

MAINE STATE LEGISLATURE

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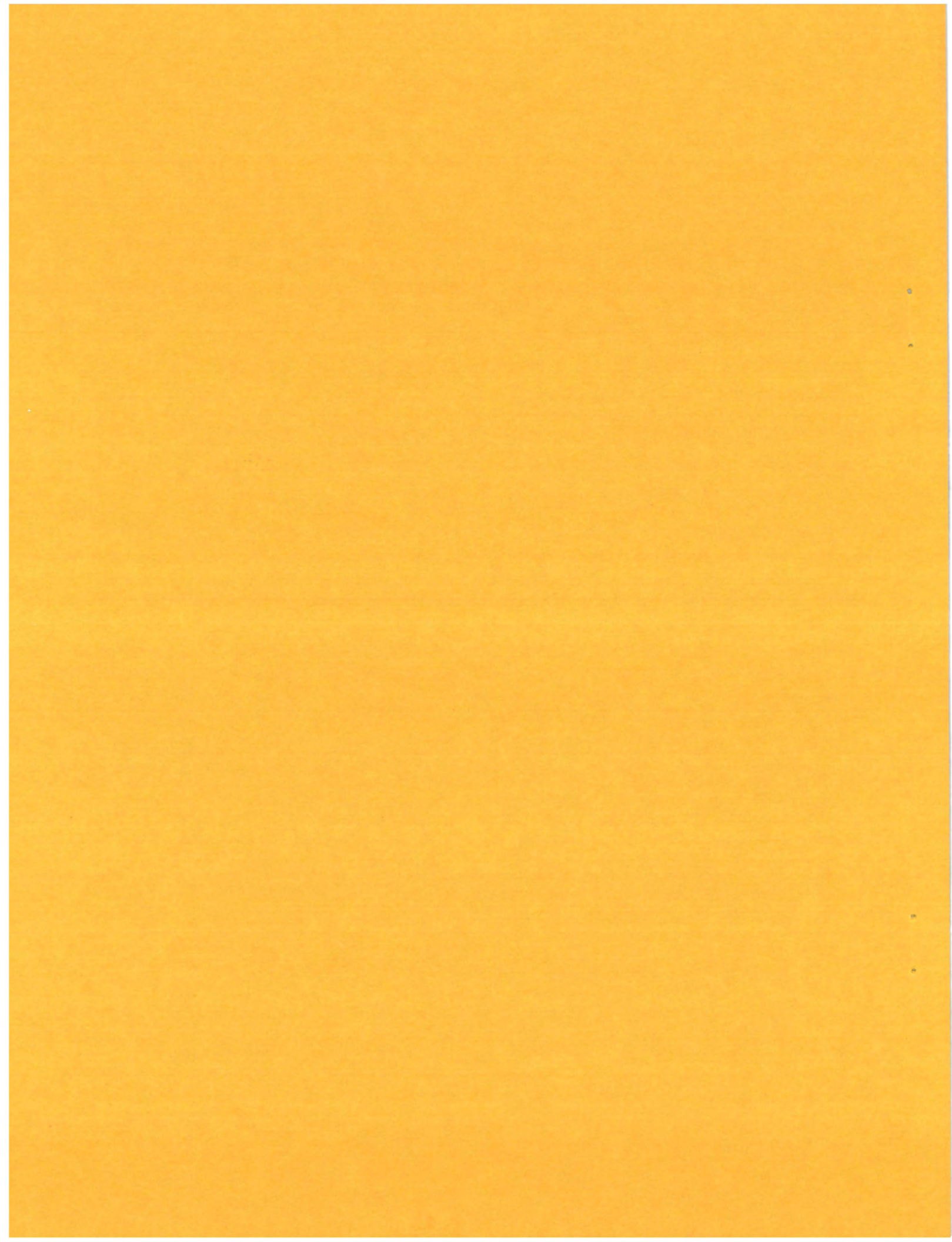
ENERGY

INTERIM ENERGY POLICY
and
COMPREHENSIVE ENERGY PLAN
for
THE STATE OF MAINE

*Report to
the 107th Legislature
January, 1975*

STATE OF MAINE
OFFICE OF ENERGY RESOURCES
AUGUSTA, MAINE

ENERGY



INTERIM ENERGY POLICY
and
COMPREHENSIVE ENERGY PLAN
for
THE STATE OF MAINE

Report to the One Hundred Seventh Legislature
January, 1975

State of Maine - Office of Energy Resources - Augusta, Maine

"The fundamental fact remains that the United States has entered a new age of energy and we have not yet adjusted our habits, expectations and national policies to the new age....a fourth essential has been added to the age-old necessities of life. Besides food, clothing, and shelter, we must have energy. It is an integral part of the nation's life support system."

A Time to Choose America's Energy Future
Energy Policy Project of The Ford Foundation
New York, New York, 1974 (at p. 1).



STATE OF MAINE
OFFICE OF THE GOVERNOR
AUGUSTA, MAINE
0243349

KENNETH M. CURTIS
GOVERNOR

December 27, 1974

To Governor James B. Longley and the members of the 107th Legislature:

It is my pleasure to transmit herewith an Energy Policy and Comprehensive Energy Plan prepared by Robert A. G. Monks, Director of the Maine Office of Energy Resources.

By working through this document, I believe you as public decisionmakers will become fully aware of the magnitude of our energy problems and the range of alternatives we must address in resolving those problems. Because there is no more fundamental issue facing the people of Maine it is my firm belief that each of these items merits full public debate and solemn deliberation by the Legislature. Failure to engage these critical questions in a forthright manner will keep us captives of energy policies determined beyond our state borders.

Mr. Monks and his staff have discharged their statutory responsibility commendably. The burden now rests with you as elected representatives of our people to act decisively in planning for our future. I am confident you will engage this challenge with the wisdom and foresight it demands.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Kenneth M. Curtis", with a long horizontal flourish extending to the right.

KENNETH M. CURTIS
Governor of Maine

KMC/dlr

ROBERT A. G. MONKS
DIRECTOR



MARY CLARK WEBSTER
DEPUTY DIRECTOR

STATE OF MAINE
OFFICE OF ENERGY RESOURCES
STATE OFFICE BUILDING
AUGUSTA, MAINE 04330
(207) - 622-6201

January 2, 1975

Governor James B. Longley and
Members of the 107th Legislature

Governor Curtis and the 106th Legislature created the Office of Energy Resources for the purpose of formulating an Energy Policy for the State of Maine and for the development of a Comprehensive Plan detailing how state government can carry out the policy. We are, accordingly, proud to transmit the Interim Energy Policy and Comprehensive Plan for your consideration and approval.

We are confident that our work is a solid beginning. Much thought will need to be given to our policy and our many specific proposals and you further have to decide on the appropriate balance between purely energy considerations and the other essential concerns of state government.

It is our sincere and enthusiastic belief that we can help you develop for Maine people the finest possible governmental response to energy concerns.

Respectfully yours,

A handwritten signature in cursive script that reads "Robert Monks".

Robert A. G. Monks

AN INTRODUCTION TO AN ENERGY POLICY FOR THE STATE OF MAINE

The State of Maine should develop a formal written energy policy from time to time, but it does not seem necessary or desirable to maintain a permanent separate staff for that purpose. With the presentation, approval and implementation of this Policy and Plan, the Office of Energy Resources has fulfilled its principal statutory mandate and, therefore, its dissolution is recommended.

