

Coleson Cove; progress or disaster?

By MAURICE GAUTHIER

"Social costs would be small in comparison with the direct benefits of the project" — National Energy Board.

Such was the National Energy Board of Canada's statement, made in conjunction with the issuing of three licenses to the New Brunswick Electric Power Commission allowing it to export power and energy to companies in the State of Maine and, in the process, giving it the "go-ahead" to invest \$120 million in the construction of what will become New Brunswick's largest thermal plant at Coleson Cove, Lorneville.

In keeping with North American trends, New Brunswick's power demands are increasing at phenomenal rates. The NBEPC expects a doubling within the next four to five years. In order to meet this requirement, drastic measures were in order. The nature of the product, however, proved to be the greatest stumbling block. Electricity, unlike manufactured goods, cannot be stored once it has been produced but must be put to use immediately. This problem is further complicated by the fact that the daily demand fluctuates drastically from mid-day and early-evening "peak load" requirements to early morning and mid-afternoon "base load" requirements. To meet this upsurge in demand, the Commission must produce what is referred to as "peak power" (i.e. electricity produced only for the duration of the excess demand). This electricity is produced above the so-called "base power" or constant amount produced to satisfy the minimum industrial, commercial, and residential requirements.

At the present time, the Province obtains ninety percent of its power from its own power plants and the remaining portion from Hydro Quebec. The provincial system is a relatively small one comprising fourteen plants, half of which are thermal (i.e. employ steam to operate generator) and half hydro (make use of water power to turn the turbines). The total power supply, 1,150,000 kilowatts, is about one tenth of the installed capacity of Hydro Quebec and about one twentieth of the twentieth of the total capacity of the State of Maine.

As a result of their need for supplemental power which must be gotten during the daily peaks, compounded with the need of backup systems of at least equal potential in the advent of power failures, the NBEPC is a member of the Northeast Power Coordinating Council. This association, one of several throughout North America, includes the Province of Ontario along with the States of New York, Vermont, New Hampshire, Massachusetts and Maine. And allows each member of construct power generators to meet their own demands in such a manner that they may rely on each other in case of emergency. Such a conglomerate also has much to offer with respect to efficient power management. For example, due to a time zone difference between New Brunswick and Ontario, peak demands occur at different times of the day. As a result, both provinces

