

International Conference on Nuclear Power and its Fuel Cycle

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In his statement to the Eighteenth Regular Session of the General Conference the Director General of the International Atomic Energy Agency proposed the organization in 1976 or 1977 of a major international conference on nuclear power and associated fuel cycle problems. This idea had previously been the subject of deliberations at the Agency's Scientific Advisory Committee (SAC) in December 1973 and at the special session devoted to this matter which was held in mid-September 1974. As SAC endorsed this proposal in principle and the General Conference also viewed it positively, the Director General announced both to the World Energy Conference in Detroit in late September 1974 and to the General Assembly of the United Nations in November 1974 the Agency's plans to hold this conference in 1977.

This proposal found recognition in the resolution of the General Assembly which reads "The General Assembly ... Realizes the importance of the initiative taken by the International Atomic Energy Agency in arranging for an International Conference on Nuclear Power and its Fuel Cycle, to be convened in 1977, to review and appraise the role of nuclear energy and alternative energy sources in satisfying energy demand in the future."

In December 1974, SAC discussed the outline of the conference programme. By that time it was known that the Tenth World Energy Conference would be held on 12 September 1977 with the proposed theme "energy conservation and avoidance of waste". SAC advised that the Agency's conference should precede the World Energy Conference and considered that, taking into account the proposed subject matters of the two conferences, their organization during the same year would not represent any duplication or overlapping.

The Conference will take place at a time when the world's energy situation and particularly the factors affecting nuclear power have become very complex indeed. Great efforts are being made to find means of supplementing the earth's limited supply of liquid fuel and natural gas. The competitive position of nuclear energy has greatly improved and seems likely to improve further. On the other hand the problem of finding capital for nuclear plants during a period when many countries are experiencing acute inflation and, in certain cases, economic recession, has assumed new proportions and has led to a slow-down in the nuclear energy programmes of some countries. In addition, concern about the impact of certain effects of nuclear energy on the environment continues to exert an impact on decision-making regarding nuclear programmes. Reference has already been made to the need to avoid bottle necks in the fuel cycle. We may hope that the effect of some of these conflicting moments of force will be clearer by 1977 so that the participating countries can obtain a more firmly based guidance about their own nuclear programmes and the integration of these programmes into the regional and world-wide energy structure.

The objective of the Conference will be to discuss and assess the overall role to be played by nuclear energy in relation to alternative energy sources, with particular reference to

the nuclear fuel cycle and the need for its integration. This integrated approach to the problems arising at the various stages of the nuclear fuel cycle is particularly vital because of the close interconnections of these stages — from uranium exploration to radioactive waste disposal — and because each of these stages gives rise to questions which in most cases cannot be fully or even partially answered without an analysis of their world-wide implications.

It is foreseen that the Conference will deal with both well-trying and advanced systems, directing attention mainly towards the short-range problems of nuclear power and the fuel cycle. Contrary to many international conferences held in the past in this field, which were of a promotional nature, this conference will concentrate on general guiding policies for the utilization of nuclear power. Consequently, attention will be focused on aspects of interest to those countries which have already decided to implement nuclear power programmes and help them to understand better the problems they will be encountering. The Agenda will relate to the situation of both developed and developing countries. The latter group would be interested in a review of the main factors affecting the successful introduction of nuclear power. Such constraints in the development of nuclear power programmes as financing, rates of growth, ultimate local density, raw materials, public acceptance and human resources and co-operation are expected to be reviewed.

The Conference will be directed towards those responsible for the development and implementation of energy programmes — planners, decision-makers and managers— rather than to an audience representing primarily research and development activities.

It is foreseen that the Conference will cover such important topics as world energy supply and demand; nuclear fuel supply and fuel cycle services; radioactivity management; technical aspects of nuclear safety; public acceptance of nuclear power; safeguarding of nuclear material; the role of nuclear energy in national energy strategies, and the international co-operation in nuclear power utilization. The work of the conference is expected to take place in plenary sessions, technical sessions and round table discussions to be held on each of the main topics.

The Conference on Nuclear Power and its Fuel Cycle is meant to be a re-oriented continuation of the four United Nations Conferences on the Peaceful Uses of Atomic Energy which have been held during the last two decades (1955, 1958, 1964 and 1971). The increasing amount of information generated each year in the whole field of nuclear energy utilization and the increasing number of international conferences dealing with various aspects of this field, have made it much more difficult and less justifiable to hold large international conferences on the general subject of peaceful uses of atomic energy.

However, the emerging status of nuclear power as a major industry, the specific features of nuclear power and its fuel cycle and the potential constraints on its accelerated introduction (for example, heavy capital costs, safety of reactors and fuel cycle installations, radioactivity management and the availability and safeguarding of nuclear fuels) represent a set of problems of international interest which motivates the periodical organization by the IAEA of major international conferences on nuclear power and its fuel cycle.

The first conference of this kind which is to be organized in 1977 will mark the twentieth anniversary of the IAEA. It is planned to invite all interested international organizations to contribute to and participate in this Conference.