As delivered

The Contribution of Nuclear Energy Co-operation to a New Global Age

Mohamed ElBaradei
Director General
International Atomic Energy Agency

OECD Headquarters, Paris

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It is a pleasure to participate in this Special Session to mark the Fortieth Anniversary of the OECD Nuclear Energy Agency (NEA). Some 80 per cent of world nuclear electricity use is in OECD Member countries. The NEA has made an invaluable contribution to nuclear safety culture through the collection and dissemination of information on the technical and scientific experience of nuclear power generation in its Member States and has played a major role in fostering understanding of the environmental and economic aspects of nuclear energy. The NEA technical reports on reactor safety, probabilistic systems assessments and its contribution to the harmonisation of national regulatory policies and practices are some of the achievements that merit our particular congratulations.

The theme of our discussions today - the Contribution of Nuclear Energy Co-operation to a New Global Age - underscores both historical continuity and change. In the aftermath of the Second World War the international community, consisting then of some 70 independent States, was addressing the same question but in a very different context. Nuclear energy has always drawn two reactions: hope, that its safe and peaceful development and application would bring a better future for all; and apprehension, that its misuse would have the opposite effect. The first experience of its use - the "original sin" as it has been called - was for military purposes. In establishing a new global political and economic order, the challenge was to create the institutions that would actualise the hopes for a better future and minimize the apprehensions.

The period of institution building took a full decade. In 1957 the IAEA and Euratom were established and the following year it was the turn of the NEA. These institutions are all products of the same generation. We share a history, we share a commitment to enhance the exclusively peaceful uses of nuclear energy and we share a tradition of forty years of co-operation.

Over these past four decades, the applications of nuclear energy have developed into mature and readily available technologies that are making a substantial contribution to sustainable development and human welfare. The full potential of nuclear science and technology still lies before us. In this context, I was very glad last week that the United States agreed to extend for a further year its collaboration in the International Thermonuclear Experimental Reactor project.

But, as we review the achievements of the past forty years and reposition ourselves to meet the challenges ahead, to my mind, the future of many aspects of nuclear technology is at a cross road. On the one hand, the urgent need to develop sustainable development strategies requires that objective consideration be given to the role of nuclear energy in these strategies. The imperative to ensure safety for all nuclear facilities requires a comprehensive and legally binding safety regime supported by an enhanced safety culture. The need to raise the standard of living of the world's poorest requires the efficient transfer of technology, including nuclear technology. And the realistic possibility, today, to curb nuclear weapons proliferation and to move towards nuclear disarmament, depends critically on the availability of an effective system of verification.

On the other hand, in many countries the role of nuclear energy is under challenge. It faces public opposition, including calls for premature closing of safe and efficient power plants, on the grounds of safety of operations, of radioactive wastes and of physical protection. In increasingly deregulated energy markets, the nuclear industry is challenged to demonstrate and improve the competitiveness of nuclear power generation. And the nuclear weapons tests conducted in May again underscored the destructive potential of nuclear energy and the need to breathe new life into international and regional non-proliferation and nuclear disarmament efforts.

The twin objectives of the IAEA are to seek to enlarge the contribution of nuclear energy for peace and development and to ensure, so far as it is able, that atomic energy is used at a high level of safety and exclusively for peaceful purposes. The Agency was never intended to "promote" nuclear energy in any commercial sense. Its role is to be an objective institution that serves as a centre for international norm development, standard setting, independent analysis, expert advice, technology transfer and impartial oversight and verification. And it is from this perspective that I would offer some views on why international nuclear co-operation, complemented by regional and national activities, is an indispensable part of the way forward. I will highlight four areas: energy, safety, verification and technology transfer.

Nuclear Power

With varying degrees of urgency, both developed and developing countries are faced with major energy choices to meet the needs of their growing economies and populations without unnecessarily contributing to greenhouse gas (GHG) emissions. Except for nuclear or hydro power, which has limited growth potential, there are not yet any other economically viable, minimal-GHG-emission, options for base load power generation. The choice of nuclear power and of a particular energy mix are national decisions. While there are many reasons why national authorities and energy investors may choose the nuclear power option - proven technology, cost factors, environmental considerations, national security of supply - the common interest is to ensure that global environmental concerns, as represented by the commitments made at the Kyoto Conference last December, are factored into objective national consideration of different energy system options.

Discharging the responsibility to ensure that nuclear power is given a full and fair hearing as an important component of many national energy strategies, together with improved energy efficiency, the use of renewable energy sources and cleaner technologies for improved fossil fuel use, requires international co-operation in several areas. First, is the need to ensure that nuclear power is recognized as a mature and readily available technology for cost effective electricity supply and mitigation of GHG emissions. I am very glad that the IAEA and the NEA will jointly organize a Special Event at the Fourth Session of the Conference of Parties to the Framework Convention on Climate Change in Argentina this year.

