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SENATE

{ REPORT
115-86

NUCLEAR ENERGY INNOVATION AND MODERNIZATION ACT

MAY 25, 2017.—Ordered to be printed

Mr. BARRASSO, from the Committee on Environment and Public
Works, submitted the following

R E P O R T

together with

ADDITIONAL VIEWS

[To accompany S. 512]

The Committee on Environment and Public Works, to which was referred the bill (S. 512) to modernize the regulation of nuclear energy having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends that the bill, as amended, do pass.

GENERAL STATEMENT AND BACKGROUND

The Omnibus Budget and Reconciliation Act of 1990 as amended (OBRA-90) requires the Nuclear Regulatory Commission (NRC) to recover 90 percent of its budget through fees levied on its licensees including those of nuclear power reactors, research reactors, nuclear fuel producers, and radioactive materials users, e.g. for medical and industrial applications. The remaining 10 percent of the budget is funded by taxpayers to cover any work the NRC may do that is not attributable to its licensees. In addition to this 10 percent, funds are also appropriated to cover work for federal agencies such as Waste Incidental to Reprocessing, generic homeland security activities, and Inspector General services that are provided to

the Defense Nuclear Facilities Safety Board.¹ Although the fee recovery percentage was altered in subsequent legislation,² OBRA-90 was the last significant legislative modification to the NRC's fee recovery structure.

To meet the mandate of 90 percent fee recovery, the NRC recovers fees in two ways. The first is governed by 10 CFR Part 170 under which the NRC bills for ". . . the costs of providing specific regulatory benefits to identifiable applicants and licensees."³ For example, Part 170 fees include review of new plant applications, license extensions, power uprates, uranium production permits, and license amendment reviews. The second way the NRC recovers fees is under 10 CFR Part 171 to ". . . recover generic regulatory costs that are not otherwise recovered through 10 CFR Part 170 fees."⁴

Several problems arise from this structure. If the NRC overestimates the amount of revenue it expect to collect under Part 170, it must recover the resulting revenue shortfall through Part 171 fees in order to meet the OBRA-90 mandate for 90 percent fee recovery. One example of this dynamic was reported in the NRC's Fee Recovery Rule for FY 2014:

"The annual fees for power reactors increase primarily as a result of: (1) Decreased Part 170 billings due to . . . delays in major design certification applications and combined license applications (This decline in 10 CFR Part 170 billings means that 10 CFR 171 fees need to increase to make up the difference and ensure that the NRC collects approximately 90% of its budget authority) . . ."⁵

Operating power reactors paid additional fees because the NRC overestimated the amount of work in the Office of New Reactors in that year. This same dynamic occurred in FY 2015.⁶ This may simply reflect poor estimates of its workload. The end result is that operating power reactors were billed for non-existent Part 170 work in order to meet the 90 percent fee recovery mandate.

During this time, the NRC also developed a backlog in its review of licensing actions. Before modifying equipment or procedures, licensees must request the NRC's approval. As such, the timeliness of these reviews is crucial for licensees to operate efficiently. The backlog in these needed reviews, when considered in the context of the problems described in the preceding paragraph, highlight the need for the NRC to budget more accurately and recover fees for work that is actually conducted. S. 512 addresses this problem by directing the NRC to expressly identify the funds necessary to conduct reviews requested by applicants and licensees and to preserve accordingly any budget authority granted solely for the requested reviews. This approach should improve the accuracy of the NRC's budgeting and ensure that funds are available to efficiently complete reviews needed by applicants and licensees.

¹Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2015; Final Rule, June 30, 2015.

²Pub. Law 106-377 (2000) and Pub. Law 109-58 (2005).

³Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2015; Final Rule, June 30, 2015.

⁴Ibid.

⁵Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2014; Final Rule, June 30, 2014.

⁶Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2015; Final Rule, June 30, 2015.

Another problem results from how the NRC recovers “generic regulatory costs” under Part 171. After the NRC has determined the level of Part 170 fees, the NRC sets the amount of Part 171 fees at a rate that is necessary to meet the 90 percent fee recovery mandate. Once it has established the total amount to be reimbursed under Part 171 fees, the NRC apportions that amount among the various classes of licensees and divides by the number of licensees in that class to determine how much each licensee must pay. Because the NRC fees are required to reimburse a statutorily mandated percent of the budget, the NRC has had difficulty adjusting to changing market conditions. An example of this perverse result can be seen within the operating reactors as reactors close:

“The permanent shutdown of the Vermont Yankee reactor decreases the fleet of operating reactors, which subsequently increases the annual fees for the rest of the fleet.”⁷

This same dynamic affected the annual fees for operating reactors in both 2013⁸ and 2014⁹ resulting from the closure of two reactors in each year. Thus, as the nuclear power industry shrinks, the NRC simply divides by a smaller number so that the remaining operating reactors pay larger fees to make up the shortfall in order to meet the 90 percent fee recovery mandate. The NRC has not decreased the overall budget to correspond to the decrease in operating reactors. S. 512 addresses this problem through the combination of removing the 90 percent mandate and capping the annual fee for operating reactors. In this manner, the annual fee will reflect the agency’s workload. As reactors close and transition to decommissioning, the total revenue from annual fees will decrease accordingly. Conversely, as new reactors become operational, the total revenue will increase.

The annual fee cap for operating reactors is set at \$4.8 million in accordance with the fee recovery rule for FY 2015.¹⁰ This is a small decrease from the agency’s all time highest fee of \$5.0 million in 2014. The 2014 cap was set at such an unusually high rate of spending to reflect specifically the agency’s costs to implement safety changes following the Fukushima nuclear accident in Japan. As the NRC’s post-Fukushima implementation nears completion, the related workload continues to decline thus trending toward the more stable funding levels seen prior to the Fukushima accident. In this manner, the cap would allow for the NRC to increase fees in response to a potential future accident comparable to Fukushima. As an additional precaution, the NRC is given the authority to grant itself a one-time, one-year waiver of the cap if the Commission concludes that adhering to the cap might compromise the NRC’s ability to accomplish its safety and security mission. The NRC may also adjust the cap to account for inflation to prevent

⁷Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2015; Final Rule, June 30, 2015.

⁸Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2013; Final Rule, July 1, 2013.

⁹Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2014; Final Rule, June 30, 2014.

¹⁰Nuclear Regulatory Commission: 10 CFR Parts 170 and 171 Revision of Fee Schedules and Fee Recovery for Fiscal Year 2015; Final Rule, June 30, 2015.

any artificial constraint in that respect. Lastly, this provision is to be executed to the “maximum extent practicable”, reflecting appropriators’ authority for implementation and any need they may have to make adjustments to address future unforeseen circumstances.

