Statement of Art Atkins
Assistant Deputy Administrator for Global Material Security
Office of Defense Nuclear Nonproliferation
National Nuclear Security Administration
U.S. Department of Energy
Before the
Subcommittee on Energy
House Committee on Energy & Commerce

February 6, 2018

Chairman Upton, Ranking Member Rush, and Members of the Subcommittee, thank you for the opportunity to discuss the Department of Energy's (DOE) National Nuclear Security Administration's (NNSA) important role in national security. NNSA is charged with important and enduring missions critical to the national security of the United States: maintaining the safety, security, reliability, and effectiveness of the nuclear weapons stockpile; preventing, countering, and responding to global nuclear threats; and providing naval nuclear propulsion to the U.S. Navy's fleet of aircraft carriers and submarines. At the same time, DOE/NNSA recognizes the important role played by civil nuclear energy, both in the United States and abroad. NNSA is making strides to ensure that the nuclear industry stays strong in a challenging environment, and listening to industry concerns is a critical component in furthering our progress.

NNSA's Nonproliferation Responsibilities

In his speech at DOE this past June, the President called for a comprehensive review of nuclear energy policy that will help find new ways to revive, revitalize, and expand this crucial industry. In parallel, the Administration is committed to preventing the global proliferation of nuclear weapons programs. In support of the President's objectives, NNSA is committed to maintaining a balance between the promotion of legitimate nuclear commerce and the national security imperative of controlling the proliferation of weapons usable material, equipment, technology, and expertise. NNSA's nuclear nonproliferation programs play a critical role in helping to ensure that nuclear exports are enabled in accordance with the highest nonproliferation standards. Increasing this global reach is among the highest priorities for NNSA. Through our support of the negotiation of 123 Agreements, export licensing, and multilateral export control regimes such as the Nuclear Suppliers Group, we ensure that U.S. nonproliferation standards are mirrored by our partners and other suppliers globally. Further, NNSA is committed to working with domestic and foreign partners to minimize the global use of highly enriched uranium (HEU) to reduce the risk that terrorists can acquire HEU for use in an improvised nuclear device.

123 Agreements and Administrative Arrangements

Working with the Department of State (DOS), the Nuclear Regulatory Commission (NRC), DOE's Office of Nuclear Energy (NE), and other departments and agencies, NNSA plays a leading role in efforts to conclude peaceful nuclear cooperation agreements with foreign governments. Often referred to as "123 Agreements," such Agreements establish the legal

framework for U.S. companies to export nuclear power reactor fuel, nuclear reactors, and other important pieces of equipment to foreign companies and governments. As such, entry into force of 123 Agreements helps to achieve the Administration's twin goals of facilitating the expansion of the U.S. civil nuclear energy sector to create more U.S. jobs and more exports, while at the same time, helping to ensure that global civil nuclear energy development takes place in accordance with the highest nonproliferation standards.

NNSA works with NE to achieve these reinforcing goals by providing technical support to the DOS in the negotiation of all 123 Agreements. In this context, NNSA experts help ensure that the terms of all 123 Agreements contain the strongest possible nonproliferation conditions and best practices. For NNSA, 123 Agreements can also be mechanisms to facilitate nuclear nonproliferation cooperation in the area of safeguards, export controls, and physical protection, to name a few.

At present, the United States has 23 such agreements in force that govern peaceful nuclear cooperation with 48 countries, the International Atomic Energy Agency and the governing authorities on Taiwan. Most recently, new 123 Agreements with China, the Republic of Korea, and Norway entered into force in October 2015, November 2015, and January 2017, respectively.

10 CFR Part 810 Authorizations

The U.S. Energy Information Administration projects that installed nuclear generating capacity outside the United States will increase by nearly 80% from 2015 to 2050.[1] The growing international market presents an important commercial opportunity for the U.S. nuclear industry, but the export of U.S. nuclear technology also poses nuclear proliferation risks that must be carefully managed. Under the Atomic Energy Act of 1954, as amended (AEA), the Secretary of Energy (the Secretary) has the authority to authorize proposed exports of unclassified U.S. nuclear technology and assistance. This authority is implemented in the 10 CFR Part 810 regulation (Part 810), which DOE/NNSA is responsible for administering.

As the Secretary stated in a December 22 letter to this Subcommittee, the Department is committed to reducing processing times for applications under Part 810 while maintaining strong nonproliferation controls on U.S. nuclear technology. DOE/NNSA and other pertinent U.S. Government agencies have made significant progress in improving the efficiency and transparency of the Part 810 regulatory regime, including through implementation of DOE/NNSA's Part 810 Process Improvement Plan (PIP). Key accomplishments to date include the following:

- The Department published a revision to the Part 810 regulation that, among other benefits, establishes fast track approval processes for a number of activities that previously would have required specific authorization.

