

Statement by Federico Consolo, Director,
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 Cleveland, Ohio

Mr. Chairman, Gentlemen:

I wish to thank you on behalf of the Euratom Commission and particularly Mr. Etienne Hirsch and Mr. Paul De Groot, for the invitation your Board addressed to them, and to express their regrets for not having been able to come here today. Let me say that I am deeply honored to have been given the opportunity to say a few words about Euratom before this very distinguished audience.

It is not my intention to give you an extensive report on how Euratom came into being; I will merely recall that the idea of European cooperation first materialized in August 1952, when the European Coal and Steel Community was set up. Since that time, the barriers between the six European countries - Belgium, France, Germany, Italy, Luxembourg and the Netherlands - are in process of being slowly but steadily abolished. A vital step forward in this direction was taken on January 1st, 1958, when the European Economic Community and the European Atomic Energy Community, also known as Common Market and Euratom respectively, came into being.

Why was Euratom actually created and what, in fact, does it stand for?

The need for new sources of energy is much greater in Europe than in the other parts of the world and, in particular, in the United States. The extension of the use of conventional sources is becoming increasingly uneconomic, as the less competitive coal mines and hydraulic potentials are being exploited. With the harnessing of nuclear energy, it was recognized in Europe that a providential source of wealth had been discovered. Thus it was agreed to establish within the Europe of Six a Community to promote and assist in the setting up of a nuclear power industry which would also contribute to economic development within the countries of the Community. Euratom is, accordingly, a joint enterprise of six countries which will:

- stimulate and coordinate scientific research in the nuclear field
- exchange and pool nuclear information and licenses on nuclear patents
- set up an efficient system for the protection of health among nuclear industry and research workers
- guide investments in nuclear industries
- establish common enterprises in the areas of activity where local nuclear industries cannot easily operate
- set up a nuclear common market between member states
- ensure equal access of all enterprises to nuclear materials.

As you see, the aims Euratom has set up for itself go extremely far. But we are nevertheless convinced, in Europe, that we will be able to fulfil them.

Euratom has only been one year in existence, but it has already proven its vitality in several fields of activity. In research, for instance: Three

working parties are examining high flux testing materials reactors; heavy water prototype reactors; plutonium production and use. Preliminary work for the establishment of the Common Center for Nuclear Research is in progress. Contacts with the European Organisation for Nuclear Research working groups have been made on the problem of fusion, and in the same field contracts will shortly be signed with the French Commissariat pour l'Energie Atomique and the Max Planck Institute of Munich in Germany. A Central Bureau for Nuclear Measurements has recently been temporarily established in the Belgian Nuclear Center at Mol. Other research contracts are being actively contemplated.

At the end of 1958, Euratom's Commission - its executive branch - submitted to the Council of Ministers its proposals for the creation of a European University.

In terms of money, let me point out that of the total amount of \$ 215 m which have been earmarked by Euratom for research purposes over the next five years, \$ 55 m will be spent in 1959.

In the field of economy and industry, regulations have been issued for the communication to the Community of all investment projects of national nuclear industries. An agreement was reached for common tariffs on the most important nuclear goods and products. A draft convention concerning third party liability to supplement the Convention of the Organisation for European Economic Cooperation is about to be submitted to the Member States.

In the field of health protection, basic standards for the protection of workers and of the general public from radiation dangers were established by the end of last year. These basic standards will provide a basis for the national legislation and shall facilitate the harmonisation of such provisions within the Community.

Basic security regulations regarding information and safety measures for the control system of materials have been set up.

In order to ensure equal access to nuclear materials, a "Supply Agency" was recently set up and will be put into operation in the near future. It will have a right of option on all raw materials and special fissionable materials produced within the Community as well as the right of control on all fuel imports within the Community. By the Treaty establishing Euratom, all special nuclear materials are the property of the Community.

The Economic and Social Committee and the Scientific and Technical Committee, which are the two advisory bodies provided for in the Treaty, are now in operation.

There is another highly important field in which Euratom has been particularly active ever since the first months of its creation - that of international cooperation. For instance, Euratom participates in the Organisation for European Economic Cooperation's Nuclear Agency's initiatives in the nuclear field as for instance Norway's Halden Reactor, the Dragon projects for the high temperature gas-cooled reactor to be built in Great Britain, Eurochemic's international enterprises, the drafting of a convention on third party liability for nuclear damages. The Halden program provides for the joint operation of the

Halden boiling water reactor. With a view to exploring the possibilities of the boiling water concept, this large scale experimental reactor has been "taken over" by an OECE group, who will contribute \$ 3,66 m to the experimental program. Euratom's participation is of \$ 1 m and the same amount will be provided by the Norwegian Atomic Energy Institute.

