

seven units are scheduled for completion by November 1959. One of the major highlights of the project occurred on July 1, 1958, when an earth-filled cofferdam upstream of the powerhouse was demolished and the powerhouse headpond area was flooded.

Construction of the control dam, which forms part of the Niagara River remedial works carried out jointly by Canada and the United States, was completed in 1957 when the last of the 13 individually operated bascule-type gates was placed in operation.

In the Sir Adam Beck-Niagara Generating Station No. 2, two 105,000-h.p. units were installed in December 1957; two similar units were completed in mid-1958 and the ultimate plant capacity of 1,680,000 h.p. in 16 units was attained. At the pumping-generating station associated with the No. 2 development, three units were placed in operation in the latter part of 1957 and the remaining three in the spring of 1958. During periods of low power demand, the units will pump water diverted from the main power canal into a reservoir having a capacity of 16,000 acre-feet. In periods of high power demand, they will operate as turbines, each with a capacity of 47,000 h.p. at maximum head. Flow from the reservoir will in turn augment the flow in the power canal and thus increase the output in the main generating station.

Further progress was made by the Commission during 1957 and 1958 on the construction of new hydro-electric plants in northwestern Ontario to meet a growing demand for power by pulp and paper and mining companies in that area. Construction was completed in the later year of the three-unit, 81,000-h.p. plant at Whitedog Falls on the Winnipeg River, and of the three-unit, 102,000-h.p. plant at Caribou Falls on the English River. Construction began in the spring of 1957 for an additional unit of 18,500 h.p. in the Manitou Falls Generating Station on the English River and the unit was placed in service in March 1958, increasing the installed capacity of the plant to 92,500 h.p. in five units. At the Cameron Falls and Alexander Falls plants on the Nipigon River, two units of 25,000 h.p. and 19,000 h.p. respectively were added. At Silver Falls on the Kaministikwia River, construction began on a single-unit 60,000-h.p. plant for completion late in 1959.

In northwestern Ontario, the Commission plans to install an additional 60,000-h.p. unit in its Abitibi Canyon Generating Station for service in 1959. The new unit will generate 60-cycle power, as opposed to the 25-cycle power which is developed in the existing 264,000-h.p. installation, and will result in more dependable service loads to those communities in the area that require 60-cycle power. The Commission also plans the construction of a 53,000-h.p. plant in two units on the Mississagi River at Red Rock Falls for service in 1961 and the installation of a new plant at Otter Rapids on the Abitibi River for service in 1962.

A vital factor in the Commission's plans for the future is the development of power resources other than hydraulic as supplemental sources of power. During 1958 the Commission undertook the construction of two new thermal-electric generating stations, Lakeview Generating Station immediately west of the Metropolitan Toronto area and Thunder Bay Generating Station at Fort William. A third station is planned for the Hamilton area. Excellent progress was made also on the enlargement of the Richard L. Hearn Generating Station to 1,200,000 kw. or three times its present size. Studies were continued in conjunction with Atomic Energy of Canada Limited and other agencies with regard to the development of a large-scale reactor for the production of energy from nuclear resources. Plans for a 200,000-kw. nuclear-electric generating station are being developed. In the meantime construction of the 20,000-kw. nuclear-electric generating station near the Des Joachims Generating Station on the Ontario side of the Ottawa River was resumed. Work there had been temporarily suspended in 1957 to permit changes in the design of the reactor to be incorporated.

Apart from the activities of the Commission, the Great Lakes Power Company placed in service in 1957 a new 30,000-h.p. unit to its Upper Falls plant on the Montreal River increasing the plant capacity to 55,300 h.p. In 1958, a 30,300-h.p. single-unit generating station was completed at Gartshore Falls on the Montreal River and a similar unit on the Michipicoten River at Cat Falls is expected to be in operation by mid-1959.