For the immediate future, the Governor will need special institutional focus on energy matters in dealing with other authorities, federal, regional and foreign and in seeing that state policies are executed. This Plan contemplates five separate instruments of continuing implementation of energy Policy: first, through existing state departments (Health and Welfare, Commerce and Industry and Taxation) and state agencies (Public Utility Commission); second, through the Executive Department and its proposed Energy Coordinator; third, through new arrangements of existing institutions, such as the Energy Research Institute, a joint venture between the state and the University of Maine, and the The Utility Siting Commission; fourth, through new instrumentalities such as the proposed Maine Woods Fuel Corporation and; fifth, through the Governor's Review Board on Energy, which will be the present OER Advisory Council, with the addition of the Governor as de facto chairman.

Following the Energy Policy, charts have been prepared to show (Chart I) a schematic representation of the several ways state government will carry out particular policies; (Chart II) the contemplated organization of personnel and functions in state government directly concerned with energy.



ROBERT A. G. MONKS
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ENERGY POLICY FOR THE STATE OF MAINE

I. The State Government must assure adequate energy at a reasonable cost in dollars, impact on the environment, and public safety.

The availability of adequate energy for transportation, industry, space heat and the generation of electric power is essential for the health, standard of living and economic well-being of Maine's citizens. Because of the complexity and expense of energy facilities, it is hopelessly impractical for each individual to fulfill his own energy needs. Experience and common sense compel the conclusion that U. S. Federal Policy cannot be as effective as state policy in adequately protecting the interest of Maine people in having secured sources of adequate energy at reasonable cost. The State Government of Maine, therefore, must take on responsibility for energy availability in the same way that it is responsible for schooling, roads, security and other emergency services, and it must assure that the costs of such energy in money, in environmental impact and respecting public safety are tolerable.

II. Efficient use of energy ("conservation") will be encouraged.

Continued availability of energy requires that careful conservation practices be developed. Efficient utilization of energy ("conservation") is the policy of the State of Maine. Formal educational curricula and special programs to inform the public of the need for energy conservation are necessary ingredients of Maine's energy policy. A successful conservation program requires the cooperation of the people and business of the State. This cooperation can be realistically expected if government provides incentives for voluntary reductions in energy usage through such devices as tax credits and guaranteed loans for energy-conserving home improvements and by increasing taxation of wasteful uses of energy.

III. Energy sources will be developed from within the State to as large an extent as possible.

To as large an extent as practicable, energy for Maine will be supplied from renewable natural resources located within the State. Maine's resources suited to alternate energy development include the forests, the wind, the sun, fast flowing fresh and salt water, and seaweed. The technology exists today to produce energy from certain of these sources at prices competitive with those currently prevailing. By developing that technology to meet Maine's energy needs, the State can significantly reduce its present vulnerability - almost total reliance on imported supplies.

The State of Maine is committed to spending resources for energy research and development. The State will provide support for an Energy Research Institute, which will be responsible for developing Maine's renewable resources as alternate sources of energy and for research into better conservation practices. If necessary, the State will provide direct funding for alternate energy projects, but the preferred policy will limit state involvement to providing assurances for start-up costs or pilot projects sufficient to encourage private companies to manage and finance desired development.

To the extent that statewide energy self-sufficiency is not possible, the State will look first to resources located within New England and secondly, to those in the Eastern Provinces of Canada. The energy problem and potentials that Maine shares with these regions can and should be explored to mutual advantage. The State must attempt to control directly those energy supplies vital to the well-being of the citizens and to be liberated from the caprices of federal and international policy considerations.

The State Government of Maine recognizes that it has a broad responsibility, beyond that to its own citizens. As part of the federal system, Maine will cooperate fully to ensure that the abundant resources with which it is uniquely endowed are utilized for the benefit not only of Maine's citizens, but also, when the State considers it necessary, for citizens of states less able to meet their own requirements.

IV. Energy information from all private and governmental sources will be coordinated by the State.

The State of Maine will coordinate all energy-related activities between the State and the federal government, regional governmental organizations in New England, the Canadian federal government and provincial and regional governmental organizations in Eastern Canada. The State will develop the capability to assemble, maintain and process data for accurate assessments of energy flows. Information processing is essential to the management of energy shortages, the prediction and prevention of future shortages, and to the development of a sound energy policy.