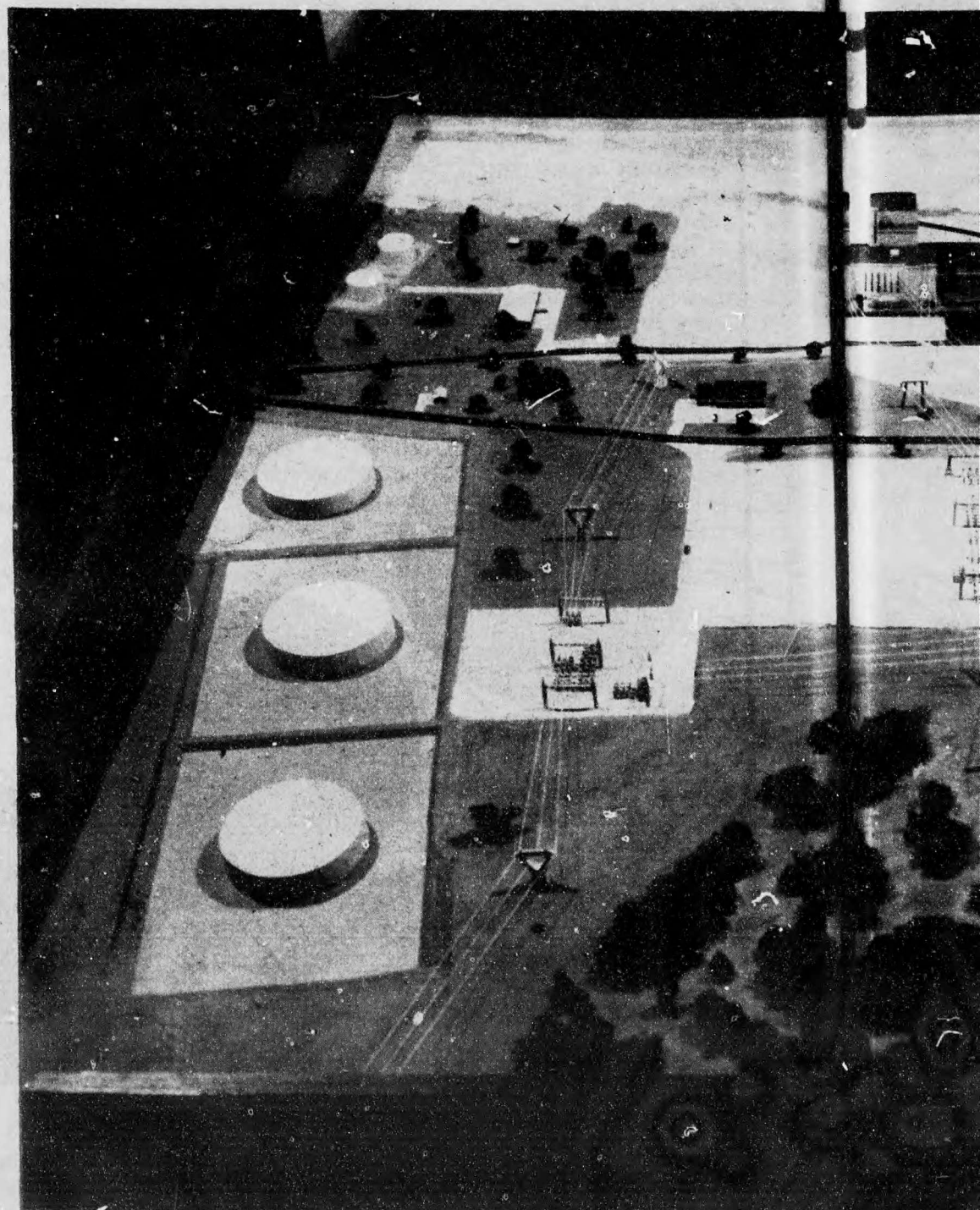
could supply each other with the peak power required in an alternate fashion thus making it unnecessary for both provinces to invest in units to meet their individual excess demand.

In building at Lorneville, the NBEPC is looking to the future. At the present time, the electrical needs of the province do not warrant the building of a generating station of the size of the Coleson Cove Project.

The plans call for two 315,000 kilowatt units to be installed initially, the first of which is scheduled to be in operation in the early part of 1976. Further units will be installed as load conditions warrant, the physical layout of the plant making provision for up to six units with a total output of over 1,800 megawatts. The need for such an amount of power, although increasing every year, will not be felt until the mid nineteen-eighties. In the meantime, the province plans on exporting its surplus power to the State of Maine while cutting back on its Quebec imports. The first licence granted by the National Energy Board (NEB) is for the export of a maximum of 400,000 kilowatts of peak power to the Maine Electric Power Co. Inc.

Maine Electric is also to receive a maximum of 876 million kilowatt hours of peak energy annually between 1976 and 1985, with a maximum of 2,189 million kilowatt hours in 1986. Under the third phase, New Brunswick will transfer 25,000 kilowatts of power from Maine Electric to the Public Service Co., and the Eastern Maine Electric Cooperative Inc. When the plant opens, approximately two-thirds of its output will be exported. As the provincial demand rises, the extra power will be exported in such a manner that by 1990, the output of the Coleson Cove Thermal Plant will be channeled into New Brunswick.

In effect, the province is enlisting financial support of the State of Maine to meet its present and future needs. A result of having a maximum of any extra power, is in the fortunate position of being able to build a much larger and efficient plant than it could if it had only with short-term provincial demand. With this project will come an estimated one hundred construction jobs and about one hundred full-time ones. Furthermore, 7-million-plus



This is a model of the proposed thermal generating plant at Coleson Cove. The plant is in the background.