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# Report of the Citizens' Dickey-Lincoln Project Impact Review Committee to Governor James B. Longley

John D. Robinson

James B. Longley

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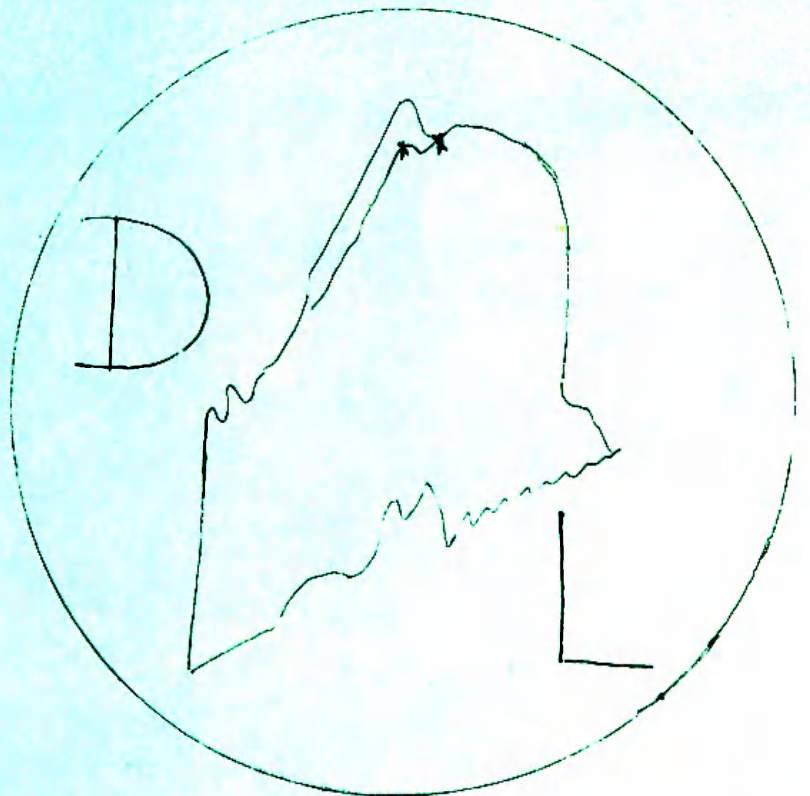
REPORT OF THE  
CITIZENS' DICKEY-LINCOLN PROJECT  
IMPACT REVIEW COMMITTEE

To

Governor

James B. Longley

November 1977



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GOVERNORS DICKEY-LINCOLN IMPACT REVIEW COMMITTEE

Letter of Transmittal

The Honorable James B. Longley  
Governor of the State of Maine  
State House  
Augusta, Maine 04333

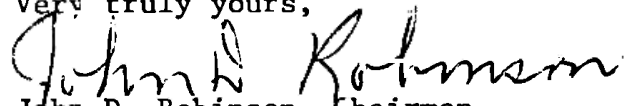
November 30, 1977

Dear Governor Longley:

Enclosed is our report concerning the construction of the Dickey-Lincoln Hydroelectric Project.

We are pleased to have had the opportunity to examine, in depth, the proposal and its impact as seen by various segments of our society. We have enjoyed and anguished in our deliberations and are hopeful that our report will identify the factors that must carry the main weight in making a final determination.

Very truly yours,

  
John D. Robinson, Chairman  
For the Committee

The Membership of the Committee was as follows:

Samuel S. Butcher  
Edward P. Cyr  
James E. Halkett  
Richard C. Hill  
James E. Patterson, Esq.

Charlott M. Porter  
John D. Robinson  
Stanley F. Salwak  
William D. Shipman  
Karen Stewart Snow

JDR/rc

# REPORT OF THE CITIZENS DICKEY-LINCOLN PROJECT IMPACT REVIEW COMMITTEE

## I. Activities of the Committee

Since its appointment in April, 1976 the Committee as a whole, and its members acting individually, have gained some perspective on the many issues surrounding the proposed Dickey-Lincoln School Project. A variety of steps have contributed to that perspective.

The Committee held several half-day meetings during which presentations were made by the Army Corps of Engineers and its contractors on the prospective Environmental Impact Statement, and by several public agencies, private organizations, and individuals. State of Maine agencies which have made presentations or have played an active role include the State Planning Office, the Department of Conservation, the Department of Inland Fish and Wildlife and the Office of Energy Resources. Private groups which have made presentations or have submitted extensive remarks include Central Maine Power Company, Geological Society of Maine, Great Northern Paper Company, Natural Resources Council of Maine (which has represented several environmental groups), Seven Islands Land Company, Society of American Foresters--Maine Chapter and Society of Electrical Engineers--Maine Chapter. In addition, many citizens of Maine and other parts of the country have made their views known by letter.

