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I have two very pleasant tasks to perform at the outset of this 7th Information Exchange Meeting on Partitioning and Transmutation.

Firstly, Mr. Chang and Mr. Yoon, on my own behalf and that of everyone present, I would like to thank you for your welcome to Korea and to this wonderful island of Jeju for our meeting. The surroundings are superb and very stimulating for all our discussions. We are all very appreciative of the generous hospitality of our hosts, Korea Atomic Energy Research Institute (KAERI), Korea Electric Power Research Institute (KEPRI), Korean Nuclear Society (KNS) and Ministry of Science and Technology (MOST) and their support for the work of the OECD Nuclear Energy Agency in this area.

I have to say that it was the intention of my Director-General, Luis Echávarri, to participate in this meeting and to make these welcoming remarks himself. However, other business commitments and developments in Paris have resulted in him being unable to be present in person and he sends his apologies for absence and his best wishes for the success of this meeting. His loss is my gain! I am delighted to join you.

Jeju, Korea joins the illustrious list of hosts of the OECD/NEA Information Exchange Meeting which forms part of the broader Information Exchange Programme on Actinide and Fission Product Partitioning and Transmutation. The first meeting was held in Mito City, Japan in 1990 and it has been followed at two-year intervals by further meetings at Argonne National Laboratory (USA), Cadarache (France), Mito City again, Mol (Belgium) and most recently in Madrid (Spain) in 2000.

My second task is to express a welcome to all delegates on behalf of the Nuclear Energy Agency. It is very encouraging to see the support that you all represent for this most interesting and challenging aspect of the development of nuclear energy and for international collaboration.

We are very pleased to have co-operation with the European Commission, continuing a collaboration of previous years. It is also a pleasure to acknowledge the co-operation of the International Atomic Energy Agency for the first time. I am particularly pleased to welcome Mr. Ved Bhatnagar and Mr. Alexander Stanculescu who represent the European Commission and the IAEA, respectively.

I would also like to particularly acknowledge the participation in this OECD Nuclear Energy Agency meeting of countries which are not members of my organisation. We are pleased to welcome them here to enhance co-operation between all countries with an interest in partitioning and transmutation with a view to best serving the interest of us all.

The objective of the OECD/NEA Information Exchange Programme on Actinide and Fission Product Partitioning and Transmutation, established in 1989, is to enhance the value of basic research in this area by facilitating the exchange of information and discussions of programmes, experimental

procedures and results. This Programme was established under the auspices of the NEA Committee for Technical and Economic Studies on Nuclear Energy Development and the Fuel Cycle and is jointly co-ordinated by the NEA Nuclear Development Division and the NEA Nuclear Science Division.

The Information Exchange Meetings form an integral part of the Programme and are intended to provide a biennial review of the state of the art of partitioning and transmutation. They are co-organised by the NEA Secretariat and major laboratories in member countries.

Within the framework of the NEA programme of work, there are two centres of activity focussing on partitioning and transmutation. The first of these is the Working Party in Partitioning and Transmutation (WPPT) working under the auspices of the Nuclear Science Committee. General objectives of the working party are to provide the NEA member countries with up-to-date information on the feasibility and development status of P&T and to provide advice to the P&T community on the required R&D. It addresses the status and trends of scientific issues comprising different disciplines, such as accelerators, chemistry, material science, nuclear data and reactor physics. It comprises four active subgroups on accelerator utilisation and reliability, chemical partitioning, fuels and materials and physics and safety of transmutation systems. Contributions from this work will be brought forward within the technical sessions, as appropriate, over the next three days.

The second centre of activity arises from the work of the Nuclear Development Committee. I would like to dwell for a moment on the most recent of their publications *Accelerator-driven Systems (ADS) and Fast Reactors (FR) in Advanced Nuclear Fuel Cycles*. Most of you all will already be aware of this study; at this stage of our meeting, I wish to highlight some of the high-level, policy level conclusions. These were:

- More R&D is needed to prove that the technology can be pursued on an industrial scale.
- High technical performance would be needed of a commercial plant in order to benefit the waste disposal activities.
- A system would need to be deployed for a long term, at least 100 years, to bring about a worthwhile benefit in terms of the composition of waste for disposal.
- Additional costs would be involved.

The context within which these conclusions will be judged will be dominated by two international strategic policy objectives, the pursuit of sustainable development and the increasing introduction of competition into markets, including the electricity markets, together with the globalisation of capital.

Will partitioning and transmutation bring value to the world in a detailed analysis of the economic, environmental and social dimensions of sustainable development? I do not have time allocated to me to address this topic but we all need to reflect on the implications of sustainable development goals when developing new technology. Within NEA, we have found the framework of sustainable development to be very suitable for introducing nuclear issues to general policy making and we would advocate such an approach for partitioning and transmutation specifically.

Will partitioning and transmutation aid or suppress the ability of nuclear energy to compete in electricity markets? I do not have time to address this in detail either. However we all recognise the imperative of short-term considerations in today's markets. The practical development and deployment of partitioning and transmutation currently depends on government action and interest and this seems to me to be likely to continue for some considerable time. However, government action is

advancing now and I personally believe that it is time to consider the potential role of partitioning and transmutation an important option in the advanced nuclear fuel cycle, which could complement other options being studied within the future nuclear waste management strategy.

For a more thorough investigation into the nuclear waste management options, we will be working on a new study which will examine the implications of reactor fuel cycle choices on the options for waste disposal. Our member countries assign great importance to understanding the changes which can be brought about in the management of irradiated fuel – and in particular waste disposal – by actions taken earlier in the fuel cycle. We intend to make a contribution to this subject and I hope to be able to report some of the outcome to you at your next meeting to be held in two years time.

That all being said, there have been very positive development in the deployment of nuclear energy this year in which NEA has been involved with active participation of many member countries. Generation IV is an active project directed towards research and development of nuclear technology to meet both market and societal needs. Advanced fuel cycles are associated with advanced nuclear technologies and the opportunity for consideration and inclusion of partitioning and transmutation within the framework of future options is high. We need to seriously consider the issues raised within the framework of Generation IV and other initiatives.

Ladies and Gentlemen, I am looking forward to the presentations and discussions of our meeting. I wish you a stimulating and rewarding three days.

Thank you for your kind attention.