

Island and one on the main channel below Galop Rapids, near Iroquois, Ont. Tenders have been called for the supply of 75,000 h.p. turbines, 16 of which will be installed and operated by the Commission, with initial operation scheduled for 1958.

Extensions to the Commission's transmission system included 185 miles at 230 kv., 263 miles at 115 kv., 197 miles at 13 kv. to 44 kv., and 1,080 circuit miles of rural lines. Good progress was made on the conversion to 60 cycle operation of equipment in the area previously using 25 cycle power and about 50 p.c. of the program was completed. One 85,000 h.p. generating unit in the DeCew Falls Plant No. 2 was changed to 60 cycle operation.

The Great Lakes Power Company in October 1954 completed its McPhail Falls development on the Michipicoten River, consisting of two turbines, 7,500 h.p. each, under 48 foot head and each driving a 5,000 kva. generator.

Prairie Provinces.—In *Manitoba* the Manitoba Hydro-Electric Board proceeded on schedule with the construction of the McArthur Falls development on the Winnipeg River. Four units, operating under reduced head, were placed in service during December 1954 and it was expected that the plant of 80,000 h.p. in eight units would be completed by July 1955. A new 110 kv. double-circuit transmission line has been completed from the plant to Transcona. The Manitoba Power Commission continued to expand its distribution system; extensions include 115 miles of transmission line at 115 kv., 21 miles at 66 kv., and 92 miles at 33 kv. The City of Winnipeg brought into operation a second unit of 25,000 kw. in its auxiliary steam plant.

In *Saskatchewan* the Saskatchewan Power Corporation completed a new unit of 25,000 kw. in the Saskatoon steam plant, bringing total capacity to 75,000 kw. A dual fuel unit of 2,500 kw. was installed at Swift Current. During the year, about 290 miles of 69 kv. line were built joining Weyburn to Assiniboia, Estevan to Red Jacket, and Saskatoon to North Battleford.

In *Alberta* Calgary Power Limited completed its Bearspaw development on the Bow River a short distance west of Calgary. The plant comprises a 20,750 h.p. turbine under 48 foot head, driving an 18,000 kva. generator. The Company also brought into operation a third unit of 30,000 h.p. with 23,500 kva. generator in its Ghost plant farther upstream; the plant operates under 92 foot head and total capacity is 66,000 h.p. In addition construction has been undertaken for 1955 operation on two new developments on the Kananaskis River, 6,900 h.p. at Upper Kananaskis Lake and 18,500 h.p. at the Pocaterra site below Lower Kananaskis Lake. During 1954 the transmission system of the Company was extended by the building of 142 miles of line at 66 kv. and 114 miles at lower voltage. Moreover Calgary Power Limited has under construction for 1956 operation a steam turbine plant at Wabamun with a capacity of 66,000 kw. The Canadian Utilities Limited installed a 6,000 kw. gas turbine unit at Vermilion and, in co-operation with Northland Utilities, added two 1,250 kw. diesel units to the plant at Fairview. The City of Lethbridge installed a new unit in its steam plant, enlarging its capacity by 13,500 kw.

British Columbia.—The highlight of hydro-electric construction in 1954 was the successful completion of the first stage of the great Kemano-Kitimat project of the Aluminum Company of Canada. The first three Pelton turbines, each of 150,000 h.p., under 2,485 foot head, were brought into operation in the underground power house and power is being transmitted at 287 kv. over the 50 mile line to Kitimat. Equipment has been ordered and preparations are under way for the installation of the fourth 150,000 h.p. turbine and 122,000 kva. generator for 1955 operation. Ultimate capacity is about 2,000,000 h.p. but no definite further schedule of installation has been announced.

The Consolidated Mining and Smelting Company of Canada Limited completed the first stage of its Waneta development on the Pend d'Oreille River, comprising two turbines each of 120,000 h.p., under 210 foot head, each directly connected to a 90,000 kva. generator. Provision has been made in the powerhouse and headworks for two additional units when required.