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[Report No. 115–86]

To modernize the regulation of nuclear energy.

IN THE SENATE OF THE UNITED STATES

MARCH 2, 2017

Mr. BARRASSO (for himself, Mr. WHITEHOUSE, Mr. INHOFE, Mr. BOOKER, Mr. CRAPO, Mrs. FISCHER, Mrs. CAPITO, Mr. MANCHIN, Mr. CASEY, Ms. DUCKWORTH, Mr. FLAKE, Mr. CARPER, Mr. ROUNDS, Mr. COONS, Mr. CORNYN, Mr. HATCH, and Mr. PETERS) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

MAY 25, 2017

Reported by Mr. BARRASSO, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To modernize the regulation of nuclear energy.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

~~**SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**~~

~~(a) SHORT TITLE.—This Act may be cited as the "Nuclear Energy Innovation and Modernization Act".~~

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

SEC. 2. FINDINGS.

Congress finds that—

(1) the safe and secure operation of nuclear reactors in the United States must remain the paramount focus of the Nuclear Regulatory Commission;

(2) the existing fleet of nuclear reactors in the United States is operating safely and securely;

(3) nuclear energy is the largest source of affordable, reliable, emissions-free energy in the United States, providing approximately 20 percent of the electricity consumed in the United States and 60 percent of emissions-free electricity generation in the United States;

(4) a 1,000-megawatt nuclear plant—

(A) provides approximately 500 permanent jobs;

(B) pays approximately $40,000,000 annually in wages;

(C) generates approximately $470,000,000 annually in goods and services in the local community; and

(D) pays approximately $83,000,000 annually in Federal, State, and local taxes;

(5) nuclear energy is of critical importance to United States energy security and worldwide influence on nonproliferation;

(6) nuclear energy uses widely available fuel resources to enable scientific progress, emissions-free and reliable electricity generation, heat generation for industrial applications, and power for deep space exploration;

(7) the private sector, the National Laboratories (as defined in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801)), and institutions of higher education are pursuing innovations in nuclear energy technology that will play a crucial role in—

(A) the future global and United States energy supply; and

(B) the exports, manufacturing, and economy of the United States;

(8) eventual deployment of commercial advanced nuclear reactors will require—

(A) modernizing the regulatory framework; and

(B) making other necessary changes to facilitate the efficient, predictable, and affordable deployment of advanced nuclear reactor technologies;

(9) 2 impediments to the commercialization of advanced nuclear reactors are the high costs and long durations associated with applying the existing nuclear regulatory framework to advanced nuclear reactors;

(10) license application reviews should be as predictable and efficient as practicable without compromising safety or security;

(11) the development of advanced nuclear reactors would benefit from the early identification of policy issues for timely consideration and resolution by the Commission to improve the efficient development of designs as well as preparing for design review and licensing;

(12) the existing nuclear regulatory framework and the requirements of that framework have not adapted to advances in scientific understanding or the features and performance characteristics of advanced nuclear reactor designs;

(13) the existing nuclear reactor licensing process does not provide iterative feedback to manage risk as needed for typical technology development and investment cycles;

(14) a staged licensing structure that provides clear and periodic feedback to applicants on an agreed schedule will help to enable the commercialization of safer and innovative technologies that will benefit the economy, national security, and environment of the United States;

(15) a technology-inclusive Commission regulatory framework will—

(A) allow greater technological innovation; and

(B) enable inventors, scientists, engineers, and students to pursue licensing advanced reactor concepts;

(16) further preparation by the Commission of the research and test reactor licensing process will enable the Commission to more efficiently process

applications for research and test reactors when the applications are received;

(17) it is incumbent on the Commission—

(A) to budget appropriate resources to undertake an active role in design familiarization activities with potential applicants with advanced reactor designs;

(B) to budget for adequate resources to conduct licensing reviews and other work requested by licensees and applicants; and

(C) to preserve those budgeted funds to ensure responsiveness to licensees and applicants in recognition of the dependence of the licensees and applicants on Commission approval before the benefits of the technology of the licensees and applicants can be realized; and

(18) both prospective advanced nuclear reactor applicants and the existing fleet of nuclear reactors in the United States would benefit from modernizing the outdated fee recovery structure of the Commission to better manage fluctuations in workload and the number of licensees in a fair and equitable manner.

SEC. 3. PURPOSE.

