

**Update on the Nuclear Regulatory Commission's (NRC)
Implementation of the Nuclear Energy Innovation and Modernization Act (NEIMA)**

Section 101, "Nuclear Regulatory Commission user fees and annual charges through fiscal year 2020"

Consistent with NEIMA Section 101, the NRC is developing its Fiscal Year (FY) 2020 draft Fee Rule such that the development of regulatory infrastructure for advanced reactor technologies is not recovered through fees. This approach is also consistent with appropriations acts from previous fiscal years dating back to FY 2017 that have similarly provided for these activities to be excluded from fee-recovery requirements.

Section 102, "Nuclear Regulatory Commission user fees and annual charges for fiscal year 2021 and each fiscal year thereafter"

Details related to compliance with these provisions will be available with the release of the President's FY 2021 budget request to Congress.

The NRC has established the performance metrics and milestone schedules required by this section and posted them on the NRC's public Web site: <https://www.nrc.gov/about-nrc/generic-schedules.html>.

Under the Section 102 requirements on invoicing, the NRC implemented a new monthly standardized fees validation process in July 2019 and modified the billing dispute process. Additionally, the NRC's electronic billing (eBilling) system went into effect on October 1, 2019, beginning with a phased implementation coordinated with nine licensees. The participation of other licensees is currently being phased in throughout FY 2020 with full implementation to occur by October 2020. The eBilling system:

- a. eliminates the mailing of paper invoices and provides licensees with the capability to analyze invoices online;
- b. provides licensees with access to the U.S. Department of the Treasury's payment system to pay their invoices; and
- c. improves the timeliness of invoices and provides the capability to export invoice data for analysis and verification of charges.

Section 103, "Advanced nuclear reactor program"

The NRC continues to prepare for the licensing of advanced nuclear reactors by holding meetings and workshops with stakeholders, developing guidance for potential applicants, and clarifying guidance for NRC staff reviewing advanced reactor license applications. These activities are designed to improve the timeliness and efficiency of licensing activities for applicants and NRC staff.

In addition to informing the staff's guidance development, interactions with stakeholders helped provide a foundation for the rulemaking required by this section to establish a technology-inclusive regulatory framework for advanced reactors. For example, the NRC staff has engaged with the Licensing Modernization Project (LMP) being led by Southern Nuclear Company, coordinated by the Nuclear Energy Institute, and cost-shared by the Department of Energy

(DOE). The LMP's objective is to develop technology-inclusive, risk-informed, and performance-based regulatory guidance for licensing advanced reactors.

On July 12, 2019, the NRC submitted reports to Congress on agency activities to (1) expedite and establish stages in the licensing process for commercial advanced nuclear reactors; and (2) increase, where appropriate, the use of risk-informed and performance-based evaluation techniques and regulatory guidance within the existing regulatory framework for licensing commercial advanced nuclear reactors.

The NRC also submitted, on January 9, 2020, a report on preparing the licensing process for research and test reactors within the existing regulatory framework. The NRC staff concluded that the current regulatory framework and staff resources support effective and timely licensing of existing and new research and test reactors. Therefore, the NRC staff is prepared to review and reach safety, security, and environmental findings if a commercial advanced reactor application were to be submitted today. This includes applications for reactors with designs that use alternative coolants or alternative fuels, operate at or near atmospheric pressure, and use passive safety strategies. Guidance is already in place for applicants, licensees, and NRC staff to reference in conducting licensing activities.

Section 104, "Baffle-former bolt guidance"

This section directed the NRC to publish any necessary revisions to agency guidance for inspecting baffle-former bolts. On April 9, 2019, the NRC staff submitted its report to Congress explaining that, at that time, the NRC staff determined that no further revisions to this guidance were necessary. Prior to preparing this report, the NRC staff verified that reactor licensees are properly implementing the industry guidance and that corrective actions appeared to be effective. The previously observed instances of baffle-former bolt cracking did not raise any immediate safety concern because the baffle-former assemblies are constructed in such a way that they can operate safely within the reactor even if a large number of bolts were to fail.

Subsequent baffle-former bolt examinations have been completed at most of the plants with pressurized-water reactors with down-flow configurations, the design most susceptible to cracking. Only one of the pressurized-water reactors with this configuration, Salem Unit 1, found that a large number of original bolts were degraded during a follow-up examination. The NRC staff has confirmed that these degraded bolts were replaced. In light of this new operating experience at Salem Unit 1, the staff is currently further assessing whether revisions to the inspection guidance may be needed. Additionally, the NRC continues to monitor the issue as well as licensee corrective actions through its inspection program.

Section 105, "Evacuation report"

On July 12, 2019, the NRC submitted the required report describing the actions the Commission has taken, or plans to take, to consider lessons learned from directed or spontaneous evacuations in densely populated urban and suburban areas in response to natural disasters, terrorist attacks, or other incidents. In preparing this report, the NRC staff coordinated with the Federal Radiological Preparedness Coordinating Committee, which includes the Federal Emergency Management Agency, relevant State emergency planning officials, and human behavior experts.

