

have been erected and about a quarter of the concrete for the penstock saddles and envelopes has been placed. Two-thirds of the steel for the power-house superstructure has been erected and about half the concrete has been placed.

During 1953, the Commission amended the program of work to provide for a pumped storage scheme and later, when required, for four additional generating units. A storage reservoir of about 15,000 acre-feet, and adjacent to the forebay, will be created by a dyke, and a pump-turbine plant will be built to raise water to the reservoir. The pump-turbine plant will operate as a generating station when water is being discharged from the reservoir and will have a capacity of up to 170,000 kw.

By virtue of this scheme, optimum use will be made of the Sir Adam Beck-Niagara Generating Stations since the storage reservoir can be filled at night and the impounded water can be used during the daytime by generating units which would otherwise be idle. The canal and forebay are now being enlarged and part of the headworks for the four additional units is being constructed; later, the power-house will be extended to accommodate the additional units. However, these four units will not be installed until high load-factor resources such as the St. Lawrence project and thermal-power plants have been developed.

(c) Pine Portage Generating Station

The first two generating units at this station on the Nipigon River were placed in service in 1950. In 1952 the Commission decided to install a third unit at this station and in April 1953 it was decided to proceed with the installation of the fourth unit; each of these units will be rated at 45,000 h.p. The third unit is scheduled for service in September 1954 and the fourth in December 1954.

(d) Manitou Falls Generating Station

During October 1953 the Commission decided to build a generating station at Manitou Falls on the English River. Three generating units, which will have a combined capacity of about 46,000 h.p., will be installed. Before construction can be started, a 14-mile access road from Ear Falls Generating Station must be built. Plans call for the completion of this road by early 1954, while the generating station itself is scheduled for service in 1956.

Steam-Electric Stations

(a) Richard L. Hearn Generating Station, Toronto

All four generating units of the first and second stages of this station are now in service. The fourth unit was placed in service in June 1953. Initially the first unit was operated at 25 cycles but the unit has now been changed over for operation at 60 cycles. The present installed capacity of the station, with one 25-cycle and three 60-cycle units, is 388,000 kw. However, when the remaining 25-cycle unit is changed over for operation at 60 cycles, the station's capacity will be raised to 400,000 kw.