

was bought by the Canadian Government and has since been operated by the Government-owned company, Eldorado Mining and Refining Limited.

In 1947 the Government put into force regulations which were designed to encourage private individuals and companies to participate in the search for uranium. The most important occurrences which have subsequently been discovered and exploited are those in the region of Beaver-lodge Lake on the north shore of Lake Athabaska and in Blind River region of Ontario. The uranium produced from these mines and from others which we are confident will be opened up in the years to come will play a large part in ensuring the adequate supply of fissile material required to meet the needs of power reactors throughout the world.

In addition to its raw material programme, Canada has continued a vigorous programme of research and development on the applications of atomic energy. Since the end of the war its programme has been exclusively for peaceful purposes -- for domestic and industrial use and radio-active isotopes for medicine, agriculture and industry. I share with my Soviet colleague the important implications and possibilities of atomic energy for alleviating the distress that comes to mankind in illness and disease. The centre of this programme is the Atomic Energy Project, located on the Ottawa River near the village of Chalk River and operated by the Government-owned crown company, Atomic Energy of Canada Limited. It is engaged in four main activities: (1) development of economic atomic power, (2) fundamental research, (3) operation of nuclear reactors and separation of nuclear fuels, (4) production of radioactive isotopes and associated equipment such as Cobalt 60 Beam Therapy units.

Canada's first reactor, known as the "zeep" which stands for zero energy experimental pile, went into operation in 1945. It operated at a mere 10 watts but made possible studies which were essential to the design of the second reactor, the NRX, which went into operation in 1947. The NRX was a natural uranium-heavy water reactor. It was then, and so remained for several years, the most powerful research reactor in the world. Even today, after eight years, this reactor is playing a leading role and is being used not only by Canada but also by the United States and the United Kingdom for atomic power studies.

The success of NRX and the demand for still stronger neutron beams for fundamental research and for engineering studies resulted in a decision in 1951 to build another natural uranium-heavy water reactor, known as NRU, which is now under construction and is expected to go into operation in 1956. This reactor will have a neutron flux five times that of the NRX reactor and a power output of two hundred thousand kilowatts. It will produce significant quantities of plutonium and will have advanced experimental facilities.

Early in 1954 a power reactor feasibility study was begun at Chalk River in collaboration with a number of Canadian power agencies. As a result of this study it was decided to design and construct a small atomic power station known as NPD -- nuclear power demonstration -- and at the same time to carry out a preliminary design study for a large power station. NPD will be purely an experimental power station and will generate from 10,000 to 20,000 kilowatts of electric power. It is scheduled to go into operation in 1958 and will be located at the power station of the Hydro-Electric Power