

James Bay giant hydro-electric power project starts up

La Grande Complex, the massive hydro-electric power development under construction since 1972 in northern Quebec, was inaugurated by Quebec Premier René Lévesque on October 27. Mr. Lévesque turned the switch that started up the first turbine of LG2, one of four proposed powerhouses along the Grand River, a tributary of James Bay.

LG2, 137 metres underground, 111 kilometres upstream from James Bay, has a capacity of 5,328 megawatts, the equivalent of an oil production of 150,000 barrels a day, though the start-up sent only 330 megawatts of electricity through the power lines to Montreal. Fifteen additional generators this year, will bring it to full capacity. When the other three plants are in operation along the Grand River the capacity will be 10,629 megawatts. The LG2 reservoir will cover 2,835 square kilometres, containing some 62 billion cubic metres of water.

Guests at the opening ceremony included federal Energy Minister Ray Hnatyshyn and Premier Richard Hatfield of New Brunswick, as well as former Quebec Premier Robert Bourassa, who proposed the project when he was in office.

Costs

La Grande Complex, is one of the world's

major hydro-electric developments. The James Bay Energy Corporation, owned by Hydro Quebec, manages an area covering 176,000 square kilometres, which is larger than England. The project involves the creation of six major reservoirs, nine dams and 170 dikes, requiring 150 million m³ of fill. The Corporation will spend \$8.5 billion for engineering and construction of the first phase, which will be fully operational by 1985. Hydro Quebec will spend another \$3.2 billion for five transmission lines linking the giant to Montreal and other urban centres. The total cost of Phase One will be an estimated \$15.1 billion.

Transportation, living quarters

A huge network of roads and airports was essential for the construction and operation of La Grande Complex. Some 1,500 kilometres of permanent roads and five airports were built in a short period of time. While the 620-kilometre main road, which incorporates ten bridges, is used mainly to ship material, personnel transportation is done almost exclusively by air.

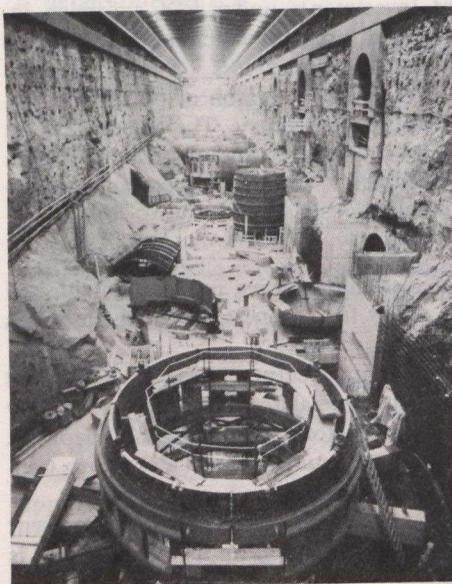
There is a campsite for each major jobsite which, although temporary, provides the comforts of modern living. At the peak of construction 1978-1979, the



The complex had a peak work force of 18,000, comprising a variety of jobs.

complex will have accommodated 20,000 people in six major campsites and five family villages, excluding 2,200 workers involved in the construction of the James Bay transmission system. Residents are given free room and board. Recreational activities, health care and all the amenities of a small town are available. Public utilities include a pumping station, a wastewater treatment plant and a refuse disposal system.

When Phase One is completed in 1985,



The Citizen

The LG2 powerhouse, which houses the turbine, is carved out of granite 137 metres beneath the surface. The most powerful underground generating plant in the world, it will account for one-half the output of La Grande Complex - Phase 1.



Last year, at a cost of \$850 an animal, a team of 19 people, mainly Cree trappers, moved 170 beavers 50 miles by helicopter to new locations within the James Bay region. The beavers inhabited an area to be flooded by the Opinaca reservoir, which will be created when waters from the Eastmain and Opinaca rivers are diverted 150 kilometres (90 miles) north to the Grand River at LG2, site of the largest power station in the James Bay hydro-electric development project.