CHART ONE *

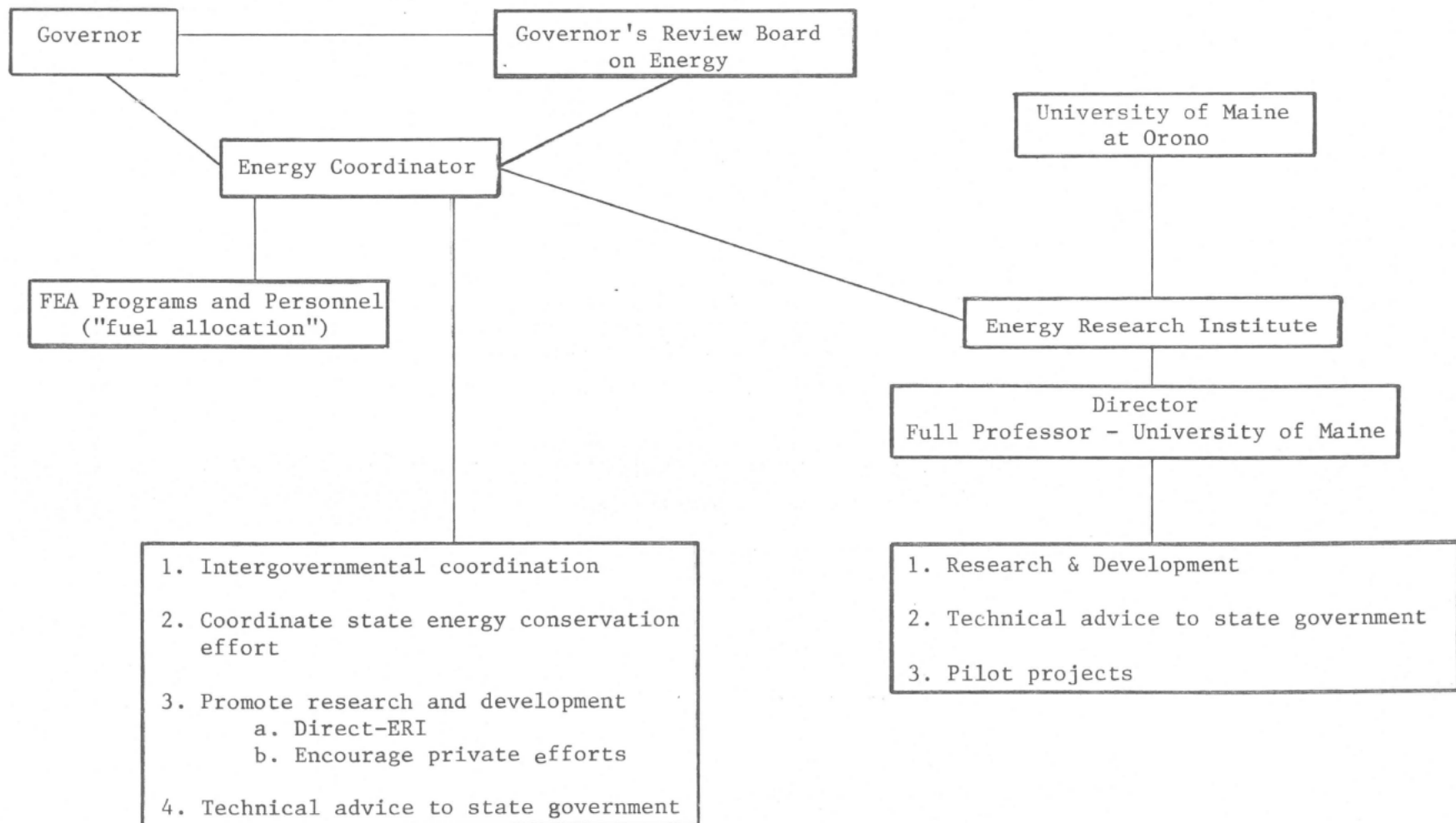
STATE ENERGY POLICY

Policy to be implemented by COMPREHENSIVE PLAN: Statute	I. Availability	II. Conservation	III. Research	IV. State Organization
	4) Siting energy facilities 5) Off-shore oil drilling 6) Emergency cash payments to needy fuel customers	7) Siting heavy industry 8) Sales Tax Exemption 9) Insulation loans 10) Energy Use Tax on cars 11) Energy standards 15) Electricity sales tax 16) Natural gas sales tax	23) Maine Woods Fuel Corporation	24) Abolition of Office of Energy Resources 25) Establishment of Governor's Review Board 26) Energy Coordinator in Governor's Office
Executive Order	1) Approval of periodic update of Energy Policy by Task Force 2) Energy Research Institute	12) State government operations	20) Direct departments to contract for substitute fuels	29) Development of program for schools
Public Utilities Commission		14) Electric Heat 17) Conservation Tests 18) Service personnel 19) Financing conservation devices	21) Direct R&D funds 22) Encourage use of alternate sources of energy 22) Permit investments in new ventures	
Energy Coordinator	3) Statement on nuclear power	13) Heavy industry forum	20) Promotion 27) Federal relations 28) Regional relations	1) Basis for new plan 28) Regional coordination 30) Assemble data
Energy Research Institute		To provide technical information	To coordinate scientific competition To secure grants To evaluate and assist new technology	To consult with government and industry

* The numbering is identical with that used in the State Energy Plan.

CHART TWO

GOVERNMENTAL ORGANIZATION OF ENERGY FUNCTIONS



COMPREHENSIVE ENERGY PLAN

In order to carry out the objectives of the State Energy Policy, a Comprehensive Energy Plan has been formulated. The essential elements of this plan are outlined below, and a more detailed explanation follows. The numbering and pagination are identical with that used in the State Energy Plan and explanatory charts.

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I. AVAILABILITY OF ENERGY

1. Provision for Periodic Review of State Energy Policy
2. Energy Research Institute
3. Criteria for Safety of Nuclear Power Generation
4. Procedures for Siting Energy Facilities
5. Off-shore Oil Drilling and Related On-shore Developments
6. Cash Supplements for Energy Expenses

The availability of adequate energy for transportation, industry, space heat and the generation of electric power is essential for the health, standard of living and economic well-being of Maine's citizens. Because of the complexity and expense of energy facilities, it is hopelessly impractical for each individual to fulfill his own energy needs. Experience and common sense compel the conclusion that U. S. Federal Policy cannot be as effective as state policy in adequately protecting the interest of Maine people in having secured sources of adequate energy at reasonable cost. The State Government of Maine, therefore, must take on responsibility for energy availability in the same way that it is responsible for schooling, roads, security and other emergency services, and it must assure that the costs of such energy in money, in environmental impact and respecting public safety are tolerable.

1. Provision for Periodic Review of State Energy Policy

Purpose: To provide the Governor and Legislature with a mechanism for a periodically updated State Energy Policy that reflects the current needs and expectations of the people.

Description: It is inadvisable to adopt a policy that cannot be altered to meet changing conditions. The State Energy Policy should be reviewed on a periodic basis to reflect changes in energy supply and demand and major shifts in federal government policy, as well as more general social and economic conditions. Every five years, or more frequently if changing conditions require it, the Governor should appoint a Task Force to study the energy problems of the State and to present a new State Energy Policy for the approval of the Governor and the Legislature. Such a task force should include people with a sound technical background capable of assessing the broad range of data available for energy planning purposes.

On a continuing basis, The Advisory Board of OER should be reconstituted to The Governor's Review Board on Energy, with the Governor personally acting as de facto Chairman, to function as a cabinet overseeing and directing the execution of energy policy through all branches of state government.

Action Required: Appointment by the Governor and confirmation by the Governor's Council with sufficient financing appropriated by the Legislature.

2. Energy Research Institute

Purpose: To establish a technical competency to deal with the energy problems and potentials peculiar to Maine and to provide Maine with the highest level of technical advice in energy matters.

Description: A principal objective of state policy should be to use and to strengthen existing institutions in so far as practical. In an area requiring technical competence, it appears wise to build with the University of Maine system; to coordinate existing competencies; and not to create a research and development capability directly in state government. There is no such formal discipline as energy, so it is constructive to have available somewhere within the state's educational system an institute that focuses knowledge on this particularly important area.

An Energy Research Institute will serve many functions, among them: teaching, research, and development. It will also provide the highest level of technical advice to governmental agencies and officials (on energy questions). The ERI will provide a central index of scientific and academic research being done on energy problems of the state. It will also provide a focus and a framework for original research to be done in Maine. Possible research topics include: the development of alternate energy sources, the latitude for fuel substitution in regional industries, technical improvements which allow for more efficient use of energy, and any others which are deemed appropriate.

As a result of a program developed by the Office of Energy Resources, and a conference jointly sponsored with the University of Maine, preliminary steps have been taken toward the establishment of an Energy Research Institute, and a Director has tentatively been selected. It is anticipated that funds already appropriated to the University and the Office of Energy Resources will be made available for some initial costs of the Institute.

Action Required: Approval by the Governor and appropriations from the Legislature to fund future state government support will significantly influence the future scope of ERI.

3. Criteria for Safety of Nuclear Power Facilities

Purpose: To ensure that nuclear power is available to meet the energy needs of the State of Maine under conditions of maximum safety that are acceptable to all citizens of the State.

Description: It is expected that the use of electricity in Maine will increase and that additional generating facilities will need to be built. Of the fuels traditionally employed to generate electricity, oil and coal do not appear to meet acceptable standards of economic cost and environmental impact. Nuclear power represents one of the most important sources of energy for meeting the demands of the immediate future.

While nuclear power is an attractive source of energy, it must be recognized that some questions still remain unanswered. There are three principal areas in the process of generating electricity from nuclear energy that have not yet been consistently demonstrated to meet the highest standards of public health and safety. Consideration should be given to these three areas when nuclear facilities are proposed for Maine.

First, the Emergency Core Cooling System is one of the single most important mechanisms for the prevention of large-scale nuclear accidents. As a result of either a rupture of the reactor piping or a rupture of the reactor pressure vessel, a loss of coolant accident would occur, and the nuclear fuel would begin to heat up the reactor core. The ECCS is designed to prevent a melt-down of the reactor core and the potential for massive dispersal of radioactive releases into the atmosphere. The United States Atomic Energy Commission plans to test the ECCS under realistically simulated accident conditions in 1977. The results of these tests should be reviewed when additional nuclear facilities are proposed.

Second, there should be provisions for the disposal of radioactive waste. At the present time, nuclear facilities in Maine are not generating sufficient

volumes of radioactive waste for there to be any problem; radioactive materials are stored at the location of the facility. With the continued operation of the existing facility and with the possible construction of additional facilities, the volume of radioactive waste will become much larger. The waste will have to be transported from the plant and a suitable location found for its permanent disposal. Current standards for the transportation of nuclear materials are strict, and a continuing effort should be made to see that they are met. Additionally, a suitable location must be found for the disposal of nuclear wastes for the many thousands of years required to reduce the high radioactivity.

