

and Power Authority signed a letter of intent to construct and operate a 500-kV intertie between Calgary and Cranbrook, to be operational in 1983.

There was no increase in Alberta Power's production capacity during 1977-78 but construction continued on the fifth 375-MW unit at the Battle River coal-fired plant, scheduled for service in 1981.

The AERCB approved an application by Alberta Power to build a coal-fired plant near Sheerness. This plant will consist of two 375-MW units with the first unit to be commissioned in 1985 and the second in 1986. The Sheerness plant will have more than enough capacity for Alberta Power's needs, and commercial arrangements for the remaining capacity will be negotiated with Calgary Power and Edmonton Power.

Alberta Power's 280-km transmission line from the provincial electric grid at Mitsue near Slave Lake to the Syncrude oil sands operation at Mildred Lake was converted to the planned 240-kV level in 1977. This line operated at 144 kV during 1976 to connect the Syncrude site and the rapidly expanding town of Fort McMurray to the provincial grid. Other 144-kV line additions to the Alberta Power system in 1977 and 1978 were: 128 km from the Swan Hills area to the Sturgeon substation south of Valleyview; 80 km paralleling an existing circuit from Manning to Keg River; and 48 km to provide additional capacity and reliability to the Vermilion-Lloydminster area; 153 km from the Monitor substation to Empress to provide increased reliability to southeast Alberta; 61 km from Metiskow to Lloydminster. The first 45-km section of a 180-km line from Vegreville to Bonnyville went into service mid-year from Vilna to Hairy Hill at 75 kV (in late 1979, the line was to carry 144 kV).

Edmonton Power's generating system was increased in 1977 by 171 MW with a third generator added at the Clover Bar station. A fourth 171-MW gas-fired thermal unit was installed in 1978.

During 1977 Edmonton Power built a 240/72-kV terminal station in the west end of Edmonton linked to the provincial grid at 240 kV via the Calgary Power system. Two 240-kV transmission interconnections were undertaken in 1978; one connects the Bellamy terminal station by a double circuit line and underground cable and the second a 240-kV tap to the Petrolia substation. A 13-km stretch of 240-kV line was constructed in 1979 between the Jasper terminal and Calgary Power's station.

At Mildred Lake, near Fort McMurray, AEC Power Ltd., a subsidiary of Alberta Energy Corp. and Calgary Power Ltd., completed a 260 MW thermal generating station to supply power and process heat to the nearby Syncrude Oil Sands mining and refining project. Commercial operation was expected to begin in 1978.

13.10.10 British Columbia

Production expansion during 1977-78 included the third and fourth 434-MW units at the Mica Dam hydro project which now has a capacity of 1 736 MW. Installation of a 53.9-MW gas turbine unit at the Keogh station near Port Hardy was the only addition to thermal capacity in 1978.

British Columbia Hydro and Power Authority has three major hydro projects under construction: Seven Mile on the Pend-d'Oreille River, Site I on the Peace River, and Revelstoke on the Columbia River. The Site I project was expected to have an installed capacity of 700 MW in four 175-MW units, the first two to be in service in 1979 and the other two in 1980. Construction of the Revelstoke project began in 1977: three 450-MW units were planned for service in 1982 and a fourth in 1983; provision will be made for two additional units for an ultimate capacity of 2 700 MW.

The tenth and final unit of the Gordon M. Shrum hydro project on the Peace River was scheduled for service in 1980. This 300-MW unit will increase the capacity of the plant to 2 416 MW.

The north coast communities of Kitimat, Terrace and Prince Rupert were linked with BC Hydro's provincial power grid through a 500-kV line between the Williston and Skeena substations. In 1978 BC Hydro changed the route of a twin 500-kV transmission line from Kelly Lake to Nicola substation because of public concern over range land.

In January 1979, BC Hydro advanced the construction of a second 500-kV "backbone" transmission line extending 136 km from Victoria north to Qualicum Bay