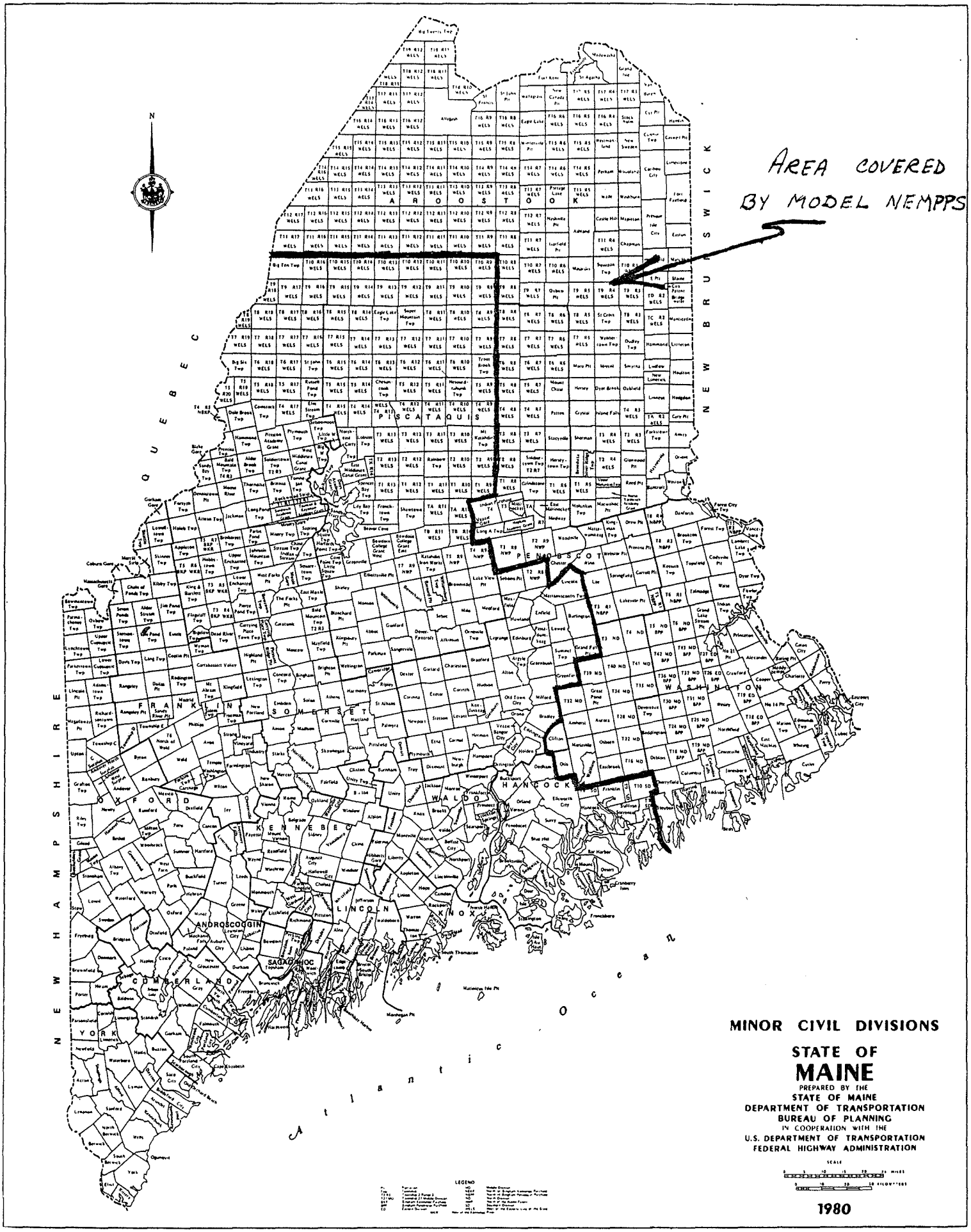
Updated 9/15/83

Summary of 1982 Reports from Electric Utilities

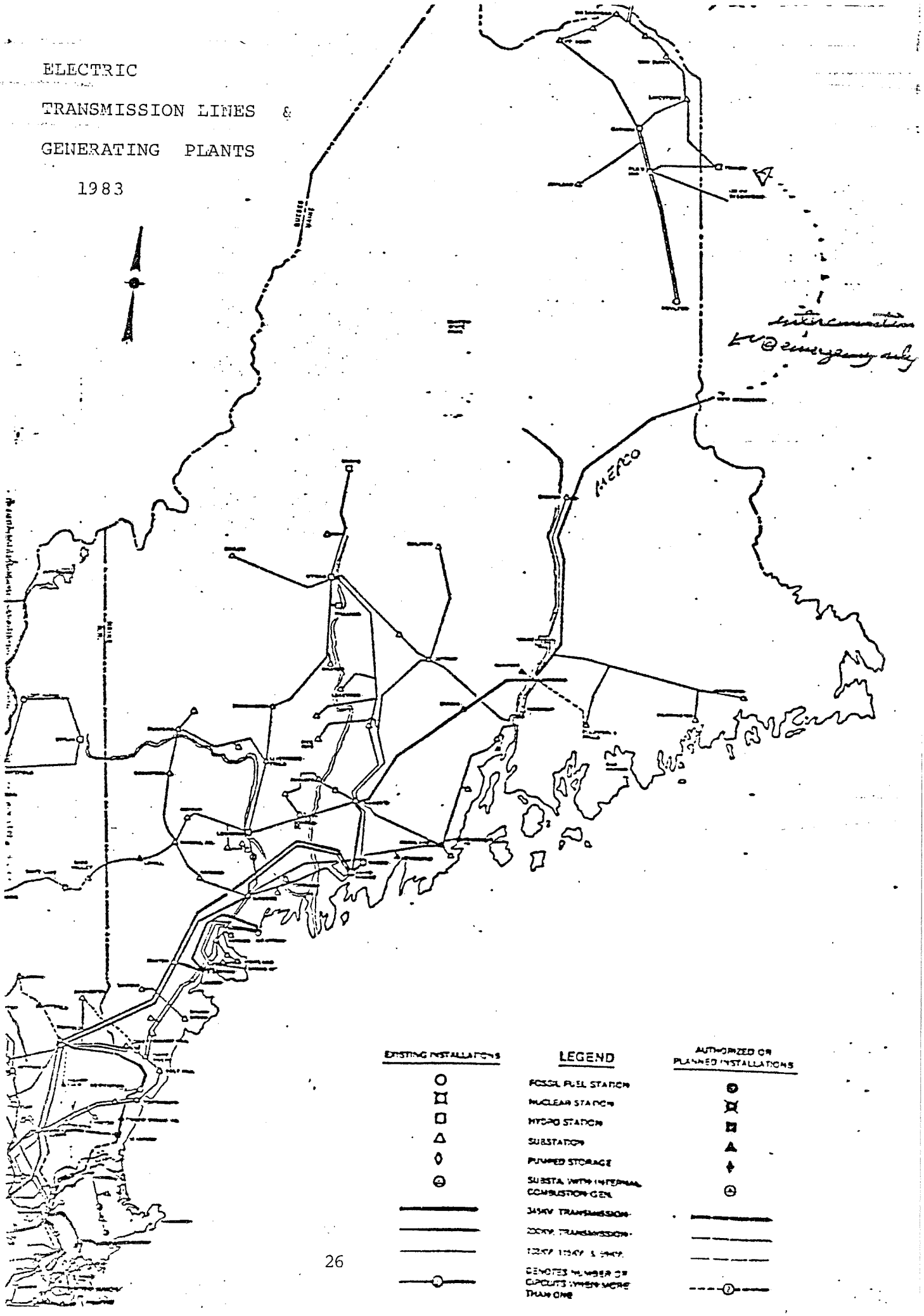
UTILITY	Revenue ($000)	Net Income (Loss) $000	Customers	KWH Sold (000)	% KWH Generated By Utility	Net Plant in Service ($000)	Construction CWIP ($000)	CWIP a % of Net Plant
Investor Owned								
Bangor Hydro	$ 80603	$ 6411	91639	1260869	51.2%	$ 66882	$ 5342	7.99%
Central Maine Power	401335	40955	318272	6662138	69.4	541656	22059	4.07
Maine Public Service	31059	4669	31971	539818	53.5	30646	4174	13.62
Stonington & Deer Isle	793	35	2030	8424	0	577	—	—
Matinicus	60	1	97	138	100.0	—	—	—
Municipal								
Kennebunk Light & Power	2554	(260)	3212	49562	4.9	2343	—	—
Lubec Water & Electric	581	(1)	1153	6867	0	350	—	—
Madison Electric Works	1268	(8)	1973	18736	3.9	1192	—	—
Van Buren Light & Power	899	(45)	1445	15577	0	287	—	—
Houlton Water Company	3126	(95)	4704	58440	0	1692	19	1.1
Co-Ops								
EMEC	5224	(520)	10107	61356	0.1	9924	117	1.2
Fox Islands	656	69	1278	5078	0	2370	10	0.4
Union River	889	17	1611	4282	0	681	17	2.5
Swan's Island	161	(12)	367	1263	0	274	1	0.4
Isle Au Haut	40	3	67	60	100.0	35	—	—