Third, the nuclear industry should be allowed to provide and finance their own insurance against possible accidents. Nuclear insurance is now regulated and financed by the federal government and the federal laws are pre-emptive. It has been repeatedly stated by nuclear spokesmen that nuclear reactors do not present major risks to public health and safety and that private insurance is readily available. Under such circumstances, the federal government should no longer be responsible for insuring nuclear facilities, and the states and private industry should be permitted to set their own higher standards. If the federal laws are repealed, Maine should adopt its own standards for private insurance of nuclear facilities.

Action Required: Decision by the Board of Environmental Protection. The decision should include specific findings in each of the problem areas set forth above, so that the public and review authorities will have a clear basis on which to base action.

4. Procedures for Siting Energy Facilities

Purpose: To provide for an efficient system of siting energy facilities that permits careful and extensive consideration of environmental factors without requiring industry to make heavy investments in time and money, assuring Maine citizens of prompt adjustments in the supply of energy as expanded capacity is required.

Description: There are two polar alternatives in considering the appropriate state policy for siting of heavy industrial facilities and power generating stations. The first is for government to be purely responsive, to set up a mechanism to review all relevant factors concerning whatever location a user proposes. The second is for government to take an active role in site selection. This policy would enable development to be limited to a particular area in which the state owns land that has already been found suitable, which it will make available at cost.

The state should evaluate and acquire an acceptable site and should proceed immediately to secure all necessary zoning, environmental and logistical support for industrial development. To as large an extent as possible, all local and state permits and approvals should be obtained, and whatever progress is feasible under various federal procedures commenced.

The state should limit development to this site until need can be shown for another location. However, several sites suitable for energy facility construction should be held by the state in a land bank, so that when the need for additional generating capability arises, the necessary evaluations, permits and licenses will exist, enabling a utility to begin construction promptly.

The state should not be involved in the management, nor in the profits of such a development beyond assuring that the public interest is served. For this purpose, a Maine Energy and Heavy Industry Siting Authority should be created with

the appropriate powers and financial competencies. Revenues to support the MEHI Authority's acquisition of power generating facility sites will be raised through a surcharge on electricity. Costs allocated to non-power generating facility sites will be otherwise allocated.

In addition to its land acquisition function, the MEHI Authority shall be responsible for monitoring existing energy facilities to determine their environmental impact, and for evaluating new energy related technologies.

Action Required: Enabling statute to be passed by Legislature. Department of Commerce and Industry responsible for site selection and approval of site by Board of Environmental Protection.

5. Off-shore Drilling and Related On-shore Developments

Purpose: To ensure that adequate plans are made by the State to meet the potential impact of off-shore drilling.

Description: In a recent opinion prepared for the United State's Supreme Court by Judge Marris, it is clear that the State of Maine has no control over leases on the outer continental shelf for oil drilling purposes. Full authority over oil drilling off the Maine coast resides with the Federal government. There is no independent action that Maine could take that would be legally binding in the matter of off-shore oil drilling.

It is possible that there will be increased pressure for related developments in Maine. If oil is found on the outer continental shelf, it will need to be transported ashore, refined, and piped to its final destination. Maine is one of a number of states that might be considered for such industries. All of these in-state land use questions are ones over which the state has jurisdiction. Plans should be made for the state to meet this responsibility.

In addition to the decisions being made by land use and environmental planning agencies in the state, the Maine Energy and Heavy Industry Siting Authority should participate in making decisions on this question.

Action Required: Enabling statute to be passed by the Legislature.

6. Cash Supplements for Energy Expenses

Purpose: To ensure that the people of Maine can purchase the energy they need for vital services such as heat, light and cooking, so that energy in Maine is not distributed solely on the basis of ability to pay for an increasingly costly, but essential commodity.

Description: The average Maine family consumes 1500 gallons of #2 oil per heating season. Price increases over the last two years require an average user to pay an additional \$225.00 for heating oil. While this price increase will have to be absorbed by most people, many families simply cannot afford it.

For those who cannot afford this increase, there will be two results. Either they will not be able to purchase the oil they need and they will be cold; or the oil companies will extend credit to them, jeopardizing industry's ability to finance purchases of oil for distribution. Neither alternative is acceptable for any length of time. There is absolutely no indication that oil prices will decline.

Legislation is required to match State funds with a grant from the U. S. Department of Health, Education and Welfare. Such an appropriation would assure that financial assistance is available for needy families with children who require emergency fuel assistance as a result of exceedingly high fuel costs. The specific program would provide aid, care and services for a period of thirty consecutive days in any one twelve month period in the case of a needy child under the age of 21.

Emergency assistance to needy families with children shall be provided in accordance with a plan established by the Maine Department of Health and Welfare.

Even with the possibility of other federal programs being established, sufficient funds will not be available to help all Maine people acquire an adequate supply of energy this winter. The magnitude of the problem is so great

that a very large expenditure would be required to provide help to all those who need help. The possibility that the federal government may make some funds available should not prevent Maine from taking the initiative to meet the needs of its own people. Although assistance of a piecemeal variety is complicated, expensive and confusing, it is better than no assistance at all. State government must unmistakably recognize that the "real energy crisis" consists of the inability of many Maine people to pay for levels of energy necessary to maintain a reasonable standard of living.

Long-range energy planning is important for insuring against future energy shortages, but the more immediate problems of poorer people this winter cannot be disregarded. Many future solutions will require Maine people to spend more money for energy. Without making provisions for the people this will hurt the most, future solutions may not be worth their social cost.

Action Required: Enabling statute and appropriation to be passed by the Legislature. Appropriate guidelines to be established by the Department of Health and Welfare. Federal funds to be received by the State Treasurer.

II. CONSERVATION OF ENERGY

7. Location of Heavy Industrial Facilities
8. Exemption from Sales Tax for Energy Conservation Materials
9. State Loans for Residential Insulation
10. Excess Energy Consumption Tax on Motor Vehicles
11. Statewide Energy Conservation Standards
12. Conservation Program for State Government Operations
13. Effective Use of Energy in Heavy Industry
14. Limitation of Electric Heat to Efficient Techniques
15. Repeal of Sales Tax on Residential Use of Electricity
16. Repeal of Sales Tax on Natural Gas
17. Electric Rate Structure to Encourage Conservation
18. Utility Service Personnel and Advertising to Focus on Conservation
19. Utility Financing Plan for Energy Conservation

Continued availability of energy requires that careful conservation practices be developed. Efficient utilization of energy ("conservation") is the policy of the State of Maine. Formal educational curricula and special programs to inform the public of the need for energy conservation are necessary ingredients of Maine's energy policy. A successful conservation program requires the cooperation of the people and business of the State. This cooperation can be realistically expected if government provides incentives for voluntary reductions in energy usage through such devices as tax credits and guaranteed loans for energy-conserving home improvements and by increasing taxation of wasteful uses of energy.

7. Location of Heavy Industrial Facilities

Purpose: To encourage conservation of energy by concentrating heavy industrial facilities close to the source of power.

Description: The state clearly has an interest in promoting the growth of maximally efficient industry in Maine. It is well understood that the technological possibilities of interrelating generating facilities, oil refineries, petro-chemical facilities, paper making machines, and other processes using steam would permit substantial economy.

