

Ontario, two large fuel-electric stations at Toronto and Windsor respectively and the Sir Adam Beck-Niagara Generating Station No. 2. The program, with allowances for revisions in the capacity of some sources, has served to bring the dependable peak capacity at the end of 1954 to 4,135,050 kw., an increase of 569,700 kw. over the capacity in 1953 and of 2,197,550 kw. over the capacity in 1945.

During 1954 construction was completed for the major hydraulic features at Sir Adam Beck-Niagara Generating Station No. 2 and seven units were in service by the end of the year. Meanwhile excellent progress was maintained in the construction of the powerhouse and the pumped storage scheme. Initially twelve units will be installed at the station, to be followed by the incorporation of the pumped storage scheme. Eventually four more units will be added at the main generating station as required.

The remedial works above the falls in the Niagara River required under the terms of the Niagara Diversion Treaty of 1950 are being undertaken by the United States Corps of Engineers on the United States side of the River and, on the Canadian side, by Ontario Hydro. The whole cost will be shared equally by Canada and the United States. The works include excavations on both sides of the River, a rock-faced retaining wall and some fill on both sides of the Horseshoe Falls, and a control structure on the Canadian side. Excavation on the United States side was completed in 1954 and construction of the control structure by Ontario Hydro was well under way.

In northwestern Ontario two additional units were installed at Pine Portage Generating Station to complete the construction work planned at this station and construction was proceeding rapidly for the Commission's new station at Manitou Falls. A significant extension was made to the Commission's facilities for the interchange of power by the construction of a second 115 kv. line between the Southern Ontario System and the North-eastern Division of the Northern Ontario Properties.

The 1955 Year Book, at pp. 549-553, contains a general descriptive article on the St. Lawrence Power Project, on which commencement of construction on Aug. 10, was marked by an international ceremony. Although this Project is a separate undertaking from the St. Lawrence Seaway, the planning, construction, and operation of both must be carefully co-ordinated. Construction of the Seaway is the responsibility of authorities created by Canada and the United States. The Power Project is being built by Ontario Hydro and the Power Authority of the State of New York and is subject to the approval of a Joint Board of Engineers appointed by the Governments of Canada and the United States. Ontario Hydro and the New York State Power Authority will share equally in the cost of constructing the development, exclusive of the cost of powerhouse machinery and equipment which will be borne by the respective entities. The generating station on the Canadian side will be known as the Robert H. Saunders-St. Lawrence Generating Station in honour of a late Chairman of the Commission.

Preparatory construction work on the St. Lawrence Power Project was carried on during 1954. During the period when navigation was closed two access tunnels and a retractable Bailey bridge were constructed to provide access to the site without interference to the movement of ships through the Cornwall canal. Meanwhile construction of cofferdams proceeded and upon completion, in the early summer of 1955, dewatering of the site was begun.

The Power Project on the St. Lawrence River is the last major hydro-electric site available to the Commission in southern Ontario. To provide for future needs the Commission must look to new resources that may appear to be less economical than those now in use or under construction. These may be hydro-electric resources located at greater distances from load centres or fuel-electric resources using coal, oil or gas. The relative scarcity of these fuels in Ontario however gives added importance to the studies being carried out with regard to the feasibility of generating electric power from nuclear reactors using fuels that are, by contrast, available in abundance in Canada. Atomic Energy of Canada Limited and members of the Commission's staff have participated in these studies which have resulted in the initiation of a project to construct a small nuclear power plant in which the Commission and the Canadian General Electric Company Limited are associated