

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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MEMORANDUM

April 28, 2016

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Hearing on H.R. 4979, the Advanced Nuclear Technology Development Act of 2016 and H.R. ____, Nuclear Utilization of Keynote Energy Policies Act

On **Friday, April 29, 2016, at 9:30 a.m. in room 2123 of the Rayburn House Office Building**, the Subcommittee on Energy and Power will hold a legislative hearing entitled “H.R. 4979, the Advanced Nuclear Technology Development Act of 2016” and H.R. ____, “Nuclear Utilization of Keynote Energy Policies Act.” This memo provides details about the legislation and background on issues that may be discussed at the hearing.

I. H.R. 4979, the Advanced Nuclear Technology Development Act of 2016

A. Background

Nuclear power reactor designers are developing a number of advanced non-light water reactor (LWR) and light-water small modular reactor (SMR) designs employing innovative solutions to technical nuclear power issues.¹ These innovations have the potential to produce nuclear power more efficiently and with less waste than current technologies. In 2008, the U.S. Nuclear Regulatory Commission (NRC) issued the following policy statement on the regulation of advanced reactors:

Regarding advanced reactors, the Commission expects, as a minimum, at least the same degree of protection of the environment and public health and safety and the common defense and security that is required for current generation light-water reactors. Furthermore, the Commission expects that advanced reactors will provide enhanced

¹ U.S. Nuclear Regulatory Commission (NRC), *Advanced Reactors and Small Modular Reactors* (online at www.nrc.gov/reactors/advanced.html) (accessed Apr. 25, 2016).

margins of safety and/or use simplified, inherent, passive, or other innovative means to accomplish their safety and security functions.²

In January 2016, the U.S. Department of Energy (DOE) announced the selection of two companies, X-energy and Southern Company Services, to further develop advanced nuclear reactor designs. These awards, which provide up to \$40 million to each company, will support work to address key technical challenges to the design, construction, and operation of next generation nuclear reactors.³

B. Summary of Legislation

H.R. 4979, The Advanced Nuclear Technology Development Act of 2016, was introduced by Rep. Latta (R-OH) and Rep. McNerney (D-CA) on April 18, 2016. The legislation aims to foster civilian research and development of advanced nuclear energy technologies and enhance the licensing and commercial deployment of such technologies.

Section 4 of the bill calls for NRC and DOE to enter into a memorandum of understanding (MOU) covering three major areas. First, the MOU would ensure that the two agencies have sufficient technical expertise to support and regulate advanced reactor technology. The MOU would also focus on modeling and simulation using computers and software codes to calculate performance of advanced reactors. Lastly, the agencies would ensure that the facilities are maintained and developed to support innovative reactor technology.

Section 6 of the bill requires that NRC, not later than 270 days after enactment, put together a plan for developing an efficient, risk-informed, technology-neutral framework for advanced reactor licensing. The plan is required to evaluate a number of subjects, such as the unique aspects of advanced reactor licensing and options to expedite the licensing process. In developing the plan, NRC must seek input from DOE, the nuclear industry, and other public stakeholders.

II. H.R. _____, Nuclear Utilization Of Keynote Energy Policies Act

The Nuclear Utilization of Keynote Energy Policies Act, which has been circulated by Rep. Kinzinger (R-IL) as a discussion draft, would make a number of substantial changes to the process by which the NRC evaluates and processes license applications for nuclear power reactors in the United States. The draft legislation would also make changes to statute and policy ranging from procedures related to the licensing of uranium enrichment facilities to the decommissioning of commercial reactors.

² U.S. NRC, *Policy Statement on the Regulation of Advanced Reactors*, 73 Fed. Reg. 60612 (Oct. 14, 2008).

³ U.S. Department of Energy, *Energy Department Announces New Investments in Advanced Nuclear Power Reactors to Help Meet America's Carbon Emission Reduction Goal* (online at www.energy.gov/articles/energy-department-announces-new-investments-advanced-nuclear-power-reactors-help-meet) (accessed Apr. 25, 2016).

Section 2 of the discussion draft makes significant changes to the mechanism by which NRC license fees contribute to the agency's overall budget authority. NRC currently recovers approximately 90 percent of its budget from license fees, with the other 10 percent coming from appropriated funds. The discussion draft would require that 100 percent of the NRC budget be recovered by license fees, but would exempt a number of different activities and authorities of the Commission from inclusion in the amount to be recovered via fees. This provision would drastically reduce the percentage of the NRC budget currently recovered through fees and increase the amount funded out of general revenues. The activities excluded from fee recovery include amounts from the Nuclear Waste Fund, homeland security related activities, and all infrastructure and corporate support (which includes administrative functions, information technology, training and travel). Infrastructure and corporate support alone is funded at \$305.5 million in the Energy and Water Appropriations bill that has passed through the full Appropriations Committee: a figure that represents more than 30 percent of the commission's total budget.⁴

