

Nonproliferation, Nuclear Security, and Advanced Reactors

Remarks of Ken Luongo, President, Partnership for Global Security

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Ladies and Gentlemen we have a remarkable set of opportunities before us at this time.

We can tackle the serious global challenge posed by Climate Change and create a safe environment for future generations; bring needed electricity to all corners of the globe and continue economic improvement for millions of people in developing countries; and do it with advanced technologies that will support a vibrant science and technology sector in the United States that will enhance its global leadership and strengthen international security and stability.

But, these opportunities cannot be realized if advanced nuclear reactors are a catalyst for the creation of new nuclear dangers. As nuclear infrastructure grows and moves into new regions, so do the amount of nuclear material and facilities that need to be secured, potentially increasing opportunities for nuclear proliferation and terrorism.

Therefore, there is an urgency in taking action to ensure that – at the early stages of this new era – all advanced reactor designs minimize nuclear security and proliferation concerns and that none will contribute to global nuclear insecurity.

This is a significant challenge because the advanced reactor landscape includes: competing nations with differing views on the importance of effective nuclear governance; an international competition to capture market share; numerous reactor designs; reactor coolants that are very different; and fuel requirements that vary.

To begin grappling with these challenges, two essential steps are required:

An in-depth and sustained dialogue is needed between advanced reactor designers and nuclear security and safeguards professionals. This is necessary to deliver a product that will suit the needs of investors, governments, and the global public.

There also needs to be a dialogue among the proponents of advanced reactors, who see the contribution to the global good that is inherent in the technology, and the expert community that is concerned that advanced nuclear technologies potentially pose new and significant nuclear security and proliferation dangers.

There are international, expert conversations being held on the security and proliferation issues related to advanced reactors that are very valuable. They have as their objective increasing the assurance that next generation reactors are very unattractive for diversion to nuclear weapon activities and that they provide increased physical protection against acts of terrorism.

This work has been primarily technical and it is important that these results and new assessments that build upon them be placed in an easily accessible policy framework context for international policy-makers and investors so that they can understand the choices that need to be made.

A very unique project that my organization, the Partnership for Global Security, and the Nuclear Energy Institute have partnered on - the Global Nexus Initiative - is specifically focused on the intersection of climate change, nuclear power and global security and the development of a new, more inclusive stakeholder coalition.

We examined the potential presented by advanced reactors and produced a “Framework for Advanced Reactor Deployment”.

In this framework were three initial recommendations for how to create a high level of confidence that next generation nuclear technology will enhance global security.

First, that high levels of safety, safeguards and security should be incorporated into the initial reactor designs. And, that these features should be rigorously tested against realistic and challenging scenarios to further strengthen these systems.

Second, that the international community should oppose advanced reactors fuel cycles that are designed for the specific purpose of breeding surplus plutonium for future use in nuclear reactors. And that it should oppose the stockpiling of separated plutonium and the use of uranium fuel enrichments that exceed 20%.

Third, in tandem with the development of next generation reactor concepts, the international community should acknowledge and address the significant gaps that exist in the global nuclear security regime by strengthening the international legal framework.

In my view, these three recommendations can serve as the baseline for the development of a more detailed policy framework of global principles for advanced reactor security and proliferation prevention.

A vital part of getting the security and nonproliferation framework right is making sure that all the key stakeholders are a part of the dialogue. This includes, governments, regulators, national laboratories, international organizations, the nuclear industry and its professional organizations, and non-governmental experts.

The GNI project is part of a movement to ensure that there is an effective and broad based partnership directing the future of nuclear power and ensuring the social value of its contributions, not a continuation of an outdated battle over its relevance.

Too often in the nuclear world there are divisions between these stakeholders that are artificial or remnants of an era when nuclear power was controversial, not a recognized part of the solution to the challenges of the 21st Century.

Those challenges include not just climate change, but the struggle for vital geopolitical influence -in a both highly interconnected and increasingly fragmented world - to ensure that all nations and the international system move toward security, stability and prosperity. Nuclear power is an instrument of geopolitical influence and it impacts these three essential global conditions for progress.

There needs to be a greater appreciation of the positive impact and importance of the U.S. aggressively participating in the global nuclear energy market. Cooperative relationships between suppliers and

recipient nations can last for a century – through reactor building, operation, and decommissioning. This has an impact on a wide range of vital foreign policy and economic issues and objectives.

Traditional nuclear suppliers including the United States, France, and Japan are losing ground on the new nuclear builds to China, Russia, and South Korea who are aggressively marketing their nuclear technologies and services. China is poised to be the Grand Central Station of nuclear commerce. Projections are that it will overtake the United States as the world's top nuclear power generating nation by 2026 - making it the largest global nuclear operator and market. And its government is investing in its nuclear industry with the aim to make it the world's dominant supplier.

The evolution of nuclear suppliers can undermine the influence of the nations that historically have been most active in building and improving the global nuclear governance system. The emerging suppliers do not have a deep record of initiating improvements to the global nuclear governance system and in the heat of clawing away market share, there is the potential to cut corners and proceed with risky sales.

Influence over the rules of the road will be exercised by those with the greatest market share.

Therefore, a race to the bottom must be avoided. The nuclear governance system is in need of strengthening but is at risk of being eroded.

Robust U.S. support for the accelerated deployment of advanced reactors offers one important lever to begin the reversal of this powerful trend.

It is essential – particularly at this critical juncture - that we get this right. There is a lot riding on it: a solution to the climate crisis; the productive use of billions of dollars in private and public investment; and the economic and geopolitical value that the effective safety, security and proliferation prevention of the next generation of nuclear reactors can provide.

Thank you.