

Kootenay River, 6,750 h.p.; British Columbia Pulp and Paper Company, 3,650 h.p. at Woodfibre and 1,200 h.p. at Port Alice (a replacement of a 300-h.p. unit). Investigations were continued by the Aluminum Company of Canada toward the establishment of a high-head plant of large capacity on one of the coastal inlets.

Yukon and the Northwest Territories.—In Yukon, a development of 400 h.p. was brought into operation on Porter Creek, near Whitehorse, by the Yukon Electrical Company, Limited, which serves Whitehorse and vicinity. Investigations covering a possible development on the Mayo River to serve the silver-lead mines in the vicinity were conducted by the Government of Canada during 1949.

Parliament has provided \$500,000 in 1950-51 for the Commission to commence construction of a hydro-electric power development in Mayo River Canyon in Yukon. The project will consist of a 1,200 ft. hydraulic tunnel leading to a power-house where the generating equipment will operate under a head of 120 ft. The initial installation will provide 3,000 h.p. but essential provision will be made for raising this power output to the maximum of 8,000 h.p. A 27 mile transmission line is planned from the power-house to the region of the silver-lead mines near Galena and Keno Hills. The initial installation together with the transmission line will cost approximately \$3,000,000.

Early in July, 1950, a start was made on the construction of a transmission line 9,000 ft. long, from the Commission's terminal sub-station near Yellowknife, to the Akaitcho Yellowknife Gold Mines, Limited, property. The estimated cost including terminal and protective equipment is \$27,000.

CONVERSION PROGRAM TO 60-CYCLE POWER IN SOUTHERN ONTARIO*

In addition to the tremendous post-war power development program, which, by 1952, will bring into service new resources totalling approximately 1,600,000 h.p., the Hydro-Electric Power Commission of Ontario is engaged upon a vast long-term program of frequency standardization at 60 cycles in the southern areas of the Province. Affected by the plan are the Commission's 25-cycle stations and distribution facilities, the plants of some 150 Hydro municipalities and the frequency-sensitive equipment and appliances of approximately 800,000 electrical consumers—industrial, commercial, farm and domestic. It is estimated that this change-over will take between 10 to 12 years to complete. No such large-scale change-over, conceived as one co-ordinated plan to be carried out in orderly sequence without a break, has been recorded elsewhere in the world. Its cost is estimated at \$200,000,000.

Origin of 25-Cycle Frequency.—Twenty-five-cycle frequency in some parts of Ontario, like 60-cycle frequency in others, was an inheritance of the Commission. In the Niagara area, it was the frequency of the initial power purchased for distribution to the original group of Hydro municipalities in Ontario. For years there was no pressing demand for a change, and it was not until comparatively recently that the phrase "a 25-cycle island in a 60-cycle sea" was coined to describe that part of southern Ontario lying west of the city of Oshawa and extending to the

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