

## **Addendum to DOE/NRC Memorandum of Understanding on Nuclear Energy Innovation**

U.S. Nuclear Regulatory Commission and United States (U.S.) Department of Energy (DOE)  
Roles and Responsibilities in Establishing the DOE Advanced Reactor Demonstration Program

### **Background**

In the budget for FY20, Congress directed the Secretary of Energy to establish an Advanced Reactor Demonstration Program (ARDP) to demonstrate multiple advanced reactor designs. The primary objective of this new program is to focus DOE and non-federal resources on actual construction of real demonstration reactors. As the DOE embarks upon the development of the ARDP, the DOE acknowledges the value and welcomes the participation of the U.S. Nuclear Regulatory Commission (NRC) in providing guidance for specific elements of the program, while also recognizing the need to assure the NRC's independence to avoid compromising its regulatory role. Specifically, the DOE seeks to engage the NRC on the development of the front-end solicitation aspects of the project, while assuring that the NRC remains independent of activities involved in the review and selection of reactor demonstration project applications. This effort will primarily involve obtaining NRC technical and regulatory feedback on the ARDP funding opportunity announcement (FOA) and associated documentation prior to issuance of the FOA to assure that the NRC's regulatory requirements are clear and that responses to DOE requests for information will meet DOE's goals for the project by clarifying the projects' preparedness for the NRC licensing process.

### **Roles and Responsibilities**

#### DOE

- Identify a single DOE Point of Contact (POC) (Dirk Cairns-Gallimore, DOE NE-51) to coordinate NRC-DOE interactions. DOE POC will work with NRC POC to:
  - o Obtain NRC review of key sections of the FOA that pertain to NRC equities and incorporate these into the FOA.
  - o Coordinate with NRC regarding the schedule for procurement activities.
  - o Coordinate with NRC regarding questions posed by interested applicants to the FOA regarding NRC-related equities. Questions will be provided in a generic sense so as not to compromise NRC independence on future licensing activities.
  - o Coordinate key sections of applications (proposals) with NRC for technical advisor inputs. Requests for input will be provided in a generic sense so as not to compromise NRC independence on future licensing activities.
  - o Notify NRC of awards and awardees.
  - o Coordinate post-award kick off meeting schedule and agenda with NRC.
- Attend, as necessary, preapplication meetings between the awardees and the NRC (including closed/non-public meetings), associated with the awardee's licensing program and authorization.

## NRC

The NRC, consistent with its role as an independent safety and security regulator, is responsible for providing accurate, current information on the NRC's regulations and licensing processes in connection with the ARDP including, but not limited to: reactor design, siting, construction, fuel selection, and operation. The NRC will provide technical and regulatory expertise and will neither make recommendations regarding specific designs nor participate in the selection process.

The following are the anticipated NRC Roles and Responsibilities in support of selected elements of the ARDP:

- Provide a single Point of Contact (Brian Smith, Deputy Director NRR/DANU) within the NRC who will assure solicitation documents are reviewed by personnel within the NRC structure with the appropriate areas of expertise.
- Provide expertise and consultation to DOE and laboratory or facility personnel on interpretation and application of NRC standards and guidance, as they relate to the ARDP.
- Provide an interface between DOE's and NRC's General Counsels to discuss issues and clarify DOE requirements related to Foreign Ownership, Control, or Influence (FOCI), or NRC requirements related to Foreign Ownership, Control, and Domination (FOCD). This interface should also discuss issues related to potential or perceived conflicts of interest.
- Review and provide technical input to the ARDP FOA and associated documents in areas such as:
  - o Potential advanced reactor licensing pathways;
  - o Expectations for applicant pre-application activities;
  - o Assuring that FOA requests for technical information on the overall design, including reactor or fuel characteristics, are consistent with required licensing information;
  - o Feasibility of advanced reactor licensing timing and schedules;
  - o Feasibility and issues involved in potentially using information from the DOE authorization process in an application for an NRC license;
  - o Providing agency-specific perspectives on export control of technologies, where appropriate;
  - o Providing clarification and definitions of FOA-requested information related to NRC requirements or licensing processes, as needed; and
  - o Any other appropriate areas where regulatory input may be required.
- Support the ARDP Industry Day (Date and Time TBD) by presenting information clarifying acceptable licensing pathways for potential applicants.
- Once the FOA has been issued, support DOE, as needed, by answering general questions regarding the NRC's licensing requirements, processes, and pathways. The NRC will not review individual applications or participate in DOE's merit review or selection processes, but the NRC will provide DOE with general information, similar to that provided in pre-application engagement with potential applicants, to clarify licensing options and pathways and applicability, interpretation, and use of NRC Regulatory Guides and other NRC guidance or documentation as they relate to individual applications for ARDP projects.
- Following DOE selection of recipients:
  - o Provide guidance to the DOE, as necessary, in the areas of licensing and licensing schedules;
  - o Interact with the vendors in a typical NRC manner;

- Provide status to the DOE on pre-application interactions of the vendors;
- Provide technical support to DOE, as necessary, for those projects that initially go through DOE authorization; and
- Communicate with the DOE, as necessary, on the status of the licensing process for each recipient.

Throughout the conduct of the ARDP, the DOE and NRC staff will participate in regular interagency status review meetings (frequency as determined by the parties).

To the extent activities discussed in this addendum result in the commitment of resources beyond the NRC's existing authority, the parties agree to establishment of an appropriate Interagency Agreement to govern such usage and reimbursement.

DOE and NRC are mindful of the conflict of interest requirements and obligations of the respective agencies under those requirements. DOE and NRC will work together to determine the best means to resolve any conflict of interest issues that may arise.

DOE Authorizing Official

Alice Caponiti

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Office of Reactor Fleet  
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Date \_\_\_\_\_

NRC Authorizing Official

Raymond Furstenau

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Office of Nuclear Regulatory Research

Date \_\_\_\_\_