

Atomic Energy of Canada Limited (AECL) has an eleven-man Board of Directors, including individuals from private industry, public and private power companies, and the universities. The Company's major plant is near Chalk River, Ont., and its Head Office and Commercial Products Division are in Ottawa. During 1960, contracts were awarded for the construction of AECL's new research centre at Whiteshell, Man., and site development was under way by the end of the year. Early in 1958, a Nuclear Power Plant Division was established in Toronto, with the responsibility of directing the NPD-2 project. This project, a nuclear power demonstration plant to produce 20,000 kw. of electricity, was nearing completion at Rolphton near the Chalk River establishment; its design and construction is being carried out in collaboration with the Canadian General Electric Company Limited and The Hydro Electric Power Commission of Ontario. Also, at the end of 1960, the Nuclear Power Plant Division of AECL, with the assistance of Ontario Hydro, had under way the designing and constructing of a full-scale nuclear power plant, known as CANDU, which will supply 200,000 kw. of electricity to the Ontario Hydro system. By agreement, Ontario Hydro will purchase the plant, situated at Douglas Point near Kincardine on Lake Huron, when it is in satisfactory operation. An Advisory Committee on Atomic Power Development keeps all other utilities fully informed of the progress being made. This Committee, which was set up by the Government in 1954, meets periodically at Chalk River to assess the economic prospects of nuclear power throughout the country.

Because of the great pace of technological development in nuclear power throughout the world, AECL devotes a major effort to collaboration with many organizations. These include industrial firms and the scientific and engineering departments of universities in Canada and, through foreign government agencies and several international organizations, many technical groups in other countries. For example, the Canadian General Electric Company has been contracted to carry out the design and development of an organic-cooled reactor, and it seems likely that this will be the first reactor to be built at the Whiteshell Nuclear Research Establishment. AMF Atomics Canada Limited and CGE are AECL's chief contractors for fuel element fabrication, and other work related to Canada's nuclear power program is carried out in collaboration with Orenda Engines Limited and the Canadian Westinghouse Company Limited. In general, AECL's policy is to stimulate the interest of private industry in the development of nuclear power so that these firms can take over construction of power plants when the time arrives, leaving AECL free for fundamental studies and developing new reactor concepts. AECL also lends general support to the nuclear and related studies of Canadian universities and lets contracts to the universities on specific problems.

In the international field, close ties are kept with the United States Atomic Energy Commission and the United Kingdom Atomic Energy Authority, both of which have representatives permanently at Chalk River. A new agreement with the United States has been signed for co-operative work on heavy-water-moderated reactors; it provides for the free exchange of all technical data in this field and a commitment by the USAEC to spend \$5,000,000 in the United States on research and development related to reactors of Canadian design. More or less formal collaboration has also been established with the International Atomic Energy Agency, the Organization for European Economic Co-operation and Euratom, as well as with India, France, Sweden, West Germany, Switzerland, Japan and Pakistan. In India, construction and running-in of the Canada-India reactor was completed during 1960, and the reactor was formally inaugurated in January 1961.

**Chalk River Project.**—The Chalk River Project is a research and development establishment. Basic and applied research is carried on by about 200 professional scientists and engineers supported by 300 technicians devoted to research in nuclear physics, nuclear chemistry, radiobiology, reactor physics, radiation chemistry, environmental radioactivity, physics of solids and liquids, and other subjects, using as their primary facilities the two major reactors, NRX and NRU, the auxiliary reactors, ZEEP, PTR and ZED-2, the tandem Van de Graaff accelerator and analytical facilities such as a precision beta-ray spectrometer, mass spectrometers, an electron microscope, multi-channel pulse analyzers,