Second, it is important for national decision makers to have available the best tools for objective comparative assessment between nuclear and other sources of energy. The DECADES (Databases and Methodologies for Comparative Assessment of Different Energy Sources for Electricity Generation) methodological framework is presently used by some 35 States to independently evaluate their energy options. This is an example of very fruitful co-operation between nine different international organizations, including the NEA, in a common project of immediate and direct relevance to a large number of Member States. The DECADES Steering Committee will meet later this year to propose new directions for future activities. In my view it would be highly desirable to expand the base of participating institutions.

Third, a full and fair hearing to nuclear power requires concerted efforts to restore public trust in its safe use including the management of wastes. In effect, this means a demonstrated record of operational safety in all activities throughout the nuclear fuel cycle and particularly the operations of all nuclear power plants and the satisfactory resolution of issues concerning spent fuel and radioactive waste management.

Safety

Nuclear safety is a global public concern. In public perception, "an accident anywhere is an accident everywhere". International co-operation is the *sine qua non* of our efforts to establish a comprehensive nuclear safety regime that consists of three elements: international agreements; safety standards; and measures to provide for the application of those agreements and standards.

Governments have recognized the benefits of international co-operation. In recent years, several important international conventions, negotiated under the IAEA's auspices, have helped to fill gaps in the international nuclear safety regime. But, we need to remain watchful of other areas in which the international community as a whole would benefit from binding norms.

It is equally important to ensure that norms and standards are not only adopted but that they are actually implemented. The provision of safety assistance services is key to achieving a world standard of excellence in the application of safety standards. Our aim is to encourage more States to use the available peer review services. They are the best practical way for safety culture to penetrate borders.

Decisions on the management of spent fuel and the final disposal of radioactive waste can be delayed but cannot be avoided. This is an area for urgent national attention and co-operation on an international or regional basis, as appropriate. One of the comparative advantages of nuclear power is the small volume of wastes generated. However, for reasons of safety, health and public perception, this becomes a negative until available technical solutions for safe and permanent disposal of wastes are demonstrated. The longer this issue remains a public concern, the more difficult it will be for objective consideration of nuclear power.

Nuclear Verification and Security of Material

The hopes for a safer and more secure world rest crucially on advancing the agenda for nuclear arms reduction and their eventual elimination. An effective verification system is indispensable to the realization of these hopes. The Model Additional Protocol to the safeguards agreements has given the IAEA the legal authority to implement a more effective safeguards system to detect and verify possible non-peaceful activities at an early stage. Good progress is being made in the conclusion of these Protocols - we expect global adherence by the year 2000.

In the wake of the nuclear weapons tests conducted in May, widespread concern has re-emerged at the possible erosion of the basic norm of the non-proliferation regime that, pending nuclear disarmament, world security is better served with fewer rather than more nuclear weapons and nuclear weapon States. The tests underscored the need to accelerate the process of nuclear disarmament. In addition to a complete ban on nuclear testing, two actions have always been identified as indispensable: freezing the production of fissile materials for weapon purposes and the gradual reduction of stockpiles of such materials, either unilaterally or through disarmament agreements.

Last month the Conference on Disarmament finally agreed to commence negotiation of a treaty prohibiting the production of fissile material for nuclear weapons or other nuclear explosive devices. Separately, discussions are underway between Russia, the US and the IAEA to place under IAEA verification some of their existing stockpiles of nuclear material from the military sector.

The potential for nuclear weapons proliferation and for threats to public safety from illicit trafficking in nuclear material and other radioactive sources is a further area of major concern which requires full international co-operation and urgent action on many fronts. These include information exchange, technical assistance and training for law enforcement personnel, research and development programmes to improve the tools for detection, and an effective international legal regime that builds upon, and does not overlap with, existing Conventions.

Transfer of Technology

The contribution of nuclear techniques to the goal of sustainable development and the improvement of human welfare is widely recognized. Support for nuclear technology transfer for exclusively peaceful purposes is an integral part of the international consensus relating to the peaceful use of nuclear energy that is embodied in the IAEA Statute and the NPT.

The IAEA is the principal vehicle for multilateral nuclear technology transfer. The size of the Technical Co-operation (TC) programme is modest - approximately $88 million this year - but the impact and results have been outstanding, as evidenced by the increasing use of SIT to control agricultural pests, radioimmunoassay techniques in medicine and the many applications of radioisotopes in industry, hydrology and environmental management, to name a few. The key to maximize the impact of the TC programme is through fostering partnerships with other international organizations including non-traditional funding organizations and being a catalyst to optimize the efforts of others.

Conclusion

I began by referring to continuity and change. I should have also mentioned uncertainty because, it seems to me, that the world is still in a period of transition that impacts on practically every aspect of the safe and exclusively peaceful use of nuclear energy. The institutions that were established 40 years ago to promote co-operation in the use of nuclear energy have a good record in meeting the needs and priorities of their respective Member States and adapting to change.

But as we confront the challenges of the future I have no doubt that we will be asked to be more efficient, more effective, strengthen our co-operation and together reach out more to civil society. These are goals to which I am wholeheartedly committed and I know that Luis Echavarri shares this commitment. I am pleased that we will be preparing a Memorandum of Understanding on future co-operation between the two Agencies. Let us work together with the aim that in forty years time our successors can look back on an even better record of achievement in nuclear energy co-operation for the service of peace and development.