



GENTILLY NUCLEAR REACTOR AT WORK

The reactor at the 250,000-kilowatt Gentilly Nuclear Power Station, on the St. Lawrence River, ten miles east of Trois-Rivières, Quebec, came into operation for the first time on November 12.

Gentilly, a prototype, is the world's first nuclear-power station to have a reactor fuelled with natural uranium and cooled by light (ordinary) water. The idea (known as CANDU-BLW, for Canada Deuterium Uranium-Boiling Light Water) is a development of the Canadian system of heavy-water-moderated reactors. Use of light rather than heavy water as a coolant offers the promise of lower capital and operating costs for future stations.

A FIRST FOR QUEBEC

Gentilly is the first nuclear-power station in Quebec. It was designed and built by Atomic Energy of Canada Limited in co-operation with Hydro-Québec. Situated on the south shore of the St. Lawrence between the villages of Gentilly and Bécancour, the station was built at a cost of \$120 million. It is owned by AECL and will be operated by Hydro-Québec, which will buy the electricity produced. The agreement on Gentilly provides for eventual purchase of that station by Hydro-Québec.

The start-up of the reactor is the first step in bringing the whole station into production. Once a chain reaction of atom splitting within the reactor has been achieved, its heat output is gradually in-

creased until enough heat is produced to generate steam for the turbine. Extensive tests have to be carried out at each stage of the approach to power production, and these will occupy several months. The first electricity is expected from the station early in 1971. The full power, of 250,000 kilowatts (enough to serve the electrical needs of a city of 200,000 people), will be reached later in the year.



The control of operations is conducted by computer in this room at the Gentilly Nuclear Power Station.