Another problem that results from the current budget and fee structure is the NRC’s limited ability to develop expertise in advance reactor technologies. To date, any work in this area is has been general and exploratory. The NRC dedicates few resources to the subject since it would be unfair to collect fees from current licensees, and consequently their ratepayers, to fund exploratory work. S. 512 provides authority for appropriators to fund the advanced reactor program in Sec. 7 in the same manner as other regulatory activities that are not attributable to a specific licensee or class of licensees. This will fund formation of the regulatory framework necessary to provide regulatory certainty and foster development of advanced reactor technologies.

S. 512, the Nuclear Energy Innovation and Modernization Act, includes provisions to reform these structural deficiencies in the NRC’s budget and fee recovery authorities to instill greater transparency and accountability. Alleviating the problems described above requires eliminating the OBRA–90 mandate of 90 percent fee recovery and replacing it with a framework that maintains taxpayer funding for programs in the same manner as established in OBRA–90, but without use of an arbitrary percentage. Under this new structure, the NRC collects from licensees the fees necessary to fund its regulatory program as determined by its actual workload, rather than a percentage constraint. For example, the NRC’s collection of fees from operating reactors would increase as new reactors become operational or decrease as reactors shutdown and the workload decreases. Elimination of the 90 percent fee recovery mandate also allows appropriators to fund work on advanced reactors without penalizing existing licensees. Consistent with current practice, the taxpayer continues to pay only for the items explicitly outlined in the law as appropriated items and the rest of the NRC’s budget is to be recovered through fees. As such, the cost to the taxpayer is generally unaffected but the fee recovery will be determined by the agency’s workload rather than a mandated percentage.¹¹

Another concern addressed within S. 512 is the NRC’s spending on corporate support costs. As noted by the EY consulting firm, the NRC’s corporate support spending as a percentage of its budget is significantly higher than peer agencies: 37 percent at the NRC; 20, 25, and 32 percent at 3 peer agencies.¹² Oversight of this spending has been complicated by numerous changes in how the agency defines and accounts for corporate support costs. S. 512 directs the NRC to limit its requests for corporate support spending, to the maximum extent practicable, to 30 percent for FY 2020 and 2021, and declining to 28 percent for FY 2024 and thereafter. Twenty-eight percent is commensurate with the level of corporate support spending by the agency in FY 2006. As noted by the Congressional Research Service in its review of this provision: “The ultimate decision of the amount to be appropriated to the NRC, and the percent-

¹¹ Congressional Research Service Memorandum: *Nuclear Regulatory Commission Net Appropriations Under S. 2795 and Current Law*; June 10, 2016.

¹² EY report “Overhead Assessment: Nuclear Regulatory Commission”; April 30, 2015.

age of the total budget authority that may be made up by corporate support costs would be retained by Congress.”¹³

The NRC’s Principles of Good Regulation state: “The American taxpayer, the rate-paying consumer, and licensees are all entitled to the best possible management and administration of regulatory activities.” Considering that regulatory costs are ultimately passed on to consumers, the NRC must improve its financial transparency and accountability. S. 512 provides necessary reforms to modernize the NRC’s budget structure and fee collection.

S. 512 also includes provisions directing the NRC to create new licensing processes suitable for advanced reactor technologies. In the near-term, the NRC will develop a licensing process from within its existing regulatory framework. This is intended to address the needs of technologies that may pursue design certification and licensing within the next several years. In the longer term, the NRC is directed to develop a more holistic, technology-inclusive process by 2024 as an optional approach for technologies that will be developed further into the future.

The NRC’s current regulatory framework has evolved to oversee light water reactor technologies and may not be suitable for advanced technologies with unique characteristics that may warrant different safety requirements with regard to emergency planning zone sizes, emergency core cooling infrastructure, and fueling needs. The NRC’s current design certification and license approval processes require significant upfront investment without adequate predictability or transparency with regard to a schedule. The legislation addresses these two issues by directing the NRC to develop a new regulatory process with a staged structure to provide applicants with clear, early feedback consistent with a mutually agreed-upon schedule. This process will allow advanced reactor companies to seek investment as a design successfully completes each stage rather than attempting to raise \$1 to \$2 billion dollars at the start of the process without a predictable schedule.

S. 512 also directs the NRC to use more risk-informed, performance-based licensing strategies, where appropriate, as a more comprehensive and holistic approach to regulation. This approach incorporates both modern methods of evaluating risks and consequences with traditional deterministic methods for a more exhaustive analysis of safety. Use of risk-informed, performance-based approaches will also allow the NRC to develop processes that are more flexible and applicable to the unique aspects of diverse technologies.

The need for a new licensing process for advanced reactor designs has been highlighted in reports by the Government Accountability Office (GAO)¹⁴ and the Nuclear Innovation Alliance.¹⁵ In addition to highlighting the need for a new licensing framework, these reports also discuss the need for cost-sharing programs to help early movers pay for some of the burden of licensing.

¹³Todd Garvey, Congressional Research Service: “Interpretation of Section 6(a)(3) of S. 2795, the Nuclear Energy Innovation and Modernization Act”; May 10, 2016.

¹⁴Nuclear Reactors: Status And Challenges In Development And Deployment Of New Commercial Concepts, GAO, July 2015: <http://www.gao.gov/assets/680/671686.pdf>.

¹⁵Strategies for Advanced Reactor Licensing, Nuclear Innovation Alliance, Ashley Finan, April 2016: http://media.&fxsp0;wix.com/&fxsp0;ugd/5b05b3__&fxsp0;71d4011545234838aa&fxsp0;27005ab7d757f1.pdf.

In response to these recommendations, S. 512 directs the Department of Energy to develop a cost-share program similar to the previous “Nuclear Power 2010” program authorized in the Energy Policy Act of 2005. There is also a similar program for small modular reactors that received appropriations beginning in FY 2012.^{16 17} This program mirrors what is available for the small modular reactors and will assist applicants by funding portions of the NRC’s fees for pre-application and application review activities. Reducing these up-front costs is important since they can be a barrier to new market entrants, discouraging innovation.

S. 512 further facilitates investments in research and development in advanced reactors by allowing a greater cost recovery for research reactors. Under current law, the NRC issues to facilities built to undertake research and development (R&D) permits specific to that purpose. Nuclear R&D facilities can recover 50% of owning and operating costs through the sale of energy or other services (such as selling medical isotopes). The NRC considers a nuclear R&D facility that recovers more than 50% of its costs to be a commercial facility and that it be licensed as such. S. 512 increases the level of own and operating cost recovery to 75% before a nuclear R&D facility is required to obtain a commercial license while specifying that R&D facilities can recover up to only 50% of costs through the sale of energy related services and that an additional 25% can be recovered through the sale of other non-energy services. This provision is intended to encourage more private investment in R&D facilities, which are critical for the development of new advanced nuclear technology, while ensuring commercial facilities continue to undergo the commercial licensing process.