The Governor's Task Force Study (TFS) released in the summer of 1972 represents a persuasive analysis. The future of the Montreal pipeline represents a new factor for consideration. The Trudeau government seems committed to national self-sufficiency in petroleum; hence, reductions in exports to the USA and extension of the Sarnia oil pipeline to Montreal. This calls into question the future of the Montreal pipeline in its present form and suggests immediate investigation into whether this superb, existing facility could not be advantageously used. The TFS suggests the desirability of limiting the heaviest kind of development to the port of Portland. If, for example, the existing pipeline could be used, then any large piece of land within forty miles of Portland harbor could well be the appropriate site of a refinery/heavy industry complex. Such a site would have to be weighed against those in other areas of the state. Ideally, a site could be found that would have good visual characteristics, and is well located with respect to the state's labor markets, that is accessible to the NEPOOL 345 KV transmission lines, and that would otherwise have favorable characteristics for paper making and other heavy industrial uses.

The Maine Energy and Heavy Industry Siting Authority should be responsible for evaluating industrial siting proposals on the basis of energy conservation. It is known that thermal integration will not only result in more profitable

use of capital but also in more efficient use of energy.

Action Required: Enabling statute to be passed by Legislature.

8. Exemption from Sales Tax for Energy Conservation Materials

Purpose: To remove a state-imposed cost on the price of energy conservation materials, thereby encouraging more efficient utilization of energy which will result in more energy being available for the most essential uses.

Description: This is an element of state policy-making which has been used to promote other desirable objectives, most recently in the area of pollution control.

Energy-saving materials will do much to reduce the overall consumption of energy. To provide incentives for their purchase and use, the State should exempt all such items from the sales tax.

Action Required: Enabling legislation to be passed by the Legislature.

9. State Loans for Residential Insulation

Purpose: To effect a major reduction in home heating requirements by expanding available financing for residential insulation and other energy conserving home improvements.

Description: Although some government involvement is necessary, the object of the energy policy is for government programs to enable Maine people to help themselves. In keeping with this objective, the Maine State Housing Authority will cooperate with state lending institutions to make low interest loans available for energy conserving home improvements, such as insulation, storm windows, and furnace dampers. This will provide numerous jobs in the depressed construction industry. The improvements will result in a major reduction in home heating requirements, thus conserving energy and saving dollars.

The proposed Direct Lending Program will establish a liaison between a state agency and private lending institutions. It provides a practical mechanism to ensure that the public interest is served, i.e. that low and moderate income families will be able to afford improvements to conserve energy, without requiring the creation of another state bureaucracy. Administration and processing of funds will be the responsibility of private institutions and the MSHA will determine eligibility requirements.

All monies raised by the Housing Authority under this program would be from the sale of revenue bonds which would not be backed by the full faith and credit of the state or by its moral obligation. The program would be administered without any additional expense to the state.

Action Required: Enabling statute to be passed by Legislature. Program to be administered by the Maine State Housing Authority.

10. Excess Energy Consumption Tax

Motor Vehicles

Purpose: To encourage and reward the use of more efficient motor vehicles, thereby conserving energy and protecting the environment.

Description: This program would impose a surtax of up to 60% of the sales or use tax on a passenger motor vehicle based on the efficiency of that motor vehicle as determined by the vehicle efficiency standards of the U.S. E.P.A. The computation will be based on the number of passenger miles per gallon up to a maximum of five passengers per vehicle. A rebate of up to 40% of the sales or use tax would be available at the other end of the scale. The tax would only be applicable to vehicles of the year 1976 and later years.

Action Required: Enacting statute to be passed by the Legislature. Program to be administered by the Bureau of Taxation.

11. Statewide Energy Conservation Standards

Purpose: To set uniform standards for building construction throughout the State including energy conservation standards.

Description: Authority to promulgate and administer statewide building standards, including energy conservation standards, should be given to the Maine State Housing Authority. It is obvious that the fuel and energy resources consumed to heat buildings in Maine represents a substantial portion of the total energy usage in the State and that existing technologies to reduce such consumption and conserve such resources should be put into effect. It is intended that the energy conservation standards would be performance oriented leaving the decision as to techniques with the designers, builders and contractors. In addition to the program of mandatory building standards for new housing, voluntary standards should be established for existing housing with lower down payment incentives attached.

Action Required: This would also be administered through the Maine State Housing Authority.

12. Conservation Program for State Government Operations

Purpose: To set energy standards for government operations in order to obtain significant reductions in operating costs and energy required.

Description: A major energy conservation program in state buildings will serve as an example to commerce, industry, and other levels of government. An employee action program for energy conservation in state buildings should be implemented according to the following plan:

Step 1. Specific standards for state government operations to be drawn up, including standards for state building construction, standards for state vehicles and an energy audit of each state office.

Step 2. Dissemination to all employees of a general memorandum from the Governor, discussing the importance of energy conservation and outlining the major elements of the employee action program. Large, attractive displays should be placed at the main entrance (near the elevators or the cafeteria) to show the weekly levels of energy used in the building. The cleaning crews begin placing "LIGHTS OUT" stickers on desks in offices where lights or equipment are left running, or drapes are left open.

Step 3. Brief staff meetings should be held in all offices, with supervisors reinforcing the energy conservation message of the Governor's memorandum and the entrance displays. Supervisors should also be encouraged to circulate through their offices at the close of the business day and to remind employees to turn off equipment and close their drapes. These staff meetings should be repeated every few weeks.

Step 4. Dissemination to all employees of an energy conservation package, which clearly describes what each individual can do to conserve energy, both at home and on the job, and the potential effect of their actions. Sources would include the "Citizen Action Guide to Energy Conservation," published by the

Citizens' Advisors Committee on Environmental Quality and "Winter: USA", published by the Office of Economic Opportunity. A special packet drawing from these and other sources will be required. Dissemination to all employees of a memorandum from the Governor describing an employee award program for energy conservation. Prior development of such a program will be required.

Step 5. Dissemination to all employees of a letter from the Director of the Office of Energy Resources and the Director of Civil Emergency Preparedness outlining a state based employee awards program for employees who initiate and carry out productive energy conservation programs in their own communities. The message should be appropriately reinforced by supervisors. The awards could include a plaque presented in a public ceremony, a visit to the community by the Director of OER and CEP to observe the impact of the program, and a formal commendation from the Governor in the employee's personnel file. Information on successful programs should be distributed as widely as possible.

Step 6. If discussions are successful, joint announcement of cooperative programs with the Credit Union and/or Employee Union to stimulate energy conservation (i.e. financial incentives for energy-conserving home improvements or employee car pools).

Step 7. On-going Activities: Brief discussions at office staff meetings of steps individual employees have taken to conserve energy. Encouragement of employee "energy consciousness."

Orientations for all new employees on the elements of the employee action program; reinforcement of this message by supervisors of new employees.

The provision of any requested information or technical support by OER's consulting engineer, Dr. Berg.

Review of new state buildings and state vehicles to ensure energy efficiency.

Action Required: Executive Order from the Governor.

13. Effective Use of Energy in Heavy Industry

Purpose: To assist heavy industry through a program that applies technical expertise to procedures that will enable more efficient utilization of energy.

Description: It is to be expected that heavy industry will be most severely affected by national shortages of energy, particularly in Maine where space heating requirements are high, transportation distances long, and dependence on imported petroleum extensive. Distribution of scarce energy supplies will probably not favor industrial users. In order to protect the frail foundation that heavy industry provides to the Maine economy, primarily through employment, there must be sufficient energy available to continue operations. If energy is in short supply, this can be accomplished only through conservation.

