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General Comment

Because the NRC is developing a framework, it can be assumed that the proposed rules will serve as a guideline for oversight of advanced nuclear reactors. Risk-Informed and Performance Based Human-System Operation Considerations for Advanced Reactors PowerPoint, NRC-2019-0061-0071, Division of Reactor Oversight, NRC, 9 (Apr. 8, 2021) (noting the rules are presented as key guidance on "reactor safeguards" for future plant designs). As an aside, nuclear energy can be a reliable source of alternative energy when used properly (as it is virtually unlimited). However, past nuclear disasters (e.g., Chernobyl, Fukushima) have highlighted the dangers that are inherent to operating nuclear facilities. Therefore, the proposed rules collectively should be focused on "minimization of risks associated with severe accidents." Risk-Informed and Performance Based Human-System Operation Considerations for Advanced Reactors PowerPoint at 13. But, the NRC should be cautious to account for alternative proposed languages so that they do not have to reopen notice and comment—leading to potential ossification.

NEIMA:
The NRC has specific goals to meet when crafting the rules under NEIMA. Under NEIMA, it must be: (1) technology inclusive (meaning use by any fission-reactor technology—there are currently both "old generation" and "new generation" nuclear reactors in operation around the globe); (2) risk-informed (focus on safety-significant elements of safety case); (3) performance-based (clear, consistent, and understandable criteria). NEIMA Expectations and Objectives, NRC-2019-0061-0071, Division of Reactor Oversight, NRC, 65 (Apr. 8, 2021). As such, my comment is focused on language for the subpart titled "Safety Objectives," and whether that meets the requirements under NEIMA.
In NRC's presentation and according materials, the agency places heavy emphasis on ensuring the language meets the criteria for NEIMA. This distills two thoughts: (1) the agency is focused on protecting the public heath and safety through nuclear operation oversight; and (2) the agency is focused on properly executing the spirit of NEIMA (and APA) so that it does not leave itself vulnerable to a judicial review with little deference.
However, while the second iteration of Subpart B discussing the Safety Objectives appear to meet

NEIMA's safety requirements on its face, a closer inspection reveals that it may contain ambiguities that makes it fall just short of being effective.

Comment:
The new iteration of the proposed rule is as follows:
"Each advanced nuclear plant must be designed, constructed, operated, and decommissioned to limit the possibility of an immediate threat to the public health and safety. In addition, each advanced nuclear plant must take such additional measures as may be appropriate when considering potential risks to public health and safety. These safety objectives shall be carried out by meeting the safety criteria identified in this subpart." Proposed Rule §53.200 Safety Objectives, NEIMA Expectations and Objectives, NRC-2019-0061-0071, Division of Reactor Oversight, NRC, 52 (Apr. 8, 2021).
Here, the language meets one of NEIMA's criterions on its face. The new iteration satisfies the risk informed criteria of NEIMA through the highlighted language. ". . . Possibility of an immediate threat to the public health and safety," ". . . when considering potential risks to public health and safety," and ". . . safety objectives shall be carried out . . ." reflects an explicit interest in protecting the safety of the public. Additionally, the rule requires engineers to "design, construct, operate, and decommission" advanced nuclear plants with potential risks in mind. Therefore, all engineers would be informed of potential risks through analysis.
The language also speaks to another criterion for NEIMA—technology inclusive. Because the rule is specifically geared towards engineering advanced nuclear reactors, the rule takes account of exceptional circumstances that may affect the technology infused nuclear power reactor as opposed to an "old generation reactor."
Finally, the rule falls short of the third criterion—performance based. While the rule explicitly reflects the spirit of NEIMAs criterions in risk and technology, there is not enough guidance as to how the results are measured. Here, the language states "by meeting the safety criteria identified in this subpart," but it does not actually point to a specific criterion. This leaves room for ambiguity where it should be clear. Without knowledge of what the specific criteria is, it leaves discretion to the engineers to design the advanced nuclear reactor to how they see fit. Once this issue is addressed, the rule will speak in the spirit of performance measurement.