

LARGE-SCALE ATOMIC PLANT

Atomic Energy of Canada Limited is to begin immediately the final design and to plan the early construction of a large-scale atomic power station, Mr. Gordon Churchill, Minister of Trade and Commerce, announced recently.

The plant is estimated to cost about \$60,000,000, exclusive of design and development costs, and could be completed and in operation late in 1964 or early 1965, at a site yet to be determined.

Known as CANDU (Canadian Deuterium Uranium), the power station will produce 200,000 kilowatts of electricity and will use a natural uranium - heavy water system. It will be similar in general principles of operation to the NPD (Nuclear Power Demonstration) atomic power station which is now under construction near Rolphton, Ontario, as a joint project of A.E.C.L., Ontario Hydro and Canadian General Electric Company Limited. The NPD station will produce 20,000 kilowatts of electricity when it goes into operation in 1961.

CONFIDENCE IN PLAN

In February 1958 it was announced that A.E.C.L. was to establish a Nuclear Power Plant Division in Toronto, to carry out design and development studies for a large-scale power plant. This was to be an advanced stage of the work that was previously done in a CANDU feasibility study at Chalk River during 1957. The work of this division, together with results of development work at Chalk River and the design work on NPD done by the Canadian General Electric Company Limited in Peterborough, has increased the confidence of the engineers and scientists involved in these programmes to the point where they are convinced that a large-scale natural uranium - heavy water atomic power station offers the best promise of producing economic atomic power in large base load units in a public utility in Canada.

In addition to substantial support in the design of this CANDU station, Ontario Hydro will provide a site, co-operate in its construction, and operate it as a unit in its power distribution system. Ontario Hydro will buy the power produced and will purchase the plant when it has demonstrated that it has suitable characteristics for Hydro's power system. The formula for the purchase price would permit production of power from CANDU that is competitive with the cost of power from modern, coal-fired power plants of a similar size.

The increased confidence of Canadian scientists and engineers in the possibility of success in achieving economic power with the natural uranium - heavy water system, coupled with the growing need for a new source of power and for markets for uranium, resulted in a decision to go ahead with the CANDU plant sooner than was planned early in 1958.

MORE ELECTRICITY NEEDED

In some areas of Canada, particularly southern Ontario, the hydraulic sites remaining to be developed are limited. Thus there will be an increasing dependence upon coal-burning stations. Ontario Hydro has estimated that if nuclear-generated electricity were not available at a competitive cost by 1980, it would have to be importing from the United States 26.5 million tons of coal annually at a cost of some \$300 million.

Other areas in Canada will also need to supplement their present sources of power in the coming years, in order to meet the continuing growth in the demand for electricity. For example, by the late 1960's Manitoba and the Maritimes expect to be installing large power stations of the 100 - 200,000 kilowatt size. The utilities which foresee a potential application of nuclear power in their systems, are interested in the construction of a large nuclear power station to be constructed at an early date, so that there will be a proven unit when their requirements materialize.

Although only about 75 tons of uranium will be required for an initial fuel loading of CANDU, an amount relatively insignificant when the size of Canada's uranium production is considered, the sooner economic nuclear stations are demonstrated the sooner they will be installed around the world, thus opening up a substantial non-military market for uranium.

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WORLD REFUGEE YEAR

In a radio broadcast on June 28, Prime Minister Diefenbaker introduced World Refugee Year, which began on that day, and urged Canadians to give it their support.

Forty-nine countries have already announced that they will take part in the Year, which was established by the United Nations General Assembly at its thirteenth session last December. The aims of the Year are to arouse interest in the serious refugee problem which still exists in the world, to secure additional financial assistance and to bring about permanent solutions.

There are still 25,000 refugees living in camps in Europe and twice as many more in temporary quarters. The United Nations High Commissioner for Refugees estimates that a further contribution of \$3 million will see the closing of all the hard core refugee camps in Europe by 1960. There are almost a million refugees in the Middle East and the same number in the small area of Hong Kong.

Canada has contributed \$1,650,000 in cash to U.N. refugee programmes in the last two years and a further \$3 million worth of food. Hundreds of thousands of refugees have been accepted as new citizens.

A Canadian Committee for World Refugee Year has been formed with a national headquarters in Toronto. This Committee, representing

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