[1] U.S. Energy Information Administration, *International Energy Outlook 2017*, Table: World Installed Nuclear Generating Capacity by Region and Country. (https://www.eia.gov/outlooks/aeo/data/browser/#/?id=23-IEO2017&sourcekey=0)

- The Department established an electronic submissions portal ("e810") that is operational and available for industry use. This website was a long-standing request from industry groups and has been available to exporters since January 2017. The e810 website reduces the paperwork burden for industry and increases transparency by allowing the applicant to view where their request is in the reviewing process.

- DOE established a single point of contact for all exporters, standardized internal documents, and clarified internal review processes.

As a result of these and other changes, the average processing time for specific authorization requests, amendments, and renewal requests under Part 810 has dropped from a high of more than 18 months to approximately 12 months. The Secretary has provided this Subcommittee with a specific timeline for implementing further improvements, including expanding the functionality of the e810 system, establishing formal deadlines for DOE/NNSA internal reviews, and creating compliance policies that encourage exporters to self-identify issues and violations. NNSA is working to ensure these improvements are implemented in a timely manner.

However, the lengthiest part of the Part 810 review process remains largely outside of DOE/NNSA control. Concurrence of DOS and review by the NRC and Departments of Defense and Commerce, and for certain cases, the Office of the Director of National Intelligence (ODNI), are required by statute. DOS does not concur until they have received the required government-to-government nonproliferation assurances from the country that would receive the technology. This process can often take six months or longer. While the U.S. Government works closely with partner countries to obtain assurances, industry also has an important role to play. We encourage U.S. exporters to emphasize the issue of nonproliferation assurances with their customers, who in turn can highlight the issue with their government counterparts. Industry taking initiative on this issue could help reduce Part 810 application processing times by several months or more.

A second major challenge in expediting the Part 810 process is the requirements of the Fiscal Year 2016 National Defense Authorization Act (NDAA), which added a heightened level of review for proposed technology exports to China and Russia.

HEU Minimization and Advanced Reactor Fuel Development

NNSA's Office of Material Management and Minimization (M3), through its Reactor Conversion Program, works in the United States and around the world to convert research reactors and medical isotope production facilities from the use of HEU to low enriched uranium (LEU). These efforts are a key element in the United States' policy to minimize the use of HEU in civilian applications worldwide by reducing, and where possible eliminating, the demand for HEU at civilian reactors and medical isotope production facilities. Conversion of a facility eliminates the need for HEU at that facility, and also reduces the overall amount of HEU in transit, where it is most vulnerable. This contributes to U.S. national security by greatly reducing the risk that terrorists can acquire HEU for use in an improvised nuclear device. The new LEU fuel designs used for conversion may, in turn, serve as the basis for industry to design future civilian research reactors with increased capabilities, further moving away from the need

for HEU fuel. To date, NNSA has converted or verified the shutdown of 101 research reactors and isotope production facilities worldwide.

NNSA's Role in Uranium Management

Uranium Management for Defense and Non-Defense Uses

The Department is preparing an Excess Uranium Management Plan addressing management of its uranium inventory that is excess and not dedicated to national security missions. This interdepartmental effort has been coordinated by NE and is expected to be released in the near future. In addition, NNSA produces a biannual report to Congress, the Unencumbered Enriched Uranium Management Plan Through 2065 that includes plans for managing tritium and enriched uranium resources to meet national security and defense requirements.

Uranium Requirements

DOE/NNSA requires a reliable supply of Enriched Uranium to accomplish its defense and non-defense related missions. For NNSA, HEU is needed to maintain the nuclear weapons stockpile, in support of Mutual Defense Agreements, and for naval propulsion programs. The nearest term defense need is for LEU required to support production of tritium, which is needed for the nuclear weapons stockpile.

NNSA's Office of Defense Programs (DP) is working to reestablish a Domestic Uranium Enrichment (DUE) capability in time to supply LEU for tritium production. DP has identified HEU from the Department's inventory that can be down-blended to provide LEU for tritium production through approximately 2038. Because longstanding U.S. policy and international agreements require LEU used for defense purposes be unencumbered by U.S. or foreign peaceful use commitments, NNSA must rely on this existing uranium inventory to meet the tritium requirement until an enrichment capability can be reestablished.

NNSA's M3 Office manages uranium for non-defense needs including High-Assay LEU (HA LEU, above 5% and less than 20% 235U) fuel for research reactors and medical isotope production, and LEU fuel for the American Assured Fuel Supply. The Department is exploring unified strategies in which a DUE capability could achieve HA-LEU requirements.

Because the Department has multiple needs for uranium, any decisions made on an enrichment capability need to consider all the requirements in order to avoid duplicative efforts.

Conclusion

NNSA is continually working with nuclear industry in recognition of the vital importance that industry plays in supporting national security as well as commerce. NNSA needs strong industry partners to address critical national security challenges, and these challenges require industry to resolve them. The success of NNSA's nonproliferation and uranium management responsibilities are only possible with strong and reliable commercial partners. Thank you for your time.