ENEA'S TENTH ANNIVERSARY

In February 1958, only six months after the inauguration of the International Atomic Energy Agency, seventeen European countries brought into being a specialized Agency to promote and co-ordinate joint projects for the development of nuclear energy. It was named the European Nuclear Energy Agency. During the first decade it has made significant contributions to the peaceful uses of atomic energy, and for the last eight years has had a co-operation agreement with the IAEA.

The seventeen nations were members of the Marshall Plan organization for economic co-operation (OEEC), forerunner of the Organization for Economic Co-operation and Development (OECD) and their immediate concern was to help meet the heavy demands being made for additional energy in Europe. Later they were to broaden their activities to include specialized techniques other than nuclear reactor development, as well as giving attention to the provision of scientific and technical information services.

The first joint activities to be sponsored concerned new types of power reactor (the boiling heavy water reactor at Halden, Norway, and the "Dragon" high-temperature gas-cooled reactor at Winfrith, UK), together with the Eurochemic experimental plant for reprocessing used uranium fuel at Mol in Belgium.

In the Halden Project, original work to assess the potentialities of the boiling heavy water reactor for power production have now given way to use of the installation as a research facility for testing fuels, and for experiments on the physical and chemical phenomena which occur in the cores of boiling water reactors.

In the course of this work the Halden installation has undergone many modifications from the original system, and has become one of the world's centres for research and development on water reactor technology. There is also participation by the United States and Japan. Under present arrangements the programme will continue to the end of 1969.

The reactor experiment at Winfrith has now been in operation for three years, during which time it has given a convincing demonstration of the practicability of this very advanced system. Latest estimates are that a twin-reactor Dragon-type power station delivering one million kilowatts of electricity could be built for between $140 and $150 per kilowatt capacity, and that such a station would have fuel costs of just over 0.1 cent per kilowatt/hour. These figures indicate that the station would be competitive with other forms of power generation in many areas. This project, in which 12 European countries are participating, will continue under current arrangements until the end of 1968. A further continuation into 1970 is under consideration.

Eurochemic brought its complex plant at Mol, Belgium, into service in July 1966. Operation since then has been highly satisfactory from the technical point of view, confirming fully the expected performance of the plant. About 32 tons of fuel have been treated up to now, yielding some 20 kg of plutonium. This is well below the nominal capacity of 150 tons per year for the plant, and is mainly due to the fact that European reactor programmes have developed more slowly than originally predicted. The quantities of fuel available are nevertheless sufficient to provide valuable technical experience.

COMMON SERVICES

The more recently created Common Services — the Computer Programme Library at Ispra (Italy) and the Neutron Data Compilation Centre at Saclay (France) — are perhaps more indicative of the future pattern of international co-operation in developing nuclear energy.

The purpose of the Ispra Programme Library is to collect computer "programmes" for all types of nuclear energy calculations, to test these programmes and then to make copies available on demand. In this way a great deal of duplicated effort in the independent preparation of similar programmes is avoided. This Ispra Library operates in close liaison with equivalent services in North America and with Japan.

At The Neutron Data Compilation Centre at Saclay, the information collected classified and then made available to users comprises bibliographical reference data on measurements of the nuclear properties of materials. Some 50 000 such references are stored in the Saclay file. In addition, the measurements themselves are stored in a separate file containing about two million data points.

COLLABORATION WITH IAEA

On 30 September 1960 an agreement was signed for co-operation between ENEA and IAEA. One result of this has been that ENEA has participated in preliminary discussions on building up the Agency's International Information System (INIS). Another is that Saclay has become an essential part of the computer links established in Vienna for world exchange of nuclear data. Yet a third aspect of the information work is that IAEA has been able to establish a permanent staff member at Ispra, thus making its services available to Agency Member States who do not belong to ENEA.

The International programme on Irradiation of Fruit and Fruit Juices, set up in 1964 by the Austrian Studiengesellschaft für Atomenergie, IAEA and ENEA is now in its third year. Ten countries are taking part, and additional research work is being undertaken in Italy, Spain and Switzerland. The programme, although basically concerned with fruits and fruit juices, is also designed to obtain information for general application in the preservation of other foodstuffs by irradiation.

An important contribution has also been made in defining legal problems, again in close association with IAEA. The 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy outlined main principles for nuclear liability and was implemented through most national legislations in the sixteen member countries which signed the Convention. A symposium on third party liability and related insurance in the maritime carriage of nuclear materials may be held jointly with IAEA later this year. Its aim will be to define a common approach by national authorities and other interested international organizations.

VIENNA'S SECOND UN ORGANIZATION. — The United Nations Industrial Development Organization is now well established in Vienna. This photo taken at an official reception marking its inauguration in the city shows Mr. I.H. Abdel-Rahman, Executive Director of Unido exchanging views with Dr. Sigvard Eklund, IAEA Director General.