A detailed analysis of the present fuel requirements of Maine industries will be made to provide the basis for examining what technical improvements can be applied to reduce energy consumption. A handbook will be assembled and distributed to industry representatives, outlining steps that can be taken to solve their particular energy problems. Both technical and operational suggestions will be made.

Investigation will be made of the latitude for fuel substitution in Maine industry, and a survey made of the availability of substitute fuels for the use of heavy industry.

Action Required: Program to be administered by the Energy Coordinator.

14. Limitation of Electric Heat to Efficient Techniques

Purpose: To ensure that available energy is applied only to its most efficient use, electric heat should be limited to particular techniques that maximize the efficiency of fuel used to generate electricity.

Description: The regulations and practices of Maine utilities should reflect governmental policy considerations with particular reference to energy conservation. The Public Utilities Commission should encourage the use of electrical energy in areas to which it is uniquely suited and discourage the use of electricity in areas where alternate forms of energy are more readily available and adaptable.

It is widely recognized that electric resistance heat is an inefficient method of space heating. Various techniques, such as the use of heat pumps and heat exchangers will significantly increase the efficiency of electric heat. The use of electricity for space heating should be limited to these techniques. Direct resistance heat should only be permitted with specific standards of efficiency.

Action Required: Decision by the Public Utilities Commission.

15. Repeal of Sales Tax on Residential Use of Electricity

Purpose: To eliminate the State practice of taxing an essential commodity.

Description: Approximately 54% of all electricity purchased in Maine is generated from oil-fired plants. Because the utilities have had long-term fuel contracts, many of which have recently expired, they are currently purchasing fuel at significantly increased prices. A sales tax is paid by the utilities on fuel purchases, and this sales tax has increased with the cost of fuel. The sales tax charged to one Maine utility is estimated to have increased 480% during 1974.

The utilities are permitted to pass on to their customers a fuel adjustment cost. Current electric rates reflect 100% of the current sales tax on fuel purchased by the utilities. Incorporated into the increased rates is an additional sales tax paid by the customer. This sales tax is based on the total cost of electricity - including fuel costs and sales taxes on fuel.

One significant result of this double taxation is that electric rates in Maine have risen more than the actual cost of fuel. Not only must users of electricity pay the higher cost of oil, but they must also pay the State an increased tax on a fixed quantity of electricity. While the sales tax alone may not represent an intolerable financial burden to many people, it will be a serious burden when imposed on top of increased fuel costs. State tax policy is aggravating an already difficult economic circumstance, and is resulting in the collection of windfall profits by the State.

A second result of this policy is discrimination against users of electric heat. The State does not impose a sales tax on the distribution of home heating oil. It is unreasonable to tax one form of space heat and not to tax another. When many energy experts are arguing that electric heat when used with efficient techniques is more efficient than oil heat, the State not only has an

inequitable tax policy, but that policy is having a negative impact on efficient utilization of energy.

Electricity should be treated as an essential commodity as are food and home heating oil, and should be exempt from the sales tax. The sales tax currently paid by the utilities when they purchase oil should continue. While those using electric heat would continue to absorb the cost of this tax through the fuel adjustment clause, they would no longer be paying a double tax.

Action Required: Enabling statute to be passed by the Legislature.

16. Repeal of Sales Tax on Natural Gas

Purpose: To eliminate the State sales tax discrimination against users of natural gas for home heating and cooking.

Description: It is not rational in terms of present energy policy to continue the sales tax discrimination against those who use natural gas for home heating and cooking as opposed to those who use tax exempt home heating oil. In fact, as a policy matter, domestic natural gas should be preferred to imported home heating oil.

Action Required: Enabling statute to be passed by the Legislature. Exemption to be the administrative responsibility of the Bureau of Taxation.

17. Electric Rate Structure to Encourage Conservation

Purpose: To promote continuing improvement in the efficiency of fuel used to generate electric power.

Description: To enable electric utilities to develop and employ more efficient patterns of energy use, expenses for certain research and experimentation should be allowed in the rate structure. It is necessary to promote continuing improvement in efficiency of use of fuel in power generation.

It is well known that higher efficiency could be obtained in the consumption and usage of electricity. The rate structure should promote efficient utilization of energy by encouraging off-peak usage, among other practices. The specific benefits to be obtained from any one of a variety of innovations are not yet clear. Further experimentation is needed.

Questions remain about the equipment used to produce light, space heat or hot water. Fluorescent lights require much less electricity than incandescent lights under most but not all conditions. Heat pumps greatly increase the efficiency of electricity used for space heating or heating water. Various types of equipment should be tested and when proved beneficial, employed on a large scale. A program of this type is being conducted in Biddeford. The utilities should be encouraged to experiment further along these lines.

Questions also remain about the time of utilization of electricity. Substantial reductions in peak demand could be obtained if more uses were changed to off-peak hours. Various methods of metering might be employed to monitor the effects of conservation practices. The utilities should be encouraged to provide incentives for lessening peak period demand.

Finally, questions remain about the mode of utilization. Electricity is clearly more suited to some uses than to others. At a time when all energy must

used carefully, priority must be given to using electricity for its more valuable purposes. Considerable efforts must be undertaken to ensure this priority will be met.

Under present strict cost-of-service accounting methods, the utilities are not in a position to afford these experiments. Such costs should be incorporated into the rate structure. What might appear to be an increased expense for many consumers will not only result in savings of energy and hence lower bills, but will also make the costly construction of additional power facilities less necessary in the future.

Action Required: Decision by the Public Utilities Commission.

18. Utility Service Personnel and Advertising to Focus on Conservation

Purpose: To ensure that the policies and practices of the utilities are directed toward energy conservation.

Description: One of the most efficient ways of promoting energy conservation is through salesmen and technicians now employed by the utilities. The utilities now have many service personnel who work on the delivery of electricity. All such personnel should be fully aware of the best conservation practices with the intention of promoting their widespread use.

Promotional advertising by the utilities is an important area for progress in conservation. Advertising should not be directed to increased demand for electricity unless that electricity will be used efficiently. The promotion of appliances which require large amounts of electricity for their operation, such as air conditioners, should not be encouraged, and should probably be advertised as an unwise practice. Greater efficiency could be achieved if advertising encouraged off-peak use of power. Advertising programs should be closely monitored so that they are designed to meet conservation objectives.

Action Required: Decision by the Public Utilities Commission.

19. Utility Financing Plan for Energy Conservation

Purpose: To make conservation devices available to consumers of electricity at reduced costs through the utilities advantageous credit position.

Description: Historically, the utilities have been in the business of providing electric appliances for sale to the public. In this same tradition, it is possible for the utilities to make available to their customers energy conservation devices so as to make most efficient their use of electrical energy. Such a program could include a broadening of the utilities present scope of operations to encompass such businesses as the sale, servicing and financing of insulation, storm windows and the like.

Whether the utility company directly participates in the "business" of energy conservation is not as important as assuring that it causes the desired result to happen. The utility may, for example, choose to arrange financing through a bank. Our policy is to make it possible for people to help themselves. Insulation will reduce expense; people have no money to pay for it; our policy is to be sure that money is made available. Specifically, we seek approval of a program under which a utility would loan (or cause to be loaned) the funds for insulation; the loan would be discharged over the period of time necessary to recoup from resulting energy savings; the customer would pay a level amount until his loan was amortized.

Action Required: Decision by the Public Utilities Commission. Implementation by private utilities.

