International Forum on Nuclear Safety Challenges in the Flat, Mixed and Open World

19-20 April 2010 Seoul, Korea

■ Organized by KINS KOREA INSTITUTE OF NUCLEAR SAFETY

■ Sponsored by MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

■ In cooperation with the IAEA International Atomic Energy Agency

1. Background

The interest in introducing or expanding nuclear power programmes is global. The most important challenge that remains is how to ensure the appropriate level of nuclear safety worldwide. An international approach with the Agency support has emphasized the sharing of nuclear safety information and experience with the new entrants in a more effective and tailored manner.

In line with this, a special focus should highlight and prioritize policy and technical challenges in the nuclear safety era: how to effectively harmonize the gap between new entrants and the existing NPP countries including the safety gap between the old and new reactor generations. Specifically, these challenges can be discussed in terms of new environmental changes, characterized by an open society with new web-based technology.

In coping with such challenges, Korea would like to propose to hold the "International Forum on Nuclear Safety Challenges in the Flat, Mixed and Open World" on 19~20 April, 2010 in Seoul, Korea, inviting H.E. Yukia Amano, IAEA Director General and other honorable regulators to share the expertise and experiences accumulated over 30 years of successful operation and to discuss the ways of eliminating gaps between the Member States.

2. Objectives

The objectives of the "International Forum on Nuclear Safety Challenges in the Flat, Mixed and Open World" are to address the nuclear safety challenges that are confronted by nuclear regulators in the exiting NPP countries as well as in new entrant countries.

The forum will particularly focus on the issues related to the regulatory assistance and partnership between new entrants and the existing NPP countries, safety approaches for the mixed reactor generations and communication challenges in a more open society.

3. Topics of the Forum

Session 1: International Harmonized Safety Regime between New Entrants and NPP Countries in the Flattening World

Faced with energy shortage and climate change in the world, nuclear energy needs to be commonly explored regardless of have or have-nots. In the past, nuclear power plants have been built and operated in mostly developed countries. However, nowadays, many developing countries have expressed their strong desire to launch a nuclear power program. Nuclear utilization has become flattener in the world: have-countries are expanding its nuclear power programs and have-not countries are just starting a nuclear power program. Most of those countries are striving to develop their safety infrastructure and relevant human resources in line with the IAEA's safety and energy guidance.

This session will address a wide scope of issues associated with nuclear safety challenges that are confronted by nuclear regulators. This includes the challenges in new entrant countries and also in

the existing NPP countries, and the challenges of promoting the international safety partnership in a more harmonized way between new entrants and those NPP countries with NPP experience.

Topics for discussion include:

- Regulatory assistance and partnership;
- Regulatory challenges associated with new builds and expanding NPPs;
- Knowledge and experience transfer to new entrants;
- Filling the gap of long period of construction recession in countries with an existing nuclear power program; and
- Sharing, building and improving safety infrastructure through education and training.

Session 2: Harmonized Safety Approaches for the Mixed Reactor Generations

The nuclear reactors in the world can be categorized into 4 generations: generation I, generation II in operation, generation III under construction, and generation IV under development. Many reactors in generation I or II are expected to extend their operation time up to 60 years or even longer. Building of new NPPs is mostly likely to start with generation III that require higher standards. This will create a generation gap between newly built and older NPPs. It is expected that the old and new generation are to be operated together, at least, for 20 or 40 years in some countries. Those reactors had been and will be born in different environments. However, the safety must be ensured even with such a generation gap. Now is the time to think about how to fill the gap appropriately to ensure nuclear safety throughout the generations.

This session will address safety approaches to harmonize the gap caused by the recent development in reactor technology: how to mix the old but stablized NPPs with the new but to-be-verified reactors. The session will also focus on safety challenges and impacts related to ageing, extreme natural events and multinational reactor design to harmonize safety, security and safeguard.

Topics for discussion include:

- Safety strategy to fill the gap between old reactors and new ones;
- Safety impact of extreme natural events;
- Safety challenges of aging plants; and
- Multinational reactor design to harmonize safety, security and safeguard.

Session 3: Regulatory Challenges in New Environments More Open to the Public and the International Community

In the modern society, the development of the digital and social networking technology enables the public which includes the international community to easily access the information and activities of an organization. It brings new regulatory challenges such as struggling with the increasing demands to know more about a regulator's well-in-process infrastructure and enhancing appropriate capabilities. As the world becomes more open than ever before, the effective communication with

the public will be a critical challenge to push forward a nuclear power programme not only in new entrant countries but also in those with old operating NPPs.

This session will address the challenges related to public communication in a modern society of advanced IT network technology and more increasing demand from the public on information on nuclear safety. It will focus on encouraging information exchanges among the Member States on public communication experiences and best practices as well as lessons learned.

Topics for discussion include:

- Effective communication with the public for the new-building of NPPs;
- Global nuclear safety and security network; and
- Public communication experience and practices.

4. Participants

This Forum is intended for senior regulators in potential new entrant countries and existing NPP countries. The Minister or DG level of Regulatory Authority of the interested Governments are welcomed to participate and discuss the aforementioned topics by sharing knowledge and experience on their nation's positions.

All persons wishing to participate in the Forum are requested to register in advance online (http://2010forum.kins.re.kr). In addition, they must complete the Participation Form and send it as soon as possible to Korea Institute of Nuclear Safety.

5. Working Language

The working language of the Forum will be English. No interpretation will be provided.

6. Visas

Designated participants who require a visa to enter Korea should submit the necessary applications to the nearest diplomatic or consular representative of the Republic of Korea as early as possible but at least one month before the meeting.

7. Expenditure

No registration fee is charged to participants.