The International Conference on Nuclear Power and its Fuel Cycle

The first report on the preparations for this major conference was published in the *Bulletin* in February 1975. The objectives of the conference are to discuss and assess the overall role to be played by nuclear energy in relation to other available energy sources, with particular reference to the nuclear fuel cycle and the need for its integration. While the conference will deal also with advanced systems, it will mainly focus attention on the shorter range problems of present proven nuclear power systems and their fuel cycles. It will concentrate on decision-making and policy formation in nuclear power programmes and in supply of fuel cycle materials and services. It will be directed towards those responsible for planning, decision making and policy formation in the energy sector.

In December 1975 the IAEA's Scientific Advisory Committee endorsed a detailed topical agenda and an organizational framework for the conference. The latter comprises some 12 plenary sessions, 22 technical sessions and eight round-table discussions run in parallel sessions. An advisory group of experts was convened at the IAEA headquarters in February 1976 to recommend the subjects and authors for the invited papers, and a corresponding group met in August to assist in the selection of the papers for the conference. About 325 papers are foreseen for the sessions and 180 of these have been invited, including all the papers for the plenary sessions and about one third of the technical session papers.

A steering committee, chaired by Professor I. Zheludev, the IAEA Deputy Director General for Technical Operations, and a scientific secretariat of 12 senior professionals of the IAEA have been established for the work with the conference.

The plenary sessions will be held in the Grosse Festspielhaus in Salzburg, which limits participation to 2000. Technical sessions will be at the Congress House, which will also accommodate the conference secretariat. Present indications are that the participation will be close to the maximum and that the number of papers also will be approximately as foreseen. The intensive planning in participating countries for this conference is a strong indicator of the importance that is being placed on it.

PROGRAMME
INTERNATIONAL CONFERENCE ON NUCLEAR POWER AND ITS FUEL CYCLE
SALZBURG, AUSTRIA, 2–13 May 1977

World Energy Supply and Demand and the Future Role of Nuclear Power

Plenary Sessions:
Global projections for nuclear energy up to the year 2000 in the light of the availability and limitations of other sources of energy

National Energy systems and nuclear power system plans

Technical and economic status of proven and advanced nuclear power systems and their requirements for fuel and fuel cycle services

Supply of Nuclear Fuel and Fuel Cycle Services

Plenary Session:
Integrated planning of the nuclear fuel cycle industry

International co-operation in supply of nuclear fuel and fuel cycle services

Technical Sessions:
Improvements in uranium exploration and evaluation techniques

Raw materials mining, processing and conversion

Development in isotope separation techniques

Fuel technology for current light water and heavy water power reactors

Plutonium-bearing oxide fuels

Fuels for high temperature reactors and other advanced fuels

Reprocessing technology for present water reactor fuels

Developments in reprocessing technology for fuels for high temperature and fast breeder reactors

Studies of large-scale nuclear fuel cycle centres

Radioactivity Management, including Transport

Plenary Sessions:
Standards, concepts and regulatory requirements for radioactivity management

Operational aspects of radioactivity management

Technical Sessions:
Criteria for radioactivity management

Radioactivity management practices

Transport of radioactive materials

Decommissioning of nuclear facilities

Experience and Technical Aspects of Nuclear Safety

Plenary Session:
Survey of national, regional or global basis of safety experience

Technical Sessions:
Safety of thermal reactors

Safety of fast reactors

Safety of fuel cycle facilities

Public Acceptance of Nuclear Power

Plenary Session:
Review of different public viewpoints in regard to public acceptance of nuclear power

Public attitudes in developed and developing countries

Experience of public education programmes

The regulatory process and its effect on public acceptance
Review of research on a better fundamental understanding of phenomena related to public acceptance

Safeguarding of Nuclear Materials

Plenary Session:
History and development of safeguards

Safeguards agreements: their legal and conceptual basis

The position of international safeguards relative to national control and accountancy and the role of operators

Determination of the effectiveness of safeguards in the light of their objectives

Technical Session:
Nuclear material accountancy

Safeguards procedures applied to typical nuclear facilities

Safeguards methods, techniques and instrumentation in various parts of the fuel cycle

Nuclear Power Prospects and Problems in Developing Countries

Plenary Session:
Nuclear power programmes in the developing world

Technical and economic constraints on the introduction of nuclear power in developing countries

Financing of nuclear power in developing countries

Requirements for and development of trained manpower resources

Establishment of legalisation and regulatory procedures

Technical Sessions:
Programme, organization and manpower development

Small and medium power reactors, desalting

Experience from nuclear power programmes in developing countries