Lastly, S. 512 includes provisions regarding uranium recovery. Section 201 directs the NRC to provide Congress with a report evaluating the feasibility and potential benefit of extending the duration of uranium recovery licenses from 10 to 20 years. License reviews and renewals can take up to five years to complete which appears disproportionately long in comparison to the license duration. Section 202 directs the NRC to conduct a pilot program to determine the feasibility of establishing flat fees for routine licensing matters.

Section 203 would bring transparency and accountability to the Department of Energy’s excess uranium transactions. Some members of Congress, the GAO, and uranium producers have long been concerned with the Department of Energy’s sales and transfers of excess uranium. Since 2006, the GAO has issued a legal opinion, five reports, and has testified before Congress on four occasions on the Department’s excess uranium transactions. GAO has found that the Department’s transactions have violated the miscellaneous receipts statute (31 U.S.C. § 3302(b)), the USEC Privatization Act (42 U.S.C. § 2297h–10), and the Atomic Energy Act (42 U.S.C. §§ 2093(a)(3), (c), 2201(m)). GAO has also found that the Department’s actions related to these transactions have been inconsistent with its own contracts, its 2008 Excess Uranium Inventory Management Plan, and its Information Quality Guidelines.

¹⁶ Public Law 109–58; August 8, 2005.

¹⁷ Report 112–331 to accompany H.R. 2055 “Military Construction and Veterans Affairs and Related Agencies Appropriations Act, 2012.”

Section 203 requires the Department to issue a long-term excess uranium inventory management plan pursuant to a rulemaking under the Administrative Procedure Act (APA). The plan must include steps to minimize the impact of the Department’s excess uranium transactions on the market. It would also subject the process by which the Secretary of Energy authorizes annual sales or transfers of excess uranium to a rulemaking under the APA. Section 203 would subject any supporting market impact analysis to peer review consistent with Office of Management and Budget guidelines. Section 203 would also establish caps on the total amount of excess uranium that the Department could sell or transfer in a given year.

S. 512 enjoys broad support as evidenced by numerous letters from companies, individuals, organizations, and universities.¹⁸

OBJECTIVES OF THE LEGISLATION

The objectives of S. 512 are to reform the Nuclear Regulatory Commission’s budget and fee recovery structure to increase transparency and accountability, to direct the Nuclear Regulatory Commission to develop regulations to enable the efficient licensing of advanced nuclear reactors, to establish a DOE program to provide cost-shared grants to reduce the cost burden of NRC licensing, and to improve the economic viability of domestic uranium recovery by reducing regulatory burden and government competition in uranium sales.

SECTION-BY-SECTION ANALYSIS

Section 1. Short Title

The title of this legislation is the “Nuclear Energy Innovation and Modernization Act.”

Sec. 2. Findings

This section identifies congressional findings that support enactment of this legislation.

Sec. 3. Purposes

The purpose of this Act is to modernize the Commission’s functions by establishing new transparency and accountability measures on the Commission’s budget and fee structure, developing the regulatory framework necessary to enable the licensing of advanced nuclear reactors, and more efficient regulation of uranium recovery.

Sec. 4. Definitions

This section provides definitions for terms used in the legislation.

¹⁸ Letters of support on file with the Senate Committee on Environment and Public Works: American Nuclear Society; AUC LLC; Boise State University; Cameco Resources; Center for Climate and Energy Solutions (C2ES); ClearPath Action; Core Solutions Consulting; Energy Fuels; GE Hitachi Nuclear Energy; General Atomics; GNBC Associates; Hybrid Power Technologies LLC; Idaho State University; Laramide Resources, Inc.; Magneto-Inertial Fusion Technologies, Inc.; National Mining Association; New Mexico Mining Association; Nuclear Energy Institute; Nuclear Engineering Department Heads Organization; Powertech (USA) Inc.; Strata Energy, Inc.; Texas Mining & Reclamation Association; Third Way; Transatomic Power Corporation; Tri Alpha Energy; United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry; University of Wisconsin-Madison, Engineering Physics Department; Uranium Energy Corp.; Uranium One Americas, Inc.; Uranium Producers of America; Ur-Energy; US Nuclear Infrastructure Council; Wyoming Mining Association; and X-Energy, LLC

TITLE I—ADVANCED NUCLEAR REACTORS AND USER FEES

Sec. 101. Nuclear Regulatory Commission user fees and annual charges through fiscal year 2019

(a) IN GENERAL.

Subsection (a) amends Section 6101 of the Omnibus Budget Reconciliation Act of 1990 to remove the amounts appropriated for the Advanced Reactor Program from the Nuclear Regulatory Commission's fee recovery requirement.

(b) REPEAL.

Subsection (b) repeals Section 6101 of the Omnibus Budget Reconciliation Act of 1990 effective October 1, 2019, to enable its replacement with the reformed budget and fee structure provided in Section 6.

Sec. 102. Nuclear Regulatory Commission user fees and annual charges for fiscal year 2020 and each fiscal year thereafter

(a) ANNUAL BUDGET JUSTIFICATION.

Subsection (a) directs the Commission to expressly identify the funds necessary to complete work on activities requested by applicants and licensees. Once budget authority is granted for those requested activities, it must be used solely for those activities. This is to ensure the Commission estimates this work accurately and ensures that adequate funds are preserved to complete this work efficiently. The Commission is also directed to limit its requests for budget authority to fund corporate support costs as a percentage of its total budget request: 30 percent in Fiscal Year 2020 and decreasing one percent every two years, until reaching 28 percent in Fiscal Year 2024 and subsequent years. The limits on the NRC's corporate support costs will ensure the Commission prioritizes spending on work that directly supports its safety and security mission.

(b) FEES AND CHARGES.

Subsection (b) directs the Commission to ensure the collection of fees is equal to the Commission's budget authority less programs excluded from fee recovery. The activities excluded from fee recovery are listed, capturing all activities that are currently excluded from fee recovery. The only new activity excluded from fee recovery is the Advanced Reactor Program authorized in Section 7, which expires in 2030.

Similar to Section 6101 of OBRA-90, the NRC is authorized to collect fees in two ways. The first is through fees for services that specifically benefit a particular person or entity. The second is through annual fees to fund more generic regulatory costs including corporate support.