III. ENERGY SOURCES TO BE DEVELOPED FROM WITHIN MAINE

20. Energy Coordinator to Promote Development of Alternate Energy Sources
21. Electricity Research to Accord with Priorities of State Energy Policy
22. Rules for Utilities to Purchase "Alternate Energy"
23. Maine Woods Fuel Corporation

To as large an extent as practicable, energy for Maine will be supplied from renewable natural resources located within the State. Maine's resources suited to alternate energy development include the forests, the wind, the sun, fast flowing fresh and salt water, and seaweed. The technology exists today to produce energy from certain of these sources at prices competitive with those currently prevailing. By developing that technology to meet Maine's energy needs, the State can significantly reduce its present vulnerability - almost total reliance on imported supplies.

The State of Maine is committed to spending resources for energy research and development. The State will provide support for an Energy Research Institute, which will be responsible for developing Maine's renewable resources as alternate sources of energy and for research into better conservation practices. If necessary, the State will provide direct funding for alternate energy projects, but the preferred policy will limit state involvement to providing assurances for start-up costs or pilot projects sufficient to encourage private companies to manage and finance desired development.

To the extent that statewide energy self-sufficiency is not possible, the State will look first to resources located within New England and secondly, to those in the Eastern Provinces of Canada. The energy problem and potentials that Maine shares with these regions can and should be explored to mutual advantage. The State must attempt to control directly those energy supplies vital to the well-being of the citizens and to be liberated from the caprices of federal and international policy considerations.

The State Government of Maine recognizes that it has a broad responsibility, beyond that to its own citizens. As part of the federal system, Maine will cooperate fully to ensure that the abundant resources with which it is uniquely endowed are utilized for the benefit not only of Maine's citizens, but also, when the State considers it necessary, for citizens of states less able to meet their own requirements.

20. Energy Coordinator to Promote Development of Alternate Energy Sources

Purpose: To ensure that the State of Maine makes the highest and best use of those resources found within its borders and to reduce the state's dependence on imported fuel, by authorizing state participation in developmental and demonstration projects.

Description: Maine's dependence on an expensive and unreliable supply of imported petroleum places the state in an extremely vulnerable position. However, within the borders of the state there are numerous and abundant natural resources suitable for development as sources of energy. These resources include the forests, the wind, seaweed, and fast flowing fresh and salt water.

State government will contract with appropriate public and private organizations to conduct developmental and demonstration projects. State funds will be expended for the preliminary engineering and planning, design, construction and operation of these pilot projects.

The state shall further encourage the development of alternate energy sources by contracting to purchase all or a portion of the usable output produced by the developmental and demonstration projects for use in state facilities or vehicles or for resale.

Action Required: Establishment of a Maine Energy Development Fund and implementation by the Energy Coordinator.

21. Electricity Research to Accord with Priorities of State Energy Policy

Purpose: To ensure that research financed by Maine utilities is conducted in areas that will provide maximum benefit to the State.

Description: Maine utilities currently make contributions to the Electric Power Research Institute for research purposes. Historically, EPRI has used these funds to research questions that may have broad national implications, but do not necessarily provide any direct results that can be applied to Maine's specific needs.

At a time when shortages in traditional sources of energy has made innovative research all the more important, it is essential that expenditures for research reflect the priorities Maine has established through its State Energy Policy. Specifically, EPRI payments should be directed toward research and development of additional energy resources and the conservation of presently existing energy resources.

Action Required: Decision by the Public Utilities Commission.

22. Rules for Utilities to Purchase Alternate Energy

And to Participate in New Ventures

Purpose: To promote the use of alternate sources of energy and to encourage experimentation with new ventures.

Description: In order for additional sources of energy to be developed in Maine, there must be specific outlets intended for the energy that is being developed. This is especially true with the experimental nature of alternate energy sources being considered in Maine. There is no point in developing a resource which will not serve a more valuable purpose in its processed form than it does now.

As well as producing energy, the utilities are among the largest users of energy in Maine. It would be to the benefit of all concerned for the utilities to be able to participate in new ventures for the development of new sources of energy.

Action Required: Decision by the Public Utilities Commission.

23. Maine Woods Fuel Corporation

Purpose: To encourage the practical development of alternate energy sources in Maine, with special reference to wood as a renewable resource, through a joint cooperative venture with government and private industry.

Description: In order to develop the wood resources located within the state as a source of energy a special corporation should be created, Maine Woods Fuel Corporation (MWFC). This approach would closely parallel that of the federal government in its organization of the Communications Satellite Program, so some focus on COMSAT is appropriate. Each of the following elements is present in the situations confronting the federal government and the State of Maine:

- 1) A problem/opportunity exists whose solution is in the public interest;
- 2) There are private companies with the interest and the resources to develop the opportunity;
- 3) It is the government's belief that the optimal method of development lies in motivating private enterprise to provide the resources and leadership;
- 4) There are continuing elements of public interest in the situation and there is a good opportunity for profit after the initial development period;
- 5) Because of the relatively undeveloped technology, the risks of front-end development are in excess of those which private enterprise is traditionally willing to bear;
- 6) It is in the interests of the people of Maine that local companies be encouraged to undertake development of this valuable resource, because of their expertise, their accountability, and their relationship with the wood based economy of the state.

It is universally agreed that Maine possesses vastly larger wood resources than are presently being used and that it would be in the best interest of all parties in the state to develop an environmentally acceptable increased use of

this resource.

The use of wood as a chemical feedstock is a known and desirable technology. The need for fuel and gas energy sources is too well recognized for any repetition here. The desirability of having control within the state of all the elements of cost of a fuel with the versatility to power cars, heat homes and drive turbines need only be suggested, particularly at a time when the direct public ownership of large acreage is just now being consolidated into large and usable tracts.

MWFC, therefore, should be organized by the 107th Legislature. There should be provision for initial capitalization provided by the state, private wood companies within the State of Maine, and other industrial, individual and public sources. There should be three classes of directors, with an equal number nominated by the Governor, designated by the wood company investors, and elected in the conventional manner. The directors should have the responsibility of running the business of the corporation as in a private business--they should be adequately compensated so as to make realistic the substantial devotion of time and energy of the best possible people to the affairs of the corporation.

The state should commit itself to test and to use methanol to as large an extent as possible in buildings, power and vehicles controlled directly by State Government. Depending on the results of those tests, the state should enter into a "requirements" contract with MWFC at a price competitive with hydro-carbons plus such premium as will appropriately reflect the public interest in local control of fuel sources. The Public Utilities Commission will declare the "appropriateness" of Maine electric utilities using domestic wood based fuel as an energy source rather than imported hydro-carbons. To the extent that the state or an instrumentality of government is in a better position to secure R & D financing from federal sources, the state, through the Energy Coordinator's Office, should continue to attempt to promote wood development as much as possible,

and to as great an extent as possible to work with MWFC.

Action Required: Enabling legislation to be passed by Legislature; cooperation with private industry to be the responsibility of the Energy Coordinator.

IV. ORGANIZATION OF STATE ENERGY CAPABILITY

24. Abolition of Office of Energy Resources
25. Creation of Governor's Review Board on Energy
26. Appointment of Energy Coordinator in Governor's Office
27. Relationships with Federal Programs
28. Discussions with Appropriate Regional Authorities
29. Education in Energy
30. Facility for Collection of Energy Information

The State of Maine will coordinate all energy-related activities between the State and the federal government, regional governmental organizations in New England, the Canadian federal government and provincial and regional governmental organizations in Eastern Canada. The State will develop the capability to assemble, maintain and process data for accurate assessments of energy flows. Information processing is essential to the management of energy shortages, the prediction and prevention of future shortages, and to the development of a sound energy policy.