Since submitting the report, the NRC staff has continued closely following the scientific literature that discusses behavioral responses to Fukushima and working with international scientific

organizations monitoring the health and environmental impacts of the radioactive releases from Chernobyl and Fukushima. The staff also reviews scientific studies of the impacts on the U.S. public from hypothetical significant radiation events such as radiation dispersal devices, and works with international partners, including the World Health Organization, on examining the psychosocial impacts of radiation events—the next workshop on this topic is scheduled for later this year.

Section 106, “Encouraging private investment in research and test reactors”

This section amended the Atomic Energy Act of 1954, to include criteria for whether a utilization facility is licensed as a research and development facility or as a commercial facility. The NRC staff is applying the new criteria to both new and renewed licenses. The NRC staff is also assessing the impacts of the new criteria on existing research and test reactor licensees. Toward this end, the NRC staff conducted a public meeting with affected stakeholders on September 26, 2019. Informed by this stakeholder feedback, the NRC staff is developing a rulemaking plan to ensure NRC regulations appropriately reflect the new criteria and clarify their applicability to existing licensees.

Section 107, “Commission report on accident tolerant fuel”

On January 9, 2020, the NRC submitted the required report on the status of the preparations to license accident tolerant fuel (ATF) technologies. The U.S. nuclear industry, with DOE’s assistance, is planning to deploy batch loads of ATF in the operating fleet by the mid-2020s. In light of these near-term plans, the NRC staff has developed a project plan to be ready to review submittals related to these fuel technologies. The NRC staff continues to engage with vendors, licensees, DOE, international counterparts, and other stakeholders to ensure that the NRC is prepared for licensing and oversight of ATF.

Section 108, “Report identifying best practices for establishment of operation of local community advisory boards”

The NRC has held 11 public meetings throughout the U.S. and conducted two public webinars to solicit feedback, insights, and ideas about best practices for community advisory boards associated with decommissioning nuclear power plants. After synthesizing the results and associated data from these public meetings, the NRC will submit the required report to Congress in July 2020.

Section 109, “Report on study recommendations”

On April 9, 2019, the NRC submitted the required status report to Congress detailing efforts to address and implement the recommendations from the Executive Director for Operations memorandum, “Tasking in Response to the Assessment of the Considerations Identified in a ‘Study of Reprisal and Chilling Effect for Raising Mission-Related Concerns and Differing Views at the Nuclear Regulatory Commission.’” The NRC has completed the majority of the recommended actions, including an annual training for all supervisors on whistleblower protection and a Differing Views Campaign to increase awareness of the agency’s Differing Views Program. The staff’s work to develop a neutral fact-finding process and to establish a differing views subgroup of the Diversity Management and Inclusion Council remains ongoing.

Section 201, "Uranium recovery report"

On April 10, 2019, the NRC submitted the required report describing the duration of uranium recovery license issuance and amendment reviews as well as recommendations to improve the efficiency and transparency of these reviews. The report highlights that the NRC staff has: brought added consistency to the pre-application activities and the acceptance review process; improved the planning and scheduling processes; created a prioritization system for new applications; further developed guidance and processes for requests for additional information; and created safety evaluation templates.

The NRC staff has also increased the term of uranium recovery licenses from 10 to 20 years; initiated a revision to the Standard Review Plan for In-Situ Leach Uranium Recovery Facilities; and improved transparency and communication with licensees on schedules and fees.

Given the reduced demand for domestic uranium supplies and the Agreement State oversight of most uranium recovery licensees, leading to a decline in NRC licensing activity associated with existing uranium recovery licenses and new applications, the effects of these changes may not be fully realized until new licensing actions and applications are submitted.

The NRC is continuing to work with Agreement States in assessing more efficient and risk informed ways of regulating to ensure the safe operations of uranium recovery facilities.

Section 202, "Pilot program for uranium recovery fees"

The NRC completed the required voluntary pilot initiative to determine the feasibility of establishing a flat fee structure for routine licensing matters related to uranium recovery. The staff evaluated routine licensing and inspection activities to identify whether those activities could meet the criteria necessary to establish a flat fee. A report on the results of the voluntary pilot initiative was provided to Congress on January 9, 2020.

Based on results of the pilot initiative, the Commission approved the staff's recommendation that the agency not implement flat fees at this time and instead maintain the current NRC fee billing structure for fees for services rendered to uranium recovery facilities. The primary reason is that the makeup of the uranium recovery fee class has changed dramatically since 2016 and since Wyoming became an Agreement State, leaving only one operating uranium recovery licensee that is regulated by the NRC in that fee class. The NRC staff has posted cost estimates for uranium recovery activities on the NRC's public Web site to provide advance information to this licensee. The NRC most recently updated these cost estimates in May 2019 and is committed to updating the cost estimates on a biennial basis. The NRC staff will continue to communicate with licensees and applicants about schedules and fees by providing an estimated range of NRC staff hours and contract costs (if applicable) that are anticipated for uranium recovery activities. Should there be an increase in the number of licensees in the uranium recovery fee class, the NRC may revisit the issue of flat fees for routine uranium recovery actions.