Subparagraph (b) places a cap on the amount of annual fee that may be charged to an operating reactor. The cap is set at the amount charged in FY 2015, \$4.8 million, not including the separate spent fuel and decommissioning fee, and may be adjusted to reflect changes in the consumer price index. This amount reflects a slight decrease from the all-time highest fee of \$5.0 million.¹⁹ As such, the cap accounts for high levels of agency spending to address

¹⁹ Nuclear Regulatory Commission 10 CFR 170 and 171: Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015; Final Rule; June 30, 2015; Table V.

regulatory changes following the Fukushima, Japan, nuclear accident. The agency's annual fee is declining since the agency's generic post-Fukushima work is nearing conclusion.^{20 21} If the Commission determines the annual fee cap may compromise its safety and security mission, the Commission may waive the cap for one year providing time to seek a remedy through the Congressional appropriations process.

Subparagraph (b) includes a research reactor fee exemption originally contained in OBRA-90. This provision was narrowly drafted to exempt a particular research reactor operated by the United States Geological Survey and does not alter the Commission's authority to recover fees from research reactors generally.

(c) PERFORMANCE AND REPORTING.

Subsection (c) directs the Commission to develop performance metrics and milestone schedules for activities requested by applicants and licensees. The increased use of metrics and schedules will improve transparency and accountability to ensure the agency is efficiently and predictably managing its workload.

(d) ACCURATE INVOICING.

Subsection (d) directs the Commission to establish processes for management review and auditing of invoices to ensure accuracy, transparency, and fairness. The Commission is also directed to develop a process for licensees and applicants to dispute and seek correction of any errors.

(e) REPORT.

Subsection (e) requires the Commission to report to Congress on the implementation of this section including any impacts and recommendations for improvement.

(f) EFFECTIVE DATE.

Subsection (f) establishes an effective date for Section 102 of October 1, 2019. This date was selected to allow the Commission time to implement these provisions through the normal budget and appropriations process.

Sec. 103. Advanced nuclear reactor program

(a) LICENSING OF COMMERCIAL ADVANCED NUCLEAR REACTORS

Subsection (a) directs the Commission within two years to establish stages within the licensing process for new reactors including the optional use of a conceptual design assessment. This change is intended to allow applicants to proceed through the licensing process in smaller steps to allow greater transparency, which will foster investor confidence based on regulatory progress. The Commission should also institute the use of licensing project plans. Licensing project plans are agreements between the agency and applicants early in the application process that reflect mutual commitments on schedules and deliverables to support resource planning for both the agency and the applicant. The Commission is also directed to implement, where appropriate, increased use of risk-informed, performance-based license licensing, and to implement strategies for licensing advanced research and test reactors within the existing regulatory framework. Together, these provisions establish a regu-

²⁰ Nuclear Regulatory Commission 10 CFR 170 and 171: Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015; Proposed Rule; March 23, 2016; Table V.

²¹ Nuclear Regulatory Commission Congressional Budget Justification; Fiscal Year 2017; p. 42

latory framework for advanced reactor technologies that will seek licensing within the next several years.

Subsection (a) further directs the Commission to complete a rulemaking by the end of 2024 to establish a technology-inclusive regulatory framework for licensing advanced nuclear reactors. This rulemaking is a more holistic approach to a more flexible and efficient regulatory framework that will be available to advanced nuclear reactor applicants who will seek licensing further into the future.

The Commission is also directed to train staff and develop the expertise required to implement Subsection (a) activities including pre-application interactions and application reviews. Appropriations are authorized for Subsection (a) in such sums as are necessary.

(b) REPORT TO ESTABLISH STAGES IN THE COMMERCIAL ADVANCED REACTOR LICENSING PROCESS

Subsection (b) directs the NRC to report to Congress within 180 days of enactment regarding implementation of stages in the licensing process within two years of enactment. The report is to include the following:

- Input from the Secretary of Energy, nuclear energy industry, technology developers, and public stakeholders;
- Cost and schedule estimates;
- Evaluation of the unique aspects of advanced nuclear reactors;
- Policy issues the Commission should address with regard to licensing;
- Options for licensing advanced nuclear reactors under the current regulatory framework including the optional use of licensing project plans;
- Options for improving the efficiency and predictability of the licensing process; and
- Any Commission action or modification of policy necessary to implement any part of the report.

(c) REPORT TO INCREASE THE USE OF RISK-INFORMED AND PERFORMANCE-BASED EVALUATION TECHNIQUES AND REGULATORY GUIDANCE

Subsection (c) directs the NRC to report to Congress within 180 days of enactment regarding increasing, where appropriate, the use of risk-informed and performance-based techniques within the existing regulatory framework. The report is to include the following:

- Input from the Secretary of Energy, nuclear energy industry, technology developers, and public stakeholders;
- Cost and schedule estimates;
- The ability of the Commission to develop and implement, where appropriate, risk-informed and performance-based techniques within two years of the date of enactment; and
- Any Commission action needed to implement any part of the report.

(d) REPORT TO PREPARE THE RESEARCH AND TEST REACTOR LICENSING PROCESS

Subsection (d) directs the NRC to report to Congress within one year of enactment regarding preparing the licensing process for research and test reactors within the existing licensing framework. The report is to include the following:

- Input from the Secretary of Energy, nuclear energy industry, technology developers, and public stakeholders;
- Cost and schedule estimates;
- Evaluation of the unique aspects of research and test reactor licensing;
- The feasibility of developing guidelines to support the license review process;
- Any Commission action needed to implement any part of the report.

(e) REPORT TO COMPLETE A RULEMAKING TO ESTABLISH A TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK FOR OPTION USE BY COMMERCIAL ADVANCED NUCLEAR REACTOR TECHNOLOGIES IN NEW REACTOR LICENSE APPLICATIONS AND TO ENHANCE COMMISSION EXPERTISE RELATING TO ADVANCED NUCLEAR REACTOR TECHNOLOGIES

Subsection (e) directs the NRC to report to Congress within 30 months of enactment regarding the completion of a rulemaking to establish a technology-inclusive licensing framework for advanced nuclear reactor technologies and developing the necessary expertise to review license applications. The report is to include the following:

- Input from the Secretary of Energy, nuclear energy industry, technology developers, and public stakeholders;
- Cost and schedule estimates;
- The ability of the Commission to complete the rulemaking by the end of 2024;
- The extent to which additional legislation or Commission action is necessary to implement any part of the framework; and
- The need for additional Commission expertise and the budget and timeframes necessary to acquire it.

Sec. 104. Advanced nuclear energy licensing cost-share grant program

(a) DEFINITIONS.

Defines terms used in this section.

(b) ESTABLISHMENT.

