



The Secretary of Energy
Washington, DC 20585



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 18, 2022

The Honorable Frank Lucas
Ranking Member
Committee on Science, Space, and Technology
U.S. House of Representatives
Washington, DC 20515

Dear Representative Lucas:

Thank you for your March 15, 2022, letter requesting the Department of Energy (DOE) and Nuclear Regulatory Commission (NRC) increase communication and that DOE and NRC prioritize sharing information with one another regarding advanced nuclear reactors. We want to assure you that DOE and NRC communicate frequently and extensively on key issues concerning the NRC's licensing framework and DOE's programs for demonstration and deployment of advanced reactors.

As required by the Nuclear Energy Innovation Capabilities Act (NEICA) of 2017, the DOE and the NRC entered into a Memorandum of Understanding (MOU) in October 2019, that includes sharing technical expertise and knowledge on advanced nuclear reactor technologies. Since then, the agencies have added addenda to the MOU that further strengthen communications. One of these addenda provides for information exchange related to DOE's selection of multiple reactor projects to be developed and deployed over the next two decades through the DOE's Advanced Reactor Demonstration Program (ARDP). The NRC provided feedback on the credibility of the licensing timelines proposed in the submitted applications. The NRC and DOE's Office of Nuclear Energy (NE) frequently share information on the ARDP project schedules, resources, and progress. Another addendum focuses on NE's National Reactor Innovation Center (NRIC) and provides the NRC opportunities to observe and learn about the advanced technologies demonstrated through NRIC. Example activities include coordination on a technology-neutral approach to environmental assessments, NRC staff detail assignments to DOE, and engagement on advanced construction technologies and the application of digital engineering to future license applications. Another addendum supports collaboration on the use of advanced modeling and simulation in a regulatory environment. The NRC and DOE continue to explore additional addenda to the MOU to further expand communication and information sharing on advanced reactors.

The DOE and NRC also signed an MOU in September 2019 regarding the Versatile Test Reactor. This agreement provides the NRC, consistent with its role as an independent safety and security regulator, with opportunities to enhance its understanding of advanced technology and inform its approaches to licensing advanced reactors. In addition, in May

2019, DOE, the NRC, and the Department of Defense (DoD) signed an MOU that establishes the basis for sharing of technical expertise and knowledge on micro-reactor technologies specific to the deployment of DoD's Portable Energy for Lasting Effects project.

The NRC and DOE communicate and interact frequently via numerous avenues. These include joint quarterly senior leadership meetings to discuss and engage on high priority topics of interest to both agencies; NRC staff participation in annual NE program reviews and staff level discussions of DOE's advanced reactor research and enabling technologies programs; and DOE providing updates on its programs at many NRC public meetings, such as NRC Commission Meetings, the annual NRC Regulatory Information Conference, and periodic Advanced Reactor Stakeholder meetings. Also, NE's Advanced Reactor Regulatory Development program supports stakeholders to engage in NRC's public activities to modernize its regulatory framework, such as developing adaptations of light water reactor (LWR)-based regulations for non-LWR advanced reactors, finalizing the establishment of risk-informed and performance-based license application guidance for advanced reactors, and clarifying expectations for advanced reactor license application content and review criteria. In addition, NE's Advanced Reactor Technologies program and the NRC coordinate to facilitate the resolution of design-specific regulatory gaps for advanced reactors. A key coordination activity involved NRC endorsement of the fast reactors fuel database developed by NE, which can now be used by advanced reactor developers to support licensing of their designs.

As a means of strengthening communication between the organizations, NRC staff have been detailed to NE technical program offices. These details have been very successful in providing much needed perspective on the challenges faced by both agencies and opening further channels of communication. NRC and DOE leaders have discussed continuing details of NRC staff to NE and providing for details of DOE staff to the NRC to deepen the lines of communication, while respecting the statutory separation of the organizations.

Regarding the Department's near-term development and demonstration activities for advanced reactor technologies, which include those of TerraPower, X-energy, and NuScale/Carbon Free Power Project (CFPP), DOE and the NRC staff conduct regular, informal coordination meetings with a focus on resolving issues impeding licensing and project progress while avoiding mission-related conflicts of interest. Coordination efforts have also included joint site visits to ARDP demonstration sites and multi-day, in-person, strategy briefings between the NRC, DOE, NuScale, and CFPP.

We appreciate your continued interest in the NRC and DOE's coordination on advanced reactors. DOE is committed to continuing communication and prioritizing information sharing with NRC on the technical development of advanced reactors.

If you have any questions or need additional information, please contact either of us or Dr. Ali Nouri, Assistant Secretary for Congressional and Intergovernmental Affairs, Office of Congressional and Intergovernmental Affairs, at (202) 586-5450, or Mr. Eugene Dacus, NRC's Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,



Jennifer Granholm



Christopher T. Hanson

cc: The Honorable Eddie Bernice Johnson
The Honorable Jamaal Bowman