

Regulatory Initiative on Risk-Informed Prioritization

In February 2013, the Commission approved SRM-COMGEA-12-0001/COMWDM-12-0002 – “Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency,” dated February 6, 2013 (ADAMS Accession No. ML13037A541) to further explore the idea of enhancing nuclear safety and regulatory efficiency by applying probabilistic risk assessment (PRA). This initiative could encourage the use and development of high-quality, plant-specific PRA models by allowing licensees to use qualitative and quantitative risk insight to propose a schedule for implementing regulatory actions on a plant-specific basis.

An NRC interoffice working group was formed to explore this initiative (known as the Risk Prioritization Initiative (RPI)) and to develop a notation vote paper, which will propose approaches for such a risk-informed prioritization process. The RPI working group conducted kick-off meetings, and the Nuclear Energy Institute (NEI) began to develop a draft process for risk-informed prioritization of regulatory actions. This process includes steps for generic characterization, which would feed into the plant-specific prioritization. The working group has held several additional public meetings to explore and provide comments on NEI’s draft guidance that describe the process.

The RPI working group also attended tabletop exercises in early 2014, during which industry illustrated how the draft industry guidance for the RPI process could be implemented on a plant-specific basis. Subsequently, NRC staff informed the Commission about its observation of tabletop exercises of the NEI draft process in COMSECY-14-0014 (ADAMS Accession No. ML14069A061). Afterwards, six licensees also participated in the industry-led demonstration pilots that were conducted between May and September of 2014 to exercise the draft guidance prioritizing plant-specific issues. Lastly, a public meeting in September 2014 was held to further exercise the process in the areas of security, emergency preparedness, and radiation protection.

Other information about the NRC staff’s observations can be found in “Summary of Staffs Observation of Industry Demonstration Pilot Activities of NEI Draft Guidance for Prioritization and Scheduling Implementation” (ADAMS Accession No. ML14302A269). In addition, NEI provided its summary and observations of the demonstration pilots in the “Nuclear Energy Institute, Report on Prioritization and Scheduling Pilot” (ADAMS Accession No. ML14349A378). The latest version of the NEI guidance was submitted to the NRC by letter dated November 14, 2014 (ADAMS Accession No. ML14325A681).

In March 2015, the staff briefed ACRS with respect to a draft version of the Commission paper in which the staff presented options of RPI as a tool to reduce cumulative effects of regulation (CER). In its Letter Report on this topic, ACRS agreed with the staff’s recommendations and recommended that the staff should explicitly include risk information as an input to decisions and priorities for proposed regulatory actions regardless of the Commission’s decisions about specific options or approaches in the SECY Paper.

On March 31, 2015, the staff submitted SECY-15-0050 “Cumulative Effects of Regulation Process Enhancements and Risk Prioritization Initiative: Response to Commission Direction and Recommendations” (ADAMS Accession No. ML15016A075). This paper responds to the Commission’s direction in Staff Requirements Memorandum (SRM)-COMSECY-14-0014, “Cumulative Effects of Regulation and Risk Prioritization Initiative: Update on Recent Activities and Recommendations for Path Forward,” dated July 18, 2014 (ADAMS Accession No.

ML14199A187). This paper provides the Commission with four options of using RPI as a tool to reduce CER for operating reactor licensees.

The first option maintains the status quo. Option 2 would augment existing regulatory processes allowing licensees to request exemptions and changes to implementation schedules for existing regulatory commitments. This option would allow licensees to use a risk-informed prioritization methodology as a basis for such request. Option 3 would allow licensees to submit a risk-informed, plant-specific implementation plan when the NRC adopts a new rule. Option 4 would establish a voluntary process that enables licensees to make plant-specific, risk-informed changes to implementation schedules for certain regulatory issues without requesting prior NRC approval.

On May 19, 2015, the staff, along with an external panel, briefed the Commission on issues related to CER and RPI. The discussion included the staff's identified lessons learned, possible approaches for implementing the RPI, as well as licensee experiences with RPI pilot projects. In the SRM-SECY-15-0050 issued on August 25, 2015 (ADAMS Accession No. ML15237A142), the Commission did not approve the RPI options. However, the Commission stated that it supports consideration of risk insights in regulatory decision-making through existing agency processes.