Subsection (b) directs the Secretary of Energy to establish a program to make cost-shared grants available to applicants to fund a portion of pre-application and application review activities.

(c) REQUIREMENT.

Subsection (c) directs the Secretary to seek out technology diversity in awarding grants.

(d) COST-SHARE AMOUNT.

Subsection (d) directs the Secretary to determine the cost-share amount for each grant.

(e) USE OF FUNDS.

Subsection (e) stipulates that recipients may use grant funds to cover Commission fees and other costs associated with:

- Developing a licensing project plan;
- Preparing an application for and obtaining a conceptual design assessment;
- Preparing and reviewing topical reports; and
- Other pre-application and application review activities and interactions with the Commission.

(f) AUTHORIZATION OF APPROPRIATIONS.

Subsection (f) authorizes appropriations in such sums as may be necessary to carry out Section 104.

Sec. 105. Baffle-former bolt guidance

Sec. 105 directs the Commission to publish any necessary revisions to guidance for the examination of baffle-former bolts and submit a report to the appropriate congressional committees.

Sec. 106. Evacuation report

Sec. 106 directs the Commission to submit a report to the appropriate congressional committees describing any actions taken or planned to consider lessons learned from evacuations resulting from natural disasters.

Sec. 107. Encouraging private investment in research and test reactors

Sec. 107 increases the amount of operating costs research reactors are allowed to recover from 50% to 75%, whereas up to 50% can be energy related and the additional 25% can only be recovered through other non-energy services.

Sec. 108. Commission report on accident tolerant fuel

Section 108 directs the Commission to report to Congress on the status of the licensing process for accident tolerant fuel. This technology could serve as a bridge to more advanced nuclear technology and has the potential to make our current commercial fleet safer and more cost competitive.

TITLE II—URANIUM

Sec. 201. Uranium recovery report

Section 201 directs the Commission to report to Congress within one year of the date of enactment regarding the safety and feasibility of extending the duration of uranium recovery licenses from 10 to 20 years.

Sec. 202. Pilot program for uranium recovery fees

Sec. 202 directs the Commission to complete a pilot program by July 31, 2018, to determine the feasibility of establishing a flat fee structure for routine uranium recovery licensing matters and report accordingly to the appropriate congressional committees.

Sec. 203. Uranium transfers and sales

Section 203 amends the USEC Privatization Act to require the Secretary of Energy to issue a 10-year excess uranium management plan beginning on January 1, 2018 and every 10 years thereafter in compliance with the Administrative Procedure Act. This section establishes an annual cap on the amount of excess uranium that the Secretary may sell or transfer at the following levels:

- 2,100 metric tons (5.487 million pounds) of natural uranium equivalent for 2017 to 2025; and
- 2,700 metric tons (7.06 million pounds) of natural uranium equivalent for 2026 and thereafter.

Any future Secretarial Determination made under the USEC Privatization Act must comply with the Administrative Procedure Act rulemaking process.

LEGISLATIVE HISTORY

On March 2, 2017, Senators Barrasso, Whitehouse, Inhofe, Booker, Crapo, Fischer, Capito, and Manchin introduced S. 512: the Nuclear Energy Innovation and Modernization Act. Additional cosponsors include Committee members Senators Carper, Duckworth, and Rounds.

On March 8, 2017, the Senate Committee on Environment and Public Works Subcommittee on Clean Air and Nuclear Safety held a legislative hearing entitled, “Legislative Hearing on S. 512, the Nuclear Energy Innovation and Modernization Act.”

On March 22, 2017, the Senate Committee on Environment and Public Works met to consider S. 512, adopted an amendment in the nature of a substitute, and ordered the bill as amended favorably reported with a roll call vote of 18 ayes and 3 nays.

HEARINGS

March 2, 2017

The Senate Committee on Environment and Public Works held an oversight hearing entitled, “Legislative Hearing on S. 512, the Nuclear Energy Innovation and Modernization Act.” Testimony was received from:

- Maria Korsnick, President and CEO, Nuclear Energy Institute
- Dr. Ashley E. Finan, Policy Director, Nuclear Innovation Alliance
- Dr. Tina Back, Vice President of Nuclear Technologies and Materials, General Atomics
- Dr. Edwin Lyman, Senior Scientist, Union of Concerned Scientists Global Security System
- Allison Bawden, Acting Director for Natural Resources and Environment with the Government Accountability Office

Written testimony was submitted by:

- Victor McCree, Executive Director of Operations, Nuclear Regulatory Commission; and
- Paul Goranson, Executive Vice President, Energy Fuels Inc. on behalf of the Uranium Producers of America.

ROLLCALL VOTES

The Committee on Environment and Public Works met to consider S. 512 on March 22, 2017. The Committee adopted the Barrasso-Carper-Whitehouse-Inhofe-Booker-Fischer-Capito-Duckworth substitute amendment, and reported the bill as amended favorably by a roll call vote of 18 ayes and 3 nays. Voting in favor were Senators Barrasso, Inhofe, Capito, Boozman, Wicker, Fischer, Moran, Rounds, Ernst, Sullivan, Shelby, Carper, Cardin, Whitehouse, Merkley, Booker, Markey and Duckworth. Voting against were Senators Sanders, Gillibrand, and Harris.

REGULATORY IMPACT STATEMENT

In compliance with section 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee finds that S. 512 does not create any additional regulatory burdens, nor will it cause any adverse impact on the personal privacy of individuals.

MANDATES ASSESSMENT

In compliance with the Unfunded Mandates Reform Act of 1995 (Public Law 104-4), the Committee has determined that S. 512 contains no intergovernmental mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

COST OF LEGISLATION

The Congressional Budget Office estimate of the cost of S. 512 has been requested but was not received at the time the report was filed. When available, the Chairman will request that it be printed in the Congressional Record for the advice of the Senate.

ADDITIONAL VIEWS OF SENATOR WHITEHOUSE

DEAR SENATOR: While we would not have taken the same approach towards the stated intent of modernizing the deployment of advanced nuclear reactors that is in S. 2795, the Nuclear Energy Innovation and Modernization Act, we do not believe the revised bill will have any major detrimental impact on public safety and transparency. The bill authors have done well to balance their desire to reform the licensing process without subjugating the Nuclear Regulatory Commission (NRC) to congressionally imposed mandates, allowing the NRC to retain the flexibility it needs to independently regulate in the public interest. The Union of Concerned Scientists therefore takes a neutral position on S. 2795.

ROBERT COWIN,
Union of Concerned Scientists,
Director of Government Affairs, Climate and Energy.

I also want to ensure the record reflects that some of these new reactor technologies could actually help to reduce the amount of nuclear waste we've accumulated through the years by using that waste as fuel. That could alleviate a major challenge facing the industry.

