



## STATEMENTS AND SPEECHES

INFORMATION DIVISION  
DEPARTMENT OF EXTERNAL AFFAIRS  
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No. 55/7 NUCLEAR ENERGY FOR PEACE OR WAR

An address to the Canadian Club of Toronto  
by the Chairman of the Defence Research  
Board, Dr. O.M. Solandt, March 7, 1955.

When the history of this century comes to be written I am sure that it will then be clear that we are living in the midst of one of the greatest periods of transition in human history. Our times will be outstanding not for the great political and social upheavals that they have seen but because during this era man has begun to understand and to use the vast store of energy that is locked up in the nuclei of atoms.

We are living in the early days of what will certainly be known as the Age of Nuclear Energy. It is always difficult to see in perspective and to understand the significance of great events in which you are yourself immersed. Nonetheless I think that it is particularly important for us to try to comprehend the significance of the developments in nuclear science that are taking place and try to control and direct their use. Should we fail in this task there seems to be a fair chance that the history of our era will never be written.

The story of the Age of Nuclear Energy begins far back in the history of fundamental research in nuclear physics. The pace of discovery in this field began to quicken around the turn of the century. A small band of brilliant research workers began to see that the trails they were following were leading toward important destinations. Some of the most important contributions to research during this period were made in Canada at McGill University by Lord Rutherford and his colleagues. In 1904 Lord Rutherford said:

"There was reason to believe that an enormous store of latent energy was resident in the atoms of radioactive elements --- energy which was derived from the internal energy of the atoms.... If it were ever possible to control at will the rate of disintegration of the radio-elements, an enormous amount of energy could be obtained from a small quantity of matter."

In the same year Frederick Soddy, a colleague of Lord Rutherford's wrote:

"In only two days radium gives out more energy, weight for weight, than the most powerful explosive known liberates during its explosion. If the