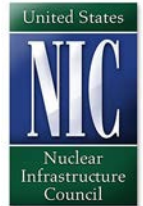


# UNITED STATES NUCLEAR INFRASTRUCTURE COUNCIL

[www.usnic.org](http://www.usnic.org)



September 19, 2017

The Honorable Ernest Moniz  
Secretary of Energy  
The Forrestal Building  
Washington DC 20585

**By email:** [RFI-UraniumTransfers@hq.doe.gov](mailto:RFI-UraniumTransfers@hq.doe.gov)

**Re:** U.S. Department of Energy (“DOE”) Request for Information for a Potential New Secretarial Determination Covering Down-Blending of High-Enriched Uranium to Low-Enriched Uranium (“LEU”)

Dear Mr. Secretary:

We are writing to advise you of a common ground concern, which if left unaddressed, could have potentially significant negative implications for emerging U.S. advanced nuclear energy reactors given a lack of special uranium that will be used as fuel.

As you are aware, Advanced Reactors have every promise of providing enhanced efficiency, flexibility and safety while producing carbon-free electricity at lower costs than current reactor technology. This continued advancement of American nuclear energy technology – including Gen 3+, Small Modular Reactors and Advanced Reactors – is pivotal to maintaining America’s market leadership globally in the \$2.8 trillion market worldwide and certainly to environmental progress.

Due to the increased efficiency of advanced nuclear technologies, many Advanced Reactors will require enrichments of the U235 isotope ranging from 6% to as much as 19.75%. (20% enrichment is the threshold of highly enriched uranium [“HEU”]) as opposed to current reactors that typically require uranium enriched to approximately 5%.

Presently, there is no readily available domestic supply of civilian uranium in excess of 5%, which presents a significant challenge for the development of U.S. Advanced Reactors. While there is a potential future domestic supplier for higher enrichments of LEU, this capability will not likely be available in the private sector until the early 2020s under a best case scenario. Without a readily available domestic supply of higher enriched LEU in the U.S, it will be extremely difficult to conduct research on Advanced Reactors potentially driving American innovators overseas. In short, it is in America’s economic, environmental and energy security interests to maintain a domestic supply of LEU at levels up to 19.75%.

The most cost-effective way to generate these higher enrichments of LEU in the short term is by down-blending (diluting) HEU with additional LEU. The Department of Energy’s current plans

**UNITED STATES NUCLEAR  
INFRASTRUCTURE COUNCIL**

[www.usnic.org](http://www.usnic.org)



are to down-blend its excess HEU for use in commercial nuclear reactors for national security requirements or clean-up cost offsets with additional amounts earmarked for high-assay LEU to foreign and domestic research reactors or for space based nuclear powered reactors.

Completely down-blending the remaining inventory – which is projected to be fully subscribed -- would be a strategic mistake. In the interest of advancing nuclear energy technology, maintaining a small domestic strategic reserve of 19.75% LEU should be a federal priority and we urge you to consider augmenting the Secretarial Determination to this end. While we are in the process of inventorying enrichment requirements and projected needs by Advanced Reactor developers over the next five years, we believe the adverse material impact on the domestic mining, conversion, or enrichment industry will be negligible.

This action will serve to bridge a crucial gap for developers until a commercial option becomes available to produce higher enrichments. Creating a stockpile of 19.75% uranium that could form a strategic reserve of readily available higher enriched LEU will be a catalyst for facilitating U.S. Advanced Reactor technologies. This will discourage the migration of these emerging technologies offshore, and will obviate an increased dependence on China and Russia to supply these needed fuel supplies.

We appreciate that the Department's awareness of the need for this crucial fuel and exploration of potential solutions. Supporting American entrepreneurs in their mission of developing the next generation of nuclear power is an economic, strategic, and environmental imperative. We are encouraged by the Department's attention to the development of Advanced Reactor technologies and wish to reinforce the necessity of an appropriate domestic reserve of higher enriched LEU.

We appreciate your consideration of this issue in the forthcoming Secretarial Determination for the Sale or Transfer of Uranium.

Sincerely,

A handwritten signature in black ink that reads "David Blee". The signature is written in a cursive style and is positioned above the typed name and title.

David Blee  
Executive Director

Copy To:

Mr. Raymond Furstenau, Associate Principal Deputy Assistant Secretary, USDOE

Ms. Cheryl Moss Herman, Office of Nuclear Energy, USDOE

Hon. Jeffrey Merrifield, Chairman, USNIC Advanced Reactors Task Force