SHELDON WHITEHOUSE.

CHANGES IN EXISTING LAW

In compliance with section 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill as reported are shown as follows: Existing law proposed to be omitted is enclosed in [black brackets], new matter is printed in *italic*, existing law in which no change is proposed is shown in roman:

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OMNIBUS BUDGET RECONCILIATION ACT OF 1990 (Titles VI and XIII)

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SEC. 6101. NRC USER FEES AND ANNUAL CHARGES.

(a) ANNUAL ASSESSMENT.—

(1) IN GENERAL.—The Nuclear Regulatory Commission (in this section referred to as the “Commission”) shall annually assess and collect such fees and charges as are described in subsections (b) and (c).

(2) FIRST ASSESSMENT.—The first assessment of fees under subsection (b) and annual charges under subsection (c) shall be made not later than September 30, 1991.

(b) FEES FOR SERVICE OR THING OF VALUE.—Pursuant to section 9701 of title 31, United States Code, any person who receives a service or thing of value from the Commission shall pay fees to cover the Commission’s costs in providing any such service or thing of value.

(c) POLICY REVIEW.—The Nuclear Regulatory Commission shall review its policy for assessment of annual charges under section 6101(c) of the Omnibus Budget Reconciliation Act of 1990, solicit public comment on the need for changes to such policy, and recommend to the Congress such changes in existing law as the Commission finds are needed to prevent the placement of an unfair burden on certain licensees of the Commission, in particular those that hold licenses to operate federally owned research reactors used primarily for educational training and academic research purposes.”.

(1) PERSONS SUBJECT TO CHARGE.—Except as provided in paragraph (4), any licensee or certificate holder of the Commission may be required to pay, in addition to the fees set forth in subsection (b), an annual charge.

(2) AGGREGATE AMOUNT OF CHARGES.—

(A) IN GENERAL.—The aggregate amount of the annual charges collected from all licensees and certificate holders in a fiscal year shall equal an amount that approximates the percentages of the budget authority of the Commission for the fiscal year stated in subparagraph (B), less—

(i) amounts collected under subsection (b) during the fiscal year;

(ii) amounts appropriated to the Commission from the Nuclear Waste Fund for the fiscal year;

(iii) amounts appropriated to the Commission for the fiscal year for implementation of section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005; [and]

(iv) amounts appropriated to the Commission for homeland security activities of the Commission for the fiscal year, except for the costs of fingerprinting and background checks required by section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169) and the costs of conducting security inspections[.]; and

(v) amounts appropriated to the Commission for the fiscal year for activities related to the development of regulatory infrastructure for advanced nuclear reactor technologies, including activities required under section 103 of the Nuclear Energy Innovation and Modernization Act.

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ATOMIC ENERGY ACT OF 1954

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TITLE I—ATOMIC ENERGY

CHAPTER 1. DECLARATION, FINDINGS, AND PURPOSE

SECTION 1. DECLARATION.—Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that—

a. the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to the paramount objective of making the maximum contribution to the common defense and security; and

b. the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

* * * * *

CHAPTER 10. ATOMIC ENERGY LICENSES

SEC. 101. LICENSE REQUIRED.—It shall be unlawful, except as provided in section 91, for any person within the United States to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export any utilization or production facility except under and in accordance with a license issued by the Commission pursuant to section 103 or 104.

SEC. 104. MEDICAL THERAPY AND RESEARCH AND DEVELOPMENT.—

a. The Commission is authorized to issue licenses to persons applying therefor for utilization facilities for use in medical therapy. In issuing such licenses the Commission is directed to permit the widest amount of effective medical therapy possible with the amount of special nuclear material available for such purposes and to impose the minimum amount of regulation consistent with its obligations under this Act to promote the common defense and security and to protect the health and safety of the public.

b. As provided for in subsection 102 b. or 102 c., or where specifically authorized by law, the Commission is authorized to issue licenses under this subsection to persons applying therefor for utilization and production facilities for industrial and commercial purposes. In issuing licenses under this subsection, the Commission shall impose the minimum amount of such regulations and terms of license as will permit the Commission to fulfill its obligations under this Act.

c. The Commission is authorized to issue licenses to persons applying therefor for utilization and production facilities useful in the conduct of research and development activities of the types specified in section 31 [and which are not facilities of the type specified in subsection 104 b.] . The Commission is directed to impose only such minimum amount of regulation of the licensee as the Commission finds will permit the Commission to fulfill its obligations under this Act to promote the common defense and security and to protect the health and safety of the public and will permit the conduct of widespread and diverse research and development.

The Commission is authorized to issue licenses under this section for utilization facilities useful in the conduct of research and development activities of the types specified in section 31 in which the licensee sells research and testing services and energy to others, subject to the condition that the licensee shall recover not more than 75 percent of the annual costs to the licensee of owning and operating the facility through sales of nonenergy services, energy, or both, other than research and development or education and training, of which not more than 50 percent may be through sales of energy.

* * * * *

U.S. ENRICHMENT CORP. PRIVITAZATION ACT

* * * * *

SECTION 204 AND TITLES III AND IV OF THE DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS ACT, 1996

SEC. 204. [42 U.S.C. 1437f note] (a) PURPOSE.—The purpose of this demonstration is to give public housing agencies and the Secretary of Housing and Urban Development the flexibility to design and test various approaches for providing and administering housing assistance that: reduce cost and achieve greater cost effectiveness in Federal expenditures; give incentives to families with children where the head of household is working, seeking work, or is preparing for work by participating in job training, educational programs, or programs that assist people to obtain employment and become economically self-sufficient; and increase housing choices for low-income families.

* * * * *

TITLE III
 RESCISSIONS AND OFFSETS
 CHAPTER 1—ENERGY AND WATER DEVELOPMENT
 SUBCHAPTER A—UNITED STATES ENRICHMENT CORPORATION
 PRIVATIZATION

SEC. 3101. [42 U.S.C. 2011 note] SHORT TITLE.

This subchapter may be cited as the “USEC Privatization Act”.

* * * * *

SEC. 3112. [42 U.S.C. 2297h-10] URANIUM TRANSFERS AND SALES.

[(a) TRANSFERS AND SALES BY THE SECRETARY.—The Secretary shall not provide enrichment services or transfer or sell any uranium (including natural uranium concentrates, natural uranium hexafluoride, or enriched uranium in any form) to any person except as consistent with this section.]

