

exceeding the rise in the cost of living. The industrial and commercial sectors also benefited from subsidies for one year, with the provincial government picking up half the increase.

### 13.10.4 New Brunswick

Provincial consumption grew by 7.9% in 1977, made up of a 12.3% increase in industrial demand and a 4.8% increase in non-industrial consumption.

The New Brunswick Electric Power Commission undertook a generation expansion program to raise the installed capacity in 1980 by 1 050 MW, an increase of almost 50% over the 1977 level of 2 140 MW. Additions would include hydro, oil and coal-fired thermal plus nuclear generation. The Mactaquac hydro station on the Saint John River was increased by 220 MW with the installation of the fifth and sixth units in 1979; a 200-MW unit capable of burning oil or coal was to be added in 1979 to the Dalhousie thermal station.

The first nuclear power station in the Maritimes was under construction at Point Lepreau, west of Saint John, on the north shore of the Bay of Fundy. Initial operation of the first 630-MW CANDU unit was scheduled for 1980. Provision was made for a second unit to be installed in the future to help reduce the province's dependence on high cost fossil fuels to produce electricity.

In 1977 the third and last 335 MW generating unit was installed at the Coleson Cove oil-fired station. Of the 1 005 MW capacity, 400 MW are committed for export to New England for a decade from 1976.

Planning for reinforcement of the provincial power grid is well under way. The existing system will eventually have an overlay at 345 kV for reinforcement of major north-south transmission and will connect the nuclear station in southwestern New Brunswick with load centres. The first stage of this planned expansion is a 345-kV transmission line between Coleson Cove and the substation at Salisbury serving Moncton. This is also the terminal for the reinforced Nova Scotia/New Brunswick interconnection to be completed in 1979. Construction began on the 345-kV line between St-André and the Eel River terminal. The latter is the termination point of the Hydro-Québec intertie and the new Dalhousie generating unit. A second 345-kV line of 116 km connecting Coleson Cove to the Keswick Switching Centre was completed during 1977 and a 345-kV connection to Point Lepreau was finished in 1978.

### 13.10.5 Quebec

Over 99% of Quebec's electrical energy supply is generated hydraulically. Hydro-Québec's current generation expansion program is designed to meet an average annual growth of 7.7% in peak demand.

There were significant changes in Hydro-Québec's generation planning during 1978. Construction on the LG-2 site of the James Bay project was more rapid than originally estimated and the first four units were expected to be in service during 1979 rather than 1980. Installation of a further four units of the 16-unit LG-2 plant was also being accelerated. However, the 1 140 MW of the planned LG-1 site was being deferred three years to come into service in 1986-87. Two generating units were to be added to each of LG-3 and LG-4 for additional peak capacity of 970 MW as substitutes for LG-1. It is planned that four 247-MW units will also be brought into service in 1985 at the Manic 5 site. Phase I of the James Bay project, with an output of 10 269 MW, will now cost an estimated \$15.1 billion, \$1.1 billion less than estimated earlier.

The Gentilly II nuclear plant was deferred by two years to an in-service date of 1981. Completion of AECL's La Prade heavy water plant was also indefinitely deferred during the year, due to an oversupply of heavy water.

Included in the expansion program was a pumped storage facility northeast of Quebec City at Lac Delaney, one of the few of its type in Canada and one of three considered by Hydro-Québec. The concept of pumped storage involves the use of relatively low-cost energy during off-peak periods to pump water into higher storage areas for use in producing electricity during peak power demand times. Although it takes an estimated 1.4 kWh of energy during off-peak service to produce 1 kWh of energy during the peak periods, development of these facilities is worthwhile because of the