Section 3 of the legislation requires the Government Accountability Office (GAO) to report on the feasibility and implications of repealing current statutory restrictions preventing foreign interests from obtaining commercial and other nuclear licenses. Section 103d of the Atomic Energy Act of 1954 provides that “[n]o license may be issued to an alien or any corporation or other entity if the commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.”⁵

Section 4 of the discussion draft eliminates the mandatory public hearing held by NRC before granting a license for operation of a nuclear power reactor. This hearing is typically a one day proceeding where stakeholders can participate and NRC commissioners perform a final check on all items related to the overall safety and environmental impact of a facility. In previous mandatory hearings, serious deficiencies in the license application have been identified and subsequently addressed.⁶

Section 5 requires NRC to use more informal adjudicatory procedures for hearings under section 189a of the Atomic Energy Act. In 2004, NRC finalized a rule that made changes to the adjudicatory process largely similar to the provisions outlined in section 5.⁷ Additionally, the

⁴ H.R. ___, “Making appropriations for energy and water development and related agencies for the fiscal year ending September 30, 2017, and for other purposes” (online at appropriations.house.gov/uploadedfiles/bills-114hr-fc-ap-fy2017-ap00-energywater.pdf) (accessed Apr. 27, 2016).

⁵ Atomic Energy Act of 1954 § 103d, Pub. L. No. 83-703.

⁶ Union of Concerned Scientists, *Testimony of Edwin Lyman, PhD, Senior Scientist at Union of Concerned Scientists before the Senate Committee on Environment and Public Works Subcommittee on Clean Air and Nuclear Safety at a hearing entitled “Enabling Advanced Reactors and a Legislative Hearing on S.2795, ‘the Nuclear Energy Innovation and Modernization Act’”* (Apr. 21, 2016) (online at www.epw.senate.gov/public/index.cfm/hearings?ID=25CCB2F0-95EA-41F6-AC64-C5CB97304232).

⁷ U.S. NRC, *Changes to Adjudicatory Process*, 69 Fed. Reg. 2182 (Jan. 14, 2004).

section eliminates the requirement in current law mandating an on-the-record adjudicatory hearing with regard to licensing for the construction and operation of a uranium enrichment facility.

Section 6 of the discussion draft makes significant changes to the Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC), which are the criteria that must be met for an entity to receive a license to construct a plant. Section 185b of the Atomic Energy Act of 1954 would be amended to state that “upon a finding that prescribed acceptance criteria have been met, no further demonstration of such criteria shall be required.” This would effectively bar NRC from performing additional review of ITAAC should issues arise after the initial assessment. The section also cuts in half, from 60 days to 30 days, the timeframe in which the public may request a hearing on whether the facility will comply with the criteria. Furthermore, the evidentiary bar for requesting a hearing would be raised from a *prima facie* showing to a demonstration of substantial evidence.

Section 7 sets up an expedited review process for nuclear energy projects at NRC. It would require a draft environmental impact statement to be issued in 12 months, with the completion of the technical review process and final environmental impact statement to be completed in 24 months. It is unclear whether NRC can meet the timeframes laid out in this section without jeopardizing public safety or threatening the environment.

In November 2015, NRC published an advance notice of proposed rulemaking regarding potential changes to its regulations for the decommissioning of nuclear power reactors. The NRC's goals in amending these regulations are to provide a more efficient decommissioning process, reduce the need for exemptions from existing regulations, and support the principles of good regulation, including openness, clarity, and reliability.⁸ Section 8 of the discussion draft would require NRC to finalize a decommissioning rulemaking within 48 months. The section also includes three factors NRC must consider when conducting the rulemaking: the low radiological risk of decommissioning reactors, the regulatory burden of decommissioning nuclear reactors, and the potential to minimize exemptions and license amendments during the process. Stakeholders in the decommissioning process have raised the importance of other factors not listed in this section, including the need for greater community involvement in the process, as well as a more formal review of decommissioning plans by NRC.

III. WITNESSES

The following witnesses have been invited to testify:

Mr. Marvin Fertel
President and Chief Executive Officer
Nuclear Energy Institute

⁸ U.S. NRC, *Regulatory Improvements for Decommissioning Power Reactors*, 80 Fed. Reg. 72358 (November 19, 2015) (Advance Notice of Proposed Rulemaking).

The Honorable Jeffrey S. Merrifield
Partner, Pillsbury Winthrop Shaw Pittman
Chairman, Advanced Reactors Task Force, Nuclear Infrastructure Council

Dr. Todd Allen
Senior Fellow, Clean Energy Program
Third Way

Mr. Geoffrey Fettus
Senior Attorney
Natural Resources Defense Council