(a) DEFINITIONS.—*In this section:*

(1) DEPLETED URANIUM.—*The term ‘depleted uranium’ means uranium having an assay less than the assay for—*

(A) *natural uranium; or*

(B) *0.711 percent of the uranium-235 isotope.*

(2) HIGHLY ENRICHED URANIUM.—*The term ‘highly enriched uranium’ means uranium having an assay of 20 percent or greater of the uranium-235 isotope.*

(3) LOW-ENRICHED URANIUM.—*The term ‘low-enriched uranium’ means uranium having an assay greater than 0.711 percent but less than 20 percent of the uranium-235 isotope.*

(4) METRIC TON OF URANIUM.—*The term ‘metric ton of uranium’ means 1,000 kilograms of uranium.*

(5) NATURAL URANIUM.—*The term ‘natural uranium’ means uranium having an assay of 0.711 percent of the uranium-235 isotope.*

(6) OFF-SPEC URANIUM.—*The term ‘off-spec uranium’ means uranium in any form, including depleted uranium, highly enriched uranium, low-enriched uranium, natural uranium, UF₆, and any byproduct of uranium processing, that does not meet the specification for commercial material (as defined by the standards of the American Society for Testing and Materials).*

(7) URANIUM.—*Other than in subsection (c), the term ‘uranium’ includes natural uranium, uranium hexafluoride, highly enriched uranium, low-enriched uranium, depleted uranium, and any byproduct of uranium processing.*

(8) URANIUM HEXAFLUORIDE; UF₆.—*The terms ‘uranium hexafluoride’ and ‘UF₆’ mean uranium that has been combined with fluorine, to form a compound that, dependent on temperature and pressure, can be a solid, liquid, or gas.*

(b) TRANSFERS AND SALES BY THE SECRETARY.—*The Secretary is not authorized to provide enrichment services, or transfer or sell any uranium except in accordance with this section.*

(c) DEVELOPMENT OF FEDERAL EXCESS URANIUM MANAGEMENT PLAN.—

(1) IN GENERAL.—*Beginning on January 1, 2018, and not less frequently than once every 10 years thereafter, the Secretary shall issue a long-term Federal excess uranium inventory management plan (referred to in this section as the ‘plan’) that details the management of the excess uranium inventories of the Department of Energy and covers a period of not fewer than 10 years.*

(2) CONTENT.—

(A) IN GENERAL.—*The plan shall cover all forms of uranium within the excess uranium inventory of the Department of Energy, including depleted uranium, highly enriched uranium, low-enriched uranium, natural uranium, off-spec uranium, and UF₆.*

(B) REDUCING IMPACT ON DOMESTIC INDUSTRY.—*The plan shall outline steps the Secretary will take to minimize the impact of transferring or selling uranium on the domestic uranium mining, conversion, and enrichment industries, including any actions for which the Secretary would require new authority.*

(C) MAXIMIZING BENEFITS TO THE FEDERAL GOVERNMENT.—*The plan shall outline steps the Secretary shall take to ensure that the Federal Government maximizes the potential value of uranium for the Federal Government.*

(3) PROPOSED PLAN.—*Before issuing the final plan, the Secretary shall publish a proposed plan in the Federal Register pursuant to a rulemaking under section 553 of title 5, United States Code.*

(4) DEADLINES FOR SUBMISSION.—*The Secretary shall issue—*

(A) *a proposed plan for public comment under paragraph (3) not later than 180 days after the date of enactment of this paragraph; and*

(B) *a final plan not later than 1 year after the date of enactment of this paragraph.*

[(b)] (d) RUSSIAN HEU.—(1) On or before December 31, 1996, the United States Executive Agent under the Russian HEU Agreement shall transfer to the Secretary without charge title to an amount of uranium hexafluoride equivalent to the natural uranium component of low-enriched uranium derived from at least 18 metric tons of highly enriched uranium purchased from the Russian Executive Agent under the Russian HEU Agreement. The quantity of such uranium hexafluoride delivered to the Secretary shall be based on a tails assay of 0.30 U²³⁵. Uranium hexafluoride transferred to the Secretary pursuant to this paragraph shall be deemed under United States law for all purposes to be of Russian origin.

(2) Within 7 years of the date of enactment of this Act, the Secretary shall sell, and receive payment for, the uranium hexafluoride transferred to the Secretary pursuant to paragraph (1). Such uranium hexafluoride shall be sold—

(A) at any time for use in the United States for the purpose of overfeeding;

(B) at any time for end use outside the United States;

(C) in 1995 and 1996 to the Russian Executive Agent at the purchase price for use in matched sales pursuant to the Suspension Agreement; or,

(D) in calendar year 2001 for consumption by end users in the United States not prior to January 1, 2002, in volumes not to exceed 3,000,000 pounds U_3O_8 equivalent per year.

(3) With respect to all enriched uranium delivered to the United States Executive Agent under the Russian HEU Agreement on or after January 1, 1997, the United States Executive Agent shall, upon request of the Russian Executive Agent, enter into an agreement to deliver concurrently to the Russian Executive Agent an amount of uranium hexafluoride equivalent to the natural uranium component of such uranium. An agreement executed pursuant to a request of the Russian Executive Agent, as contemplated in this paragraph, may pertain to any deliveries due during any period remaining under the Russian HEU Agreement. The quantity of such uranium hexafluoride delivered to the Russian Executive Agent shall be based on a tails assay of 0.30 U^{235} . Title to uranium hexafluoride delivered to the Russian Executive Agent pursuant to this paragraph shall transfer to the Russian Executive Agent upon delivery of such material to the Russian Executive Agent, with such delivery to take place at a North American facility designated by the Russian Executive Agent. Uranium hexafluoride delivered to the Russian Executive Agent pursuant to this paragraph shall be deemed under U.S. law for all purposes to be of Russian origin. Such uranium hexafluoride may be sold to any person or entity for delivery and use in the United States only as permitted in [subsections (b)(5), (b)(6) and (b)(7) of this section] *paragraphs (5), (6), and (7)*.

(4) In the event that the Russian Executive Agent does not exercise its right to enter into an agreement to take delivery of the natural uranium component of any low-enriched uranium, as contemplated in paragraph (3), within 90 days of the date such low-enriched uranium is delivered to the United States Executive Agent, or upon request of the Russian Executive Agent, then the United States Executive Agent shall engage an independent entity through a competitive selection process to auction an amount of uranium hexafluoride or U_3O_8 (in the event that the conversion component of such hexafluoride has previously been sold) equivalent to the natural uranium component of such low-enriched uranium. An agreement executed pursuant to a request of the Russian Executive Agent, as contemplated in this paragraph, may pertain to any deliveries due during any period remaining under the Russian HEU Agreement. Such independent entity shall sell such uranium hexafluoride in one or more lots to any person or entity to maximize the proceeds from such sales, for disposition consistent with the limitations set forth in this subsection. The independent entity shall pay to the Russian Executive Agent the proceeds of any such auction less all reasonable transaction and other administrative costs. The quantity of such uranium hexafluoride auctioned shall be based on a tails assay of 0.30 U^{235} . Title to uranium hexafluoride auctioned pursuant to this paragraph shall transfer to the buyer of such material upon delivery of such material to the buyer. Uranium hexafluoride auctioned pursuant to this paragraph shall be deemed under United States law for all purposes to be of Russian origin.