24. Abolition of Office of Energy Resources

Purpose: To organize the State energy capability as efficiently as possible.

Description: The Office of Energy Resources was created at the height of the energy crisis precipitated by the Arab oil embargo. OER was directed to draw up plans for meeting Maine's future energy needs. An interim statement of policy recommendations and plans has been completed.

It is imperative that implementation of the interim recommendations begin immediately, to ensure that Maine's energy requirements are met promptly and efficiently. Until June 30, when a final comprehensive plan will be presented, OER will be responsible for carrying out the recommendations in the interim plan.

OER was provided with a specific planning objective; it was not intended for this office to assume broad administrative powers. Therefore, upon completion of the final comprehensive plan, the Office of Energy Resources should be abolished.

Meeting Maine's future energy needs will require a broad range of activities from many different segments of our society, from private citizens, from commerce and industry, and from all levels of government. As a planning organization, OER is not the proper state agency to assume overall, long-range responsibility for these activities.

However, the state should not be without an energy planning capability or the general capacity to coordinate energy matters. Provisions will be made for both requirements.

Action Required: Enabling statute to be passed by the Legislature.

25. Creation of Governor's Review Board on Energy

Purpose: To advise the Governor, the Legislature and the Energy Coordinator on the implementation of energy policy.

Description: It is desirable to have the highest level of public input available to governmental decision making. In implementing the policy recommendations made herein, state government will benefit from the advice of public officials and private citizens who have interest, education, and experience in the areas of energy planning, research, and development.

Therefore, upon abolition of the Office of Energy Resources, the present State Advisory Council on Energy Resources shall become the Governor's Review Board on Energy. Membership of the Council shall remain the same, but it shall become a Cabinet-level Board; the Governor will become, de facto, Chairman of the Council, enabling him to receive the full benefit of the opinions and advice of the members.

Until abolition of the Office of Energy Resources, the Advisory Council shall continue in its present capacity, providing information and assistance in the development of a state energy resources plan.

Action Required: Enabling legislation passed by the Legislature.

26. Appointment of Energy Coordinator in Governor's Office

Purpose: To organize the State energy capability as efficiently as possible.

Description: The position of Energy Coordinator should be located within the Governor's Office. Following the example successfully set by many other states, Maine should create one single position from which all energy affairs of the state can be coordinated. There is no need to maintain a large bureaucratic organization for a wide variety of projects; these projects can be undertaken by existing state agencies, providing there is overall coordination.

It is appropriate that this position be located within the Governor's office, as are the Federal-State Coordinator, State Youth Coordinator and Urban Affairs Coordinator, among others. As the chief executive of the State, it is the Governor who is ultimately responsible for administering energy programs, and the Energy Coordinator should be responsible to the Governor.

It is desirable to have an Energy Coordinator rather than an Office of Energy Resources for two reasons. First is that his proximity to the Governor will ensure maximum awareness and consideration of energy questions. The second reason is that having a minimal staff providing a coordinating function will eliminate the creation of yet another state bureaucracy.

Action Required: Appointment by the Governor of an Energy Coordinator.

27. Relationships with Federal Programs

Purpose: To provide the State with ongoing coordination of energy related activities.

Description: It is appropriate and essential that there be an Energy Coordinator in the Governor's Office, to provide the Governor with information vital to energy related decisions.

Energy programs will be required at every level of state government in the coming years, as energy evolves from an inexpensive and abundant commodity, to a scarcer and more costly one. It will be the responsibility of the Energy Coordinator to ensure maximum efficiency in these programs, and to provide coordination so that unnecessary duplication can be avoided.

As energy becomes a greater consideration of the Federal Government, extensive appropriations will be made for energy research and programs. The Energy Coordinator will be responsible for securing those funds for which Maine is eligible.

In addition to his advisory, coordinating, and grantsman functions, the Energy Coordinator will keep himself abreast of the activities of other federal, regional, and state energy agencies, and will, in turn, inform them of Maine's programs.

Action Required: To be undertaken by the Energy Coordinator.

28. Discussions with Appropriate Regional Authorities

Purpose: To maintain open communications with representatives of the other New England states and the Eastern provinces of Canada for the purpose of maximizing benefits to be obtained through cooperation in energy matters.

Description: Both the New England region and the region of North America that includes New England and Eastern Canada face common energy problems. With the exception of hydroelectric power and firewood, the region is not endowed with the energy resources which are in common use, such as oil, natural gas and low sulfur coal. The major industries of the region require large amounts of fuel, and the fuel requirements for residential space heating and private transportation are higher than in other parts of either country. The energy related needs of the region are sufficiently distinct from the needs of other, more densely populated regions of the United States and Canada, that regional efforts to meet these needs are required.

A variety of mechanisms already exist for an interchange of ideas and resources. The Energy Project of the New England Regional Commission provides an important vehicle. The New England Governors and the Eastern Province Premiers have already met and established coordination in matters concerning energy.

Portland harbor is the second largest oil port on the east coast of the United States, principally because it is the terminus for the pipeline carrying crude oil to the refineries in Montreal. We should actively explore with the Canadian federal and provincial governments those projects on which Americans and Canadians could cooperate for mutual benefit, specifically undeveloped hydroelectric sites, including the large tidal power of the Bay of Fundy. Preliminary discussions at the state/provincial level have indicated that a very large benefit to all parties can be achieved from joint development of various projects on the St. John River, Passamaquoddy, Cobscook, Chignecto and Minas Bays.

The use of wood for boiler fuel or as a chemical feedstock, the implications of locating an oil refinery on Passamaquoddy Bay, and the future possibilities of the Portland-Montreal pipeline are all subjects of continuing interest to the whole region.

Maine is situated right in the middle of the Eastern Atlantic World and has all the attributes and resources necessary to be the catalyst for state, provincial and federal action on effective resource development.

Action Required: To be carried out by the Energy Coordinator.

29. Education in Energy

Purpose: To develop an awareness of the necessity for energy conservation among the population and to improve the present capability to manage energy problems at both the public and private levels by providing a cadre of individuals capable of meeting and dealing with the overall energy question.

Description: There are a variety of approaches that can be taken to educate the public regarding the rapidly changing position of energy in our society. One approach is to establish a program of public education, making information on energy conservation available through the use of the media and through public discussion of the problems. This is already being done with some limited success by various federal, state and local agencies.

Another approach is to introduce energy concepts through the state's educational system. It is felt that this approach would have a greater impact on the development of an energy conservation ethic. A program will be established to make "energy" part of the formal curriculum of the state school system. The program will promote and assist in the formal teaching of subjects relating to energy at all levels, from elementary school through the university, also including adult education classes.

Special programs will also be developed outside the formal school systems, and will include filmstrips, speakers, and student participation programs, such as those presently being developed by the Bolton Institute. These special programs will be made available to schools throughout the state.

Action Required: Implementation by the Energy Coordinator working with the Department of Education and other appropriate agencies.

30. Facility for Collection of Energy Information

Purpose: To maintain the capability of the state to anticipate and to deal effectively with shortages of energy and to provide current and reliable information on the types and quantity of energy resources produced, imported, converted, distributed, exported, stored or consumed within the state.

Description: An Energy Data Center will be established in the Office of Energy Coordinator to collect and maintain all relevant energy data. Forms will be furnished which will indicate the quantity of energy resources which in any way affect the state and which will identify each refinery from which petroleum products have been obtained for sale or resale within the state. Any additional data essential to other state agencies to meet their information requirements will also be collected. Periodic reports of the collected energy data will be prepared.

Action Required: To be undertaken by the Energy Coordinator.

