

clusively hydro-electric base more flexible through integrated operation. Quebec's largest conventional thermal plant, the Tracy station near Sorel, has an installed capacity of 600 MW.

Commissioning of seven 475-MW units at the Churchill Falls plant in Labrador, with virtually the entire capacity (ultimately 5,225 MW) under long-term purchase contract with Hydro-Québec, has provided the province with most of its additional power needs over the short term. Accordingly, the province has been able to plan generation expansion on a longer-term basis than would otherwise be the case; consequently, in-province completions in 1973 were limited to a net gain of 35.1 MW in hydro capacity and a small thermal increase of 5.8 MW.

Over the short term, completion of Churchill Falls will provide Quebec with an additional 1,900 MW of hydro-electric capacity, 1,425 MW to come on line in 1974 and the remaining 475 MW in 1975. Construction of the Manicouagan—Outardes hydro complex will be completed by 1978 at which time an additional 1,640 MW will have been developed at two sites — Manic 3 and Outardes 2. In thermal power, Hydro-Québec has scheduled a 90-MW gas turbine plant for 1977 at Figury in the Abitibi region and a 12-MW addition at Cap-aux-Meules for 1974. The largest thermal addition currently committed is a 637-MW nuclear unit for service in 1978 at the Gentilly plant. To be known as Gentilly II, this unit will augment the 250-MW nuclear unit (Gentilly I) commissioned in 1971.

In the James Bay region work has already started on the first phase of development, known as the La Grande complex. Plans through 1985 envisage the construction of dams, powerhouses, spillways, control structures and 80 miles of dykes, with associated reservoirs to store and divert water from the Caniapiscou, Grande Baleine and Opinaca rivers to the La Grande River. The four proposed powerhouses will span a 300-mile reach of the La Grande River and develop the entire 1,245 ft of head upstream of its mouth. Subject to final design approval the four stations, designated LG-1 through LG-4, have been planned to have a combined generating capacity of 10,776 MW, almost half of which (5,328 MW) will be developed at LG-2 in 16 units of 333 MW each. The other three plants are expected to produce 1,185 MW, 1,860 MW and 2,403 MW. To augment this phase of development, studies are being conducted to assess the economic feasibility of a Phase 2 program to harness the Rupert, Broadback, Nottaway and Eastmain rivers, located south of the La Grande River basin.

Ontario. Most of the electric power produced in the province comes from generators of The Hydro-Electric Power Commission of Ontario. The province's largest hydro-electric generating station is located on the Niagara River at Queenston where the Sir Adam Beck—Niagara generating stations Nos. 1 and 2 and the associated pumping-generating station have a combined generating capacity of 1,815 MW.

Ontario has more thermal capacity than any other province in Canada; capacity installed at the beginning of 1973 was 9,148 MW, about 52% of the national total. Ontario Hydro's Lakeview station at Toronto is Canada's largest thermal generating station with an installed capacity of 2,430 MW. The Lambton station near Sarnia reached its designed capacity of 2,000 MW in 1970. Except for the oil-fired Lennox station (near Kingston) now under construction, Ontario's fossil-fuelled thermal plants are designed to be coal-fired.

The East and West Systems, formerly separate operating entities, were fully integrated in 1970 and, although the capacity of the interconnection is a limiting factor in the exchange of power, the combined facilities now form a unified provincial network. For general day-to-day operations the province is still divided into seven regions, with regional offices located in major municipalities.

The primary concern of the Commission is the provision of electric power by generation or purchase to more than 350 electric utilities for resale in municipalities having cost contracts with the Commission. The Commission also supplies power in bulk to direct customers, mostly industrial customers whose requirements are so large or so unusual as to make service by local municipal utilities impracticable. These include mines, industries in unorganized territories, and certain inter-connected systems.

In addition to these operations which represent about 90% of its energy sales, the Commission delivers electric power to retail customers in rural areas and in a small group of 15 municipalities served by Commission-owned local distribution facilities. However, retail service is generally provided by municipal electric utilities, owned and operated by local commissions which supply ultimate customers in most cities and towns, many villages and certain populous