

May 5, 2023

Honorable Cathy McMorris Rodgers  
Chair  
Committee on Energy & Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

Honorable Frank Pallone Jr.  
Ranking Member  
Committee on Energy & Commerce  
2125 Rayburn House Office Building  
Washington, DC 20515

Honorable Jeff Duncan  
Chair  
Subcommittee on Energy, Climate,  
& Grid Security  
2125 Rayburn House Office Building  
Washington, DC 20515

Honorable Diana DeGette  
Ranking Member  
Subcommittee on Energy, Climate,  
& Grid Security  
2125 Rayburn House Office Building  
Washington, DC 20515

Honorable McMorris Rodgers, Pallone Jr., Duncan, and DeGette:

On behalf of the men and women of the nuclear professional community, I am pleased to respond to your request for information regarding the U.S. Nuclear Regulatory Commission's licensing and regulatory processes for advanced reactors.

Established in 1954, the American Nuclear Society is the premier scientific organization for U.S. nuclear professionals. Our 10,000+ members have dedicated their careers to the peaceful use of nuclear science, engineering and technology for the benefit of humanity, and we serve our community by hosting scientific conferences, publishing technical journals, promulgating ANSI-certified standards, and providing professional development and leadership programs. ANS also supports activities aimed at broadening the public's understanding of nuclear science and technology, including K-12 Nuclear STEM education in classrooms and the dissemination of up-to-date, unbiased and technically sound information and insights on nuclear topics to journalists and policymakers.

In order to properly consider the question of how to improve the NRC licensing review and approval processes for advanced reactors, it is important to first provide some context. Earlier this spring, the NRC hosted its first in-person Regulatory Information Conference (RIC) since the onset of COVID. It was a well-organized event, and the plenaries and sessions were informative. However, it was hard not to sense a level of frustration in the hallways over the stringency of NRC's proposed Part 53 regulatory framework for advanced reactors; the perceived lack of preparedness for a coming onslaught of license applications, as well as a general sense that, as one friend put it, the Commission is "wrapped around the axle of administrative procedures and precedents".

Of course, one must always view these criticisms through a filtered lens. Yes, the regulatory process is cumbersome, but nuclear technology is serious business. Yes, it's fair to argue that regulatory uncertainty is holding advanced nuclear back to some degree, but so are a host of other challenges that include project financing, siting, workforce, supply chain, and fuel availability. At any given moment, it is impossible to determine with certainty which of these headwinds are strongest. Still, there's no denying that, at least from a timing standpoint, improving NRC efficiency needs to be at the front of the line, because solving the regulatory challenge enables solutions for the others.

It is also important to remember that, in the nearly 70 years since the inception of the U.S. commercial nuclear industry, no member of the public has been killed or injured by the operations of a reactor. In that time, nuclear energy has offset billions of pounds of environmental pollutants like Sox, Nox, and fine particulates that otherwise would have caused millions of premature deaths. We challenge anyone to find a better safety record in any other industrial sector; and the NRC deserves a healthy share of the credit.

Now add the growing human and environmental impacts of climate change (using even the tamest prognostications) and any honest debate about our approach to nuclear safety has to consider the question "How many lives will we sacrifice by not acting with urgency?"

As your letter points out, federal law gives NRC the authority to consider the overall benefits of nuclear as part of their licensing and regulatory activities. We believe NRC needs to formally reframe its mission in a manner that aligns more closely with the original precepts of nuclear regulation set forth in the Atomic Energy Act of 1954, specifically its mandate that the "development, use and control" of nuclear energy be conducted in a way as to "improve the general welfare."

A clear-eyed recognition of the net positive public health impacts of nuclear energy by NRC does not equate to "promotion." The modern case for nuclear safety demands a holistic approach, one that operationalizes the urgency of the moment, applies risk assessment in the broadest possible scope, and defines the "public good" as the-most-good-for-the-most-people. This kind of recognition by NRC leadership would not require the agency to make wholesale changes to its regulations or processes, but it would send a powerful signal, both internally and externally, that timeliness in its licensing and regulatory actions is a central tenet of NRC's mission.

The lack of a bias to action on the part of the NRC can clearly be seen in the agency's inability to complete rulemaking in anything resembling a timely manner. Periodically, the NRC needs to adapt its regulations to account for new information and changed circumstances, address new regulatory issues, and incorporate lessons-learned in carrying out regulatory activities. However, at the NRC regulatory changes languish for years or even decades. One example is the sorely needed decommissioning rulemaking which the Commission kicked off in 2014, but which continues to churn

nearly a decade later (reference - <https://www.nrc.gov/waste/decommissioning/reg-guides-comm/regulations/reg-improv-trans-to-decom.html>).

Another example is the stalled rulemaking on low-level waste that began with public workshops in 2009 and progressed to a proposed rule in 2015, but has yet to come to fruition (reference - <https://www.nrc.gov/waste/llw-disposal/llw-pa/uw-streams.html>). Rulemaking should be a routine part of doing business; however, the agency and its stakeholders have come to see it as an activity of last resort with little or no chance of success. The results are inefficient workarounds and regulatory ossification.

We also encourage the Committee to consider the behavioral implications of NRC's current financial structure, where an overwhelming majority of its monetary receipts come from its licensees, and advanced reactor developers pay for NRC licensing activities on a per person, per hour basis, similar to a law, or other professional services firm. This fee structure is bound to negatively incentivize NRC staffing decisions, even if subconsciously, leading to staff resource over utilization, excessive focus on non-safety-significant issues and overly delayed licensing timeframes. In an ideal world, NRC license application fees would be fixed, consistent and transparent like other federal regulatory agencies, such as the U.S. Food and Drug Administration.

As to specific NRC reforms, we encourage the Committee to carefully consider the recommendations included in the Idaho National Laboratory's report: "Recommendations to Improve the Nuclear Regulatory Commission Reactor Licensing and Approval Process." INL/RPT-23-72206. In addition, we encourage the Committee to review the recently introduced ADVANCE Act of 2023, [S.1111](#), especially the provisions regarding enhanced compensation pathways for highly skilled and experienced technical employees.

In closing, we appreciate the Committee's interest in this very important set of issues, and look forward to providing you with any additional information you may require.

Sincerely,

Craig H. Piercy

A handwritten signature in black ink, appearing to read "C. H. Piercy", written in a cursive style.

Executive Director and CEO  
American Nuclear Society