

for completion in 1975 and the remaining two in 1976. On the Peace River 14 miles downstream of the G.M. Shrum generating station, preliminary work on camps, site-clearing and access roads has been put in hand at Site 1; first power from this four-unit 700-MW station is expected in 1979 with completion in 1980. The fourth major hydro electric installation is at the Seven Mile Project and preliminary work on the labour camp started in 1975. Three units totalling 525 MW are expected to be in service in 1980.

To match the generation expansion program significant additions to the transmission system are in progress. By the end of 1974, 61 miles of the 500-kV circuit No. 1 to Mica had been completed and work was proceeding on the remaining line sections. Clearing was completed for the second 500-kV circuit.

The capacity of the main 500-kV system from the G.M. Shrum Station was increased by additions to the series capacitor installations at four locations. Civil engineering works were completed at the new 500-kV substations at Nicola and Meridian.

For the longer term, detailed studies are being made of coal deposits at Hat Creek, 13 miles west of Cache Creek, as a possible source of fuel for a large thermal electric generating station. This deposit is now estimated at 500 million tons which could support a 2,000-MW generating station, and more coal may well be located in areas surrounding the proven body.

Yukon Territory and Northwest Territories. The Northern Canada Power Commission, a Crown corporation established in 1948, is empowered to survey utility requirements, construct and operate public utility plants in the Northwest Territories, the Yukon Territory and, subject to the approval of the Governor in Council, elsewhere in Canada. Projects undertaken by the Commission must be financially self-sustaining.

A preliminary evaluation of hydro-electric potential has been made for most of the major rivers in the Yukon Territory and in the central portion of the Mackenzie district of the Northwest Territories confirming the existence of substantial waterpower potential. The Yukon River and its tributaries contain some of the larger undeveloped hydro-electric resources in North America.

Except for the Yellowknife area the power needs of the Northwest Territories prior to 1965 were met from thermal sources but the balance was altered in favour of hydro by completion of the station on the Taltson River near Fort Smith. With several new additions over the 1970-73 period, thermal facilities have again become dominant in terms of installed capacity. Thermal (diesel) capacity also surpassed hydro in the Yukon Territory in 1971, however, from an energy production point of view hydro is the dominant energy source in both Territories since the larger load centres are essentially on hydro supply. Thermal electric generation in the Northwest Territories and the Yukon Territory has been provided by diesel units and this same source, employing larger capacity units, will continue to play a major role in meeting load growth in both Territories. Additional hydro capacity is being developed in both areas and this will likely be the predominant power source in the long term.

The Northern Canada Power Commission has hydro-electric power developments on the Yukon River near Whitehorse and on the Mayo River near Mayo in the Yukon Territory; in the Northwest Territories, it has developments on the Snare River northwest of Yellowknife and on the Taltson River northeast of Fort Smith.

During 1974 Northern Canada Power Commission increased its generating capacity by a total of 13.6 MW adding 1.6 MW in the Yukon and 12.0 MW in the Northwest Territories.

During the year the Commission acquired three additional systems in Grise Fiord, Pond Inlet and Arctic Bay, NWT; negotiations progressed with the Ministry of Transport toward acquisition of the existing power system in Resolute, NWT; and a generation and distribution system was established in Johnson's Crossing, YT. At the end of 1974 the Commission was responsible for electrical services in 52 separate communities throughout the northern territories.

Construction is nearing completion on a 30-MW hydro plant on the Aishihik River in the Yukon Territory, which will be tied into the present Whitehorse-Faro system. Studies are also proceeding on the development of an even larger hydro site with a potential of the order of 50 to 100 MW.

In the Northwest Territories construction began on a 9.6-MW two-unit hydro station at Snare Forks, which will be the third development on the Snare River. The Snare Forks plant is