Committee members chaired Open Comment Meetings in the fall of 1976 in Augusta, Bangor, Fort Kent, and Portland. Many individuals participated in these meetings as did representatives of environmental and other organizations.

Members of the Committee have also tried to gain first-hand information on the project site. A flight over the St. John Valley from Fort Kent to Nine-Mile Stream, including the Big Black River watershed and the critical boundary areas, was made in the fall of 1976. Three committee members took a four-day canoe trip on the St. John River from the Daquaam Road to Dickey in June of 1977. Several members of the Committee have acquired a sensitivity to the problems and values of northern Aroostook County through a much longer exposure than the lifetime of the Committee.

Liaison with the Corps of Engineers and other groups was carried out through the staff office of the Committee at the University of Maine at Farmington. The staff office also served as a repository for technical reports sent to the Committee, and it generally disseminated information to members as directed by the chairman.

Following sixteen months spent collecting information relevant to the project, the Committee was able to identify those factors thought by members to be most significant in evaluating the project. These were discussed at length at a two-day meeting in August, 1977 and at a meeting in October 1977. Individual members of the Committee examined selected areas of the project in depth and reviewed the relevant reports of the contractors and the Corps of Engineers in some detail.

## II. Evaluation of the Project

### 1. General Remarks

In evaluating the project the Committee has endeavored to consider both the interests of the residents of the project area and the interests

of the rest of the state. Moreover, while the project has been examined primarily from the point of view of Maine people, the Committee recognizes that it is probably not in the best interests of Maine, nor perhaps even possible, to remain aloof from regional or national energy problems.

Although the overall benefit-cost ratios suggested by the Army Corps of Engineers, and by others, have attracted a good deal of attention, the Committee is reluctant to attach too much weight to these or to certain other economic measures (for example, estimated dollar savings) which have been prepared for the project, for the following reasons:

- 1) It is difficult to assign specific costs to the most likely alternatives for future peaking power generation because the fuels for these alternatives (oil for gas turbines, nuclear fuel for pumped-storage hydro, etc.) are either subject to wide price movements or, in the case of oil, may simply not be available in the longer term.
- 2) There are many intangible factors--both costs and benefits--which are felt to be significant for this project and whose values cannot be reflected in economic analysis.
- 3) Estimates of the value of the forest resources foregone if the project were to be developed are very sensitive to the assumptions one makes about growth and growth-harvest ratios on the timberland taken out of production, and future markets for wood and its products. It appears that the costs or benefits of the project as developed by the Army Corps of Engineers may be understated in some respects (#1 above) and overstated in others (#3 above). These considerations may be more significant than the much-discussed assumptions regarding the choice of interest rate used for the evaluation of federal projects.



For the reasons given, this report avoids any direct estimate of economic costs and benefits which have been assigned to various components of the project. Rather, the factors which the Committee considers most significant for this project are discussed primarily in qualitative terms. The Committee has not been able to review all aspects of the transmission line system, but some consideration of its impact is included below.

## 2. Intangible Factors

The Committee feels that the intangible factors associated with this project are very significant. Construction of the dam would require the displacement of an entire community (Allagash). Although the displaced residents would be compensated for their lost property, and might find a number of new opportunities opening up for them, it is not likely that their present lifestyles and sense of community could be maintained following their displacement. The loss of the community of Allagash must be viewed, therefore, as a significant one.

The economic values assigned to recreational uses are small compared with the overall benefits or costs of the project. Nonetheless, the project would bring about the loss of a recreational resource which is very scarce and which is not easily evaluated in economic terms. Despite the short season, the St. John River above Dickey represents a significant white water canoeing resource for residents of eastern United States. This resource would be mostly replaced by a large lake whose recreational potential is not essentially different from others in Maine.

The reservoir would eliminate a substantial fraction of the deer wintering habitat in the project area. This would probably result in a loss in the deer herd and a displacement of hunting activity. The reservoir would also eliminate a native brook trout fishery and replace it with a fishery of unknown quality.

The boom and bust nature of a large construction project in a rural area would be expected to impose significant social costs on the residents of the project area and neighboring towns during the construction phase. The culture and lifestyles of the residents would be affected by the immigration of large numbers of workers with their own sets of values and with no long-term interest in the area. While the project would create higher incomes for many residents, its ability to sustain those incomes would depend on the kinds and extent of follow-on economic activity generated.