The Dragon project agreement was signed in Paris on March 23, between Great Britain, Norway, Denmark, Sweden, Austria, Switzerland and Euratom. The experience gained in Great Britain from the operation of gas-cooled reactors had confirmed the interest which a reactor with a high outlet gas temperature (about 750° Celsius) and a considerable burn-up of fuel will present in the next years. Therefore, Euratom gladly accepted the British proposal to internationalize the first high temperature gas-cooled reactor project, within the OECE system. This project provides for a total expenditure of about \$ 38 m with Euratom participating for about \$ 12,15 m.

I wish to emphasize the fact that in both these projects, the member countries of Euratom do not participate individually, but that Euratom participates as such and on behalf of its member countries.

Relationships have also been established with the International Atomic Energy Agency in Vienna, the Council of Europe in Strasbourg, the International Labour Organisation in Geneva. As far as the first named organisation is concerned, Euratom has established regular contacts both directly and through the intermediary of the member countries. Pursuant to an invitation from the Board of Governors of the Agency, Euratom sent an observer to the Second General Conference held in Vienna from September 22, to October 4, 1958.

Furthermore, both the USA-EURATOM and the UK-EURATOM agreements reaffirm our interest in fostering the peaceful application of atomic energy through the International Atomic Energy Agency and the possibility that the result of such cooperation benefit that Agency. Under these agreements, provisions are made for consultations to be established with the International Atomic Energy and the European Nuclear Energy Agencies of OECE in matters of safeguard and control.

In the field of International Cooperation, an agreement is being negotiated with Canada and preliminary contacts have been made with Brazil.

Two agreements have already been signed by Euratom in the nuclear power and research field. I am speaking of the Cooperation Agreement between the USA and Euratom, signed on November 8, 1958 and which came into force on February 18, 1959, and the Agreement between the United Kingdom and Euratom, which was signed and came into force on February 4, 1959. I would like to say a few words on the US-Euratom Agreement, but before doing so, let me give you some general information on the UK-Euratom bilateral agreement. This agreement is a "framework" arrangement aiming to favour the exchange of information and experience between the two contracting parties and to open the market for British reactors to persons and enterprises established within the Community.

The US-Euratom cooperation agreement provides - as you know - for a program for the construction in the six Euratom countries of 6 - 8 nuclear power plants (for a total capacity of about 1000 MW) of types on which research and development have been carried to an advanced stage in the United States.

The total cost for this construction program has been estimated at \$ 350 m, of which about an amount up to \$ 135 m will be provided by the Export-Import Bank of Washington in the form of a long term line of credit to be relent by Euratom to Electricity Companies within the Community. The balance will be provided from sources within the Community. Negotiations with the Export-Import Bank are well under way.

A very important element of this agreement relates to the guarantees that the U.S. Atomic Energy Commission offers for an average irradiation level of the fuel elements loaded in the reactors during 10 years of operation. Those guarantees, in combination with those offered by the manufacturer, will result in a computed kwh cost that research and development will tend to bring to the level of the conventional kwh cost. Still in the matter of fuel, I would like to draw your attention to the fact that the United States Government have agreed to sell to Euratom 235 enriched uranium up to a net amount of 30,000 kg of contained U 235 for this joint program. Payment for such enriched uranium may be made on a deferred basis.

In order to permit this program to be completed before 1963 (and possibly 1965 as concerns two reactors) a joint Euratom - U.S. project selection board has been created. This Board will analyze the construction projects submitted by interested industrial enterprises before September 1, 1959, and make appropriate recommendations to the AEC and Euratom Commission for final decision.

The second program provided for in the Agreement is in the field of research and development. This program involves a total expenditure of \$ 100 m over a period of 5 years. Expenditures will be equally shared by U.S. and Euratom and will call upon the possibilities offered both in the U.S.A. and in the Community. Invitations to submit plans for participation in this program were extended to the industries within the Community and will be evaluated and selected by a joint U.S. - Euratom Research and Development Board.

Mr. Chairman, Gentlemen: I have tried to give you a picture of Euratom and its role in the international peaceful development of nuclear energy, in its first year of existence. In closing I would like to quote from President Eisenhower's message to Congress when he presented the agreement between the U.S. and Euratom:

" The Europeans see atomic energy not merely as an alternative source of energy but as something that they must develop quickly if they are to confirm their economic growth and exercise their rightful influence in world affairs. The success of the undertaking, therefore, is of vital importance to the U.S. for the 160 million people on the Continent of Europe are crucial to North Atlantic strength."