(5) Except as provided in paragraphs (6) and (7), uranium hexafluoride delivered to the Russian Executive Agent under paragraph (3) or auctioned pursuant to paragraph (4), may not be delivered for consumption by end users in the United States either directly or indirectly prior to January 1, 1998, and thereafter only in accordance with the following schedule:

* * * * *

(6) Uranium hexafluoride delivered to the Russian Executive Agent under paragraph (3) or auctioned pursuant to paragraph (4) may be sold at any time as Russian-origin natural uranium in a matched sale pursuant to the Suspension Agreement, and in such case shall not be counted against the annual maximum deliveries set forth in paragraph (5).

(7) Uranium hexafluoride delivered to the Russian Executive Agent under paragraph (3) or auctioned pursuant to paragraph (4) may be sold at any time for use in the United States for the purpose of overfeeding in the operations of enrichment facilities.

(8) Nothing in this subsection **[(b)]** shall restrict the sale of the conversion component of such uranium hexafluoride.

(9) The Secretary of Commerce shall have responsibility for the administration and enforcement of the limitations set forth in this subsection. The Secretary of Commerce may require any person to provide any certifications, information, or take any action that may be necessary to enforce these limitations. The United States Customs Service shall maintain and provide any information required by the Secretary of Commerce and shall take any action requested by the Secretary of Commerce which is necessary for the administration and enforcement of the uranium delivery limitations set forth in this section.

(10) The President shall monitor the actions of the United States Executive Agent under the Russian HEU Agreement and shall report to the Congress not later than December 31 of each year on the effect the low-enriched uranium delivered under the Russian HEU Agreement is having on the domestic uranium mining, conversion, and enrichment industries, and the operation of the gaseous diffusion plants. Such report shall include a description of actions taken or proposed to be taken by the President to prevent or mitigate any material adverse impact on such industries or any loss of employment at the gaseous diffusion plants as a result of the Russian HEU Agreement.

[(c)] (e) TRANSFERS TO THE CORPORATION.—(1) The Secretary shall transfer to the Corporation without charge up to 50 metric tons of enriched uranium and up to 7,000 metric tons of natural uranium from the Department of Energy's stockpile, subject to the restrictions in **[(subsection (c)(2)]** *paragraph (2)*.

(2) The Corporation shall not deliver for commercial end use in the United States—

(A) any of the uranium transferred under this subsection before January 1, 1998;

(B) more than 10 percent of the uranium (by uranium hexafluoride equivalent content) transferred under this subsection or more than 4,000,000 pounds, whichever is less, in any calendar year after 1997; or

(C) more than 800,000 separative work units contained in low-enriched uranium transferred under this subsection in any calendar year.

[(d)] *(f) INVENTORY SALES.*—(1) In addition to the transfers authorized under subsections **[(c) and (e)]**, the Secretary may, from time to time, sell natural and low-enriched uranium (including low-enriched uranium derived from highly enriched uranium) **[(e) and (g)]**, the Secretary, may from time to time, sell uranium from the Department of Energy's stockpile.

(2) *LIMITATIONS.*—*The transfers authorized under subsections (e) and (g), and the sales authorized under paragraph (1), shall be subject to the following limitations:*

(A) *Effective for the period of calendar years 2017 through 2025, the Secretary shall not transfer or sell more than 2,100 metric tons of natural uranium equivalent annually in any form, including depleted uranium, highly enriched uranium, low-enriched uranium, natural uranium, off-spec uranium, and UF6.*

(B) *Effective beginning on January 1, 2026, the Secretary shall not transfer or sell more than 2,700 metric tons of natural uranium equivalent annually in any form, including depleted uranium, highly enriched uranium, low-enriched uranium, natural uranium, off-spec uranium, and UF6.*

[(2)] (3) Except as provided in subsections (b), (c), and (e), no sale or transfer of natural or low-enriched uranium shall be made unless—

(3) *DETERMINATIONS.*—*Except as provided in subsections (d), (e), and (g), and subject to paragraph (4), no sale or transfer of uranium shall be made unless—*

(A) the President determines that the material is not necessary for national security needs,

(B) the Secretary determines that **[(the sale)]** *the sale or transfer of the material will not have an adverse material impact on the domestic uranium mining, conversion, or enrichment industry, taking into account the sales of uranium under the Russian HEU Agreement and the Suspension Agreement, and*

(C) the price paid to the Secretary will not be less than the fair market value of the material.

(4) *REQUIREMENTS FOR DETERMINATIONS.*—

(A) *PROPOSED DETERMINATION.*—*Before making a determination under paragraph (3)(B), the Secretary shall publish a proposed determination in the Federal Register pursuant to a rulemaking under section 553 of title 5, United States Code.*

(B) *QUALITY OF MARKET ANALYSIS.*—*Any market analysis that is prepared by the Department of Energy, or that the Department of Energy commissions for the Secretary as part of the determination process under paragraph (3)(B), shall be subject to a peer review process consistent with the guidelines of the Office of Management and Budget published at 67 Fed. Reg. 8452–8460 (February 22, 2002) (or successor guidelines), to ensure and maximize the quality,*

objectivity, utility, and integrity of information disseminated by Federal agencies.

(C) WAIVER OF SECRETARIAL DETERMINATION.—*Beginning on January 1, 2023, the requirement for a determination by the Secretary under paragraph (3)(B) shall be waived for transferring or selling uranium by the Secretary if the uranium has been identified in the updated long-term Federal excess uranium inventory management plan under subsection (c)(1).*

[(e)] (g) GOVERNMENT TRANSFERS.—Notwithstanding subsection **[(d)(2)]** (f)(3), but subject to subsection (f)(2), the Secretary may transfer or sell enriched uranium—

(1) to a Federal agency if the material is transferred for the use of the receiving agency without any resale or transfer to another entity and the material does not meet commercial specifications;

(2) to any person for national security purposes, as determined by the Secretary; or

(3) to any State or local agency or nonprofit, charitable, or educational institution for use other than the generation of electricity for commercial use.

[(f)] (h) SAVINGS PROVISION.—Nothing in this subchapter shall be read to modify the terms of the Russian HEU Agreement.

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