

and to investor-owned electric distribution companies for distribution. The Newfoundland Light and Power Company is the principal distributor. Bowater Power Company Limited supplies the Bowater Newfoundland Pulp and Paper Mills Limited and several large mining operations. Electricity is provided to isolated areas by the Newfoundland and Labrador Power Commission through a Rural Electricity Authority and through Power Distribution Districts, principally by means of diesel generator sets.

Construction of the 5,225-MW Churchill Falls hydro development in Labrador continued to dominate the scene in this province. With three 475-MW units (units 5, 6 and 7) coming on line in 1973, the plant's capacity reached 3,325 MW in seven units, a full year ahead of original schedule. The 1,900 MW in operation in 1972 established the plant as the largest hydro plant in Canada and the latest additions have made it the largest individual hydro station in North America. Three additional 475-MW units in 1974 and a fourth in 1975 will add still another 1,900 MW for a total of 5,225 MW in 11 units. Virtually all of the Churchill Falls energy is sold to Hydro-Québec and is delivered to the Hydro-Québec system via 735-kV transmission. To match the rapid plant construction program, erection and stringing of the third 735-kV line from the Churchill Falls hydro station to the Labrador/Quebec border was completed in 1973; construction of this third line posed special problems to avoid the dangers of induced voltage from the two adjacent in-service transmission lines. Because of the advanced schedule at Churchill Falls some water flow was diverted from the smaller Twin Falls plant to the main Churchill Falls development reservoir for more efficient use at the higher head Churchill Falls plant.

Downstream of Churchill Falls, Brinco has undertaken feasibility studies on a projected 1,800-MW development at the Gull Island site. Additional sites could be developed on the Lower Churchill and adjacent rivers to substantially increase the available capacity. The provincial government commissioned a study, to be completed in 1974, on the feasibility of transmitting energy across the Strait of Belle Isle from Labrador to the island of Newfoundland. The Government of Newfoundland has indicated that energy from future development of the Churchill River in Labrador should be used in Newfoundland rather than exported. The island is expected to require additional power by 1977-78 to meet load growth, and the alternative to transmitting power from the Lower Churchill River would be additional "on-island" thermal generation and some further, though limited, development of hydro power.

Substantial expansion in "on-island" generating facilities in recent years was sufficient to meet the needs at present and for several more years. Although no new expansion was under way on the island in 1973, construction continued on a second 230-kV connection between the Baie d'Espoir hydro development and the west coast of the island. Some 85 miles of 230-kV transmission line was completed in 1973 from a new switching station at Buchans to the Bottom Brook terminal.

Prince Edward Island. The absence of any large streams in the province has led to an almost total dependence on oil-fuelled thermal-power generation except for a few minor hydro plants used to operate small mills. The Maritime Electric Company, Limited provides direct service to customers in Charlottetown and in the towns, villages and rural areas of the province with the exception of Summerside, where a municipal electric department serves customers with power purchased from the Company while the town's 6.9-MW diesel plant is on stand-by.

In 1973 the Maritime Electric Company, Limited installed a 25-MW gas turbine at Borden, raising that station's total capacity to 39 MW. A short 69-kV line was constructed to interconnect the Borden plant with the existing 69-kV system at Albany. Demand on the Maritime Electric system was 11.8% over the previous year but that rate of increase is not expected to be repeated in 1974 because of sharp increases in energy rates resulting from increased fuel costs.

Interconnection with the mainland by means of a 138-kV submarine cable across Northumberland Strait is being planned for service in 1976. With this facility the Island will have access to the much larger power systems on the mainland, including nuclear generation, and will thereby be relieved of its dependency upon small capacity thermal generation and imported oil supply for power production.

Nova Scotia. In 1973 the operations of the Nova Scotia Light and Power Company Limited and the Nova Scotia Power Commission were integrated into a single utility, the Nova Scotia