### 3. Utilization of the River as an Energy Resource.

The Committee has no reason to doubt that the project would play a significant role in meeting peak-hour energy demands which have been forecast for New England. While the energy output would be very small relative to total New England requirements--less than 3 per cent-- the capacity would account for between 15 and 20 per cent of the region's total peaking requirements by the late 1980's. It is recognized that improved load management techniques, including peak load pricing, will restrain in some degree the rate of growth in peaking requirements. But it does not appear, at this time, that such improvements will relieve the need to build new peaking capacity.

The project would make available to Maine 200 megawatts of capacity (out of a total of 830 megawatts) and approximately 530 million kilowatt-hours annually (out of a total of 1200 million)\*. This includes 175 million kilowatt hours of energy which would accrue to the Maine grid each year from Canadian generating facilities as a result of the enhancement of downstream generating capability. By way of comparison, Maine Yankee has 850 mw of capacity and produces almost 6 billion kwh annually. The largest existing hydro plants in Maine are at Bingham and Indian Pond on the Kennebec River where combined capacity and output are 147 mw and 500 million kwh. It is clear that the major energy impact of Dickey-Lincoln in Maine would be as a source of electric power for Electrical Cooperatives and municipal systems throughout the state.

Three-fourths of the peaking energy and more than one-half of the total energy output from Dickey-Lincoln would be shipped out-of-state, at least in the early years. The Committee feels, however, that the interests of Maine cannot be entirely separated from those of the region. Participants in the New England power grid are required to assume responsibilities in addition to the right to receive benefits.

The project offers the advantage of producing power from a renewable resource at very low operating costs. The concentration of cost in the construction phase, together with the long life of the project, means that the overall cost of power will be relatively immune from inflation. Further, the generation of hydroelectricity is comparatively free of the

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\* Because the Lincoln School dam would be in operation most of the hours of the year (Contrasted with the Dickey dam that would run two hours to three hours per day, on average) the kilowatt hours available to Maine would be relatively large, even though the capacity of the Lincoln School dam would be much smaller than the Dickey dam.

health effects common to other means of power generation. The most probable alternative means of producing peaking power in the near term--on the scale needed by New England--appears to be gas turbines, which rely on a resource (fuel oil) that is becoming increasingly scarce. Alternate sites for limited hydroelectric development--both conventional and pumped storage--exist in Maine, but the Committee has not been convinced that the development of these sites would involve environmental costs which are less significant than those projected for Dickey-Lincoln.

The development of the project, including transmission lines, would bring about the irretrievable loss of a forest resource which, like flowing water, is renewable and which also sustains a substantial number of jobs in the state. The forest resource appears to be under-utilized at the present time, and the loss of this resource under present economic conditions appears to be small when compared to the benefits expected from the hydroelectric project. (Forestry jobs in the project area might be moved rather than totally lost; that area accounts for a minor portion of Aroostook County's total forest.) On the other hand, the Committee feels that the degree of utilization and the value of the forest resource are likely to increase in the future. Instead of weighing the hydroelectric benefits against the benefits of lumber and pulp, perhaps one should consider the benefits of a forest resource industry which could ultimately involve a number of products ranging from industrial chemicals, such as fibers and liquid fuels (to replace petrochemical products) through energy, pharmaceuticals, lumber and paper.

#### 4. Secondary Economic Factors

Secondary benefits stem mainly from the presence of a large amount of "load factor" power in Maine and the effect this might have on income, economic development, and property values. Construction of the project would obviously introduce a large number of temporary jobs to the project area and correspondingly increase the amount of commercial activity. Aside from the influence of the energy itself, however, longer run secondary benefits are largely hypothetical.

Significant secondary economic costs are mainly limited to the construction phase and the years immediately thereafter. These include an increase in municipal tax burdens and in the cost of goods and services in the project area. Apart from some upward pressure in wage levels, the majority of the residents will not receive any benefits during the construction phase. Indeed, they may experience an economic loss as a result of this increase in the cost of living.

### III. Recommendations

Members of the Committee attach different weights to the factors described above because perceptions and values differ. The Committee members have voted six to four against the project. In spite of this, the Committee does not feel it has reached a clear consensus on a single recommendation. It is our opinion that the final decision should be considered in light of the energy policies that evolve for Maine and the country as a whole.

We hope that the absence of a clear consensus regarding the construction of the project will not detract from our intention to identify the main considerations.

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Lincoln Project Impact  
Review Committee.

Report of the Citizens'  
Dickey-Lincoln Project  
Impact Review Committee to  
Governor James B. Longley.