Utilities not shown


Consumer-owned
electric systems in
Maine
1983
Van Buren
Houlton
Eastern Maine
Madison
Bangor
Union River
Lubec
★ Augusta
Lewiston
Swan's Island
Fox Islands
Kennebunk
municipal electric systems in Maine
rural electric cooperatives in Maine


AREA COVERED
BY MODEL NEMPPS
MINOR CIVIL DIVISIONS
STATE OF
MAINE
PREPARED BY THE
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
1980
AROOSTOOK
PISCATAQUIS
PENOBSCOT
WASHINGTON
HANCOCK
WALDO
KNOX
LINCOLN
SAGADAHOC
KENNEBEC
ANDROSCOGGIN
CUMBERLAND
YORK
OXFORD
FRANKLIN
SOMERSET
QUEBEC
NEW BRUNSWICK
NEW HAMPSHIRE
Atlantic Ocean

ELECTRIC TRANSMISSION LINES & GENERATING PLANTS 1983



STATE OF MAINE

APPENDIX E

Inter-Departmental Memorandum Date October 7, 1983

To Files Dept.

From Haven Whiteside Dept. Legislative Staff

Subject Some recent legislation relating to Public Power & Utility Financing

Title 35, c. 10 (§§181ff) PL 1981, c. 473 (eff 1981) Maine Public Utility Financing Bank (shares Directors & Staff with Maine Municipal Bond Bank)

- to provide benefits of tax-exempt financing to investor-owned utilities
- revenue bonds (not credit of the State)
- under IRS regulations, limited to those that serve 2 counties or less

Title 35, c. 241 (§§2951ff) PL 1981, c. 694 (eff 1982) Municipal Power District Enabling Act

- standard charter (optional) for municipal power districts
- referendum to form district
- no eminent domain to acquire plant
- PUC consent to serve in existing service area

Title 35, part 8, c. 301-307 (§§4001ff) PL 1981, c. 422 (eff 1981) Maine Municipal & Rural Electrification Cooperative Agency Act

- to help municipals & coop finance transmission & generation facilities
- no retail authority
- no eminent domain for existing facilities or licensed hydro-sites
- revenue bonds (not credit of state or towns)

Title 35, §2328, PL 1981, c. 482 (eff 1981) Authorizes PUC to Purchase Electric Energy for Resale on a Nonprofit Basis

- can purchase from out of state

HW/elk