The active ingredient of this bomb is Cobalt 60, which was developed as a by-product of the high neutron flux of the NRX reactor at Chalk River. Although Cobalt 60 is perhaps the best known, the Canadien Government establishment at Chalk River produces more than a hundred radio-isotopes for export. Ordinary cobalt, in the form of tiny pellets is placed within the core of the NRX reactor and left there to be bombarded by neutrons for 12 to 18 months. Cobalt 60 is at present being used for the treatment of cancer in beam therapy units developed at Atomic Energy of Canada which have been installed not only in our own country but in hospitals in the United States, United Kingdom and Italy. France, Brazil and Argentina will soon be added to this list. Almost all cobalt therapy machines in use in the world today were made in Canada. Various other isotopes have been shipped from Canada to the following countries: Argentina, Australia, Belgium, Brazil, Chile, France, Germany, India, Israel, Jamaica, Japan, Sweden, Switzerland, United Kingdom, United States and Venezuela. In addition, procurement procedures have been established with Denmark, New Zealand and Norway. In the past few years we have exported to other countries isotopes having upwards of 28,000 curies of activity - more than twice as much as we have used at home in Canada.

Many other uses of isotopes have been developed in Canada ranging from the testing of welds on enormous metal castings to the control of the thickness of paper as it comes through the paper-making machines. These isotopes have also been made available to countries throughout the world.

My United States and United Kingdom colleagues have spoken in some detail about what their governments are prepared to do in the immediate future during the period when the International Atomic Energy Agency is being negotiated. The Canadian Government is also giving sympathetic consideration to parallel interim activities. We cannot of course offer in Canada anything comparable in extent to the programmes indicated by Mr. Lodge and Sir Pierson Dixon. My Government agrees, however, that the first requirement of countries newly entering the atomic energy field is for their scientists to acquaint themselves with the basic technology on the subject. My Government is prepared to broaden its existing programme of exchanging reports on atomic energy with foreign scientific research institutes and is now in a position to furnish considerable additional information on the structure and operation of research reactors. We are also prepared to provide information on the techniques of exploring for radio-active ores and on their mining and milling operations.

In the field of health, Canadian cancer treatment and radio-logical research centres will welcome from other countries qualified radiologists and specialist physicians who wish to visit our clinics and study the application of radio-isotopes to the problems of disease.

As regards fundamental research in science and engineering, Canada's National Research Council has since 1948 carried out a programme of post-doctorate