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April 25, 2018

Mr. Fred Brown  
Director, Office of New Reactors  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Recommendations for Enhancing the Safety Focus of New Reactor Regulatory Reviews

Dear Mr. Brown:

The joint letter from NEI<sup>1</sup>, NIC and NIA to Chairman Svinicki dated January 23, 2018 identified four near term objectives for ensuring that advanced reactors can be licensed and built in the U.S. and thus preserve U.S. leadership in nuclear safety and technology:

- Reversing the trend of increasing regulatory costs and excessively long reviews;
- Aligning the regulatory framework for advanced reactors with their inherent enhanced safety;
- Defining licensing options clearly, including options for staged applications and approval; and
- Providing additional flexibility for changes during construction.

Among the industry activities to address these priorities is an assessment of licensing lessons learned based on experience with regulatory reviews under 10 CFR Part 52. Applications for designs with improved safety features have required ever greater detail, adding time and expense without commensurate safety benefit. The attached paper assesses new reactor licensing reviews, including information from an ongoing review of a small modular reactor, and provides recommendations on how the NRC can be more effective in adapting its reviews to account for the benefits of safer designs. One of the conclusions of the review is that while the standard of "adequate protection" has not changed for decades, as a practical matter it has, because the NRC now requires more effort from applicants to demonstrate that a design satisfies that standard. As a result, the advantages of safer designs have not yielded a significant reduction of regulatory review costs.

We look forward to further dialogue with the NRC to improve the efficiency and effectiveness of design reviews to realize the benefits of safer designs while maintaining reasonable assurance of safety.

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<sup>1</sup> The Nuclear Energy Institute (NEI) is responsible for establishing unified nuclear industry policy on behalf of its members on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

Mr. Fred Brown

April 25, 2018

Page 2

The paper is being provided to improve NRC's understanding of industry perspectives and is intended to provide insights to the NRC's transformational change initiative as well as near-term activities to assure the safety focus of ongoing and future licensing reviews.

Sincerely,

A handwritten signature in black ink, appearing to read "Pamela Cowan". The signature is written in a cursive, flowing style.

Pamela Cowan

Attachment

cc: Michael Johnson, OEDO, NRC  
Dan Dorman, OEDO, NRC  
Frank Akstulewicz, NRO/DNRL, NRC  
Robert Taylor, NRO/DSSEA, NRC  
Margaret Doane, OGC, NRC