

Welcome Address

Mr Jun Ho SHIN, President,
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Ladies and gentlemen,

Welcome to the 22nd IAEA International Project on Innovative Reactors and Fuel Cycles Dialogue Forum (INPRO DF) in Korea.

The Korea Nuclear International Cooperation Foundation (KONICOF) is delighted to host this DF with the Korea Nuclear Society on the beautiful Jeju Island.

The escalating global climate crisis demands concerted efforts to reduce greenhouse gas emissions.

The surge in power demand to support advanced industries like AI and semiconductors is anticipated.

We are facing looming energy security crises due to geopolitical tension.

It is essential to mitigate the economic downturn caused by various factors including the rising cost of low-carbon energy.

The pivotal solution to the multiple crises lies in optimizing the utilization of low-cost, clean energy sources beyond renewable energy.

In this regard, nuclear energy, providing low electricity costs and stability, is crucial in the energy transition to reduce fossil fuel dependency and pursue decarbonization.

In September 2023, Korea proposed the "Carbon-Free Energy Initiative" at the UN General Assembly, to advocate for the active utilization of nuclear energy to alleviate the burden on companies complying with RE100, which aims for 100% renewable energy.

Furthermore, during the "First Nuclear Energy Summit" on March 21, a resolution was passed endorsing the expansion of nuclear energy's share in power generation as a low-carbon energy source.

The necessity of expanding nuclear energy was also highlighted in the 'Declaration to Triple Nuclear Energy by 2050,' launched at COP28 in 2023.

Ladies and gentlemen,

Nuclear power meets key criteria for climate crisis resilience, economic viability, and energy security.

Particularly, Small Modular Reactors (SMRs) can offer significant promise in advancing global decarbonization initiatives, providing flexibility in operation, deployment, and product.

They can ideally be suited as distributed power sources, helping to mitigate the intermittent nature of renewable energy by adjusting generation levels in response to power supply fluctuations.

SMRs with smaller Emergency Planning Zones can be situated in close proximity to industrial or chemical facilities.

Their compact footprint, shorter construction timelines, lower initial costs, and scalability mitigate deployment risks.

Economic viability can be ensured through mass production.

Furthermore, their minimal siting constraints extend the potential for deployment into deep-sea locations and remote areas, further solidifying their anticipated role as a power source in space exploration.

Above all, SMRs are game changers with their diverse range of potential applications.

They can be utilized for power generation, hydrogen production, local heating and industrial heat supply like petroleum refining, freshwater production, and more.

In particular, SMRs with a capacity of less than 10MWe, known as Micro Modular Reactors (MMRs), are easily deployable across various applications.

The envisioned roles of such SMRs include powering nuclear propulsion systems for rockets and spacecraft, facilitating both military and civilian satellite communications, and bolstering the establishment of space infrastructure such as bases. SMRs are expected to be key players in the burgeoning field of space exploration.

Above all, SMRs offer high safety levels through features such as passive safety design, which reduces the probability of major accidents.

To facilitate the smooth development of the SMR industry, efforts should be systematically coordinated to encompass technological advancements, regulatory innovations for safety, enhancement of manufacturing capabilities, participation in global supply chain, financial support, and fostering a skilled workforce.

In addition, international solidarity and cooperation are indispensable for a sustainable future powered by nuclear energy.

We appreciate the IAEA for its leading international efforts on SMRs by supporting Member States in their endeavors to develop and deploy advanced reactors through the 'SMR Platform.'

It has also established Nuclear Harmonization and Standardization Initiative (NHSI) for both industry and regulatory domains.

Ladies and gentlemen,

Against this backdrop, the current discussion within INPRO Dialogue Forum on the Successful Development and Sustainable Deployment of SMRs holds significant importance.

I anticipate that this INPRO Dialogue Forum will serve as a stepping stone for the exchange of knowledge and the fortification of collaborative ties among participants.

I also look forward to constructive outcomes on the agenda during the forum. Thank you.