The purpose of this Act is to provide—

(1) a program to develop the expertise and regulatory processes necessary to allow innovation and the commercialization of advanced nuclear reactors;

(2) a revised fee recovery structure to ensure the availability of resources to meet industry needs without burdening existing licensees unfairly for inaccurate workload projections or premature existing reactor closures; and

(3) more efficient regulation of uranium recovery.

SEC. 4. DEFINITIONS.

In this Act:

(1) ADVANCED NUCLEAR REACTOR.—The term ''advanced nuclear reactor'' means a nuclear fission or fusion reactor, including a prototype plant (as defined in sections 50.2 and 52.1 of title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act)), with significant improvements compared to commercial nuclear reactors under construction as of the date of enactment of this Act, including improvements such as—

(A) additional inherent safety features;

(B) significantly lower levelized cost of electricity;

(C) lower waste yields;

(D) greater fuel utilization;

(E) enhanced reliability;

(F) increased proliferation resistance;

(G) increased thermal efficiency; or

(H) ability to integrate into electric and nonelectric applications.

(2) ADVANCED NUCLEAR REACTOR FUEL.—The term ''advanced nuclear reactor fuel'' means fuel for use in an advanced nuclear reactor or a research and test reactor, including fuel with a low uranium enrichment level of not greater than 20 percent.

(3) AGREEMENT STATE.—The term ''Agreement State'' means any State with which the Commission has entered into an effective agreement under section 274 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2021(b)).

(4) APPLICANT.—The term ''applicant'' means an applicant for a license, certification, permit, or other form of approval from the Commission for a commercial advanced nuclear reactor or a research and test reactor.

(5) APPROPRIATE CONGRESSIONAL COMMITTEES.—The term ''appropriate congressional committees'' means the Committee on Environment and Public Works of the Senate and the Committee on

~~Energy and Commerce of the House of Representatives.~~

~~(6) COMMISSION.—The term "Commission" means the Nuclear Regulatory Commission.~~

~~(7) CONCEPTUAL DESIGN ASSESSMENT.—The term "conceptual design assessment" means an early-stage review by the Commission that—~~

~~(A) assesses preliminary design information for consistency with applicable regulatory requirements of the Commission;~~

~~(B) is performed on a set of topic areas agreed to in the licensing project plan; and~~

~~(C) is performed at a cost and schedule agreed to in the licensing project plan.~~

~~(8) CORPORATE SUPPORT COSTS.—The term "corporate support costs" means expenditures for acquisitions, administrative services, financial management, human resource management, information management, information technology, policy support, outreach, and training, as those categories are described and calculated in Appendix A of the Congressional Budget Justification for Fiscal Year 2017 of the Commission.~~

~~(9) LICENSING PROJECT PLAN.—The term "licensing project plan" means a plan that describes—~~

(A) the interactions between an applicant and the Commission; and

(B) project schedules and deliverables in specific detail to support long-range resource planning undertaken by the Commission and an applicant.

(10) REGULATORY FRAMEWORK.—The term ''regulatory framework'' means the framework for reviewing requests for certifications, permits, approvals, and licenses for nuclear power plants.

(11) REQUESTED ACTIVITY OF THE COMMISSION.—The term ''requested activity of the Commission'' means—

(A) the processing of applications for—

(i) design certifications or approvals;

(ii) licenses;

(iii) permits;

(iv) license amendments;

(v) license renewals;

(vi) certificates of compliance; and

(vii) power uprates; and

(B) any other activity requested by a licensee or applicant.

(12) RESEARCH AND TEST REACTOR.—

(A) IN GENERAL.—The term ''research and test reactor'' means a reactor that—

(i) falls within the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. 5842); and

(ii) is useful in the conduct of research and development activities as licensed under section 104 c. of the Atomic Energy Act (42 U.S.C. 2134(c)).

(B) EXCLUSION.—The term ''research and test reactor'' does not include a commercial advanced nuclear reactor.

(13) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(14) STANDARD DESIGN APPROVAL.—The term ''standard design approval'' means the approval of a final standard design or a major portion of a final design standard as described in subpart E of part 52 of title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act).

(15) TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK.—The term ''technology-inclusive regulatory framework'' means a regulatory framework

developed using methods of evaluation that are flexible and practicable for application to a variety of reactor technologies, including, where appropriate, the use of risk-informed and performance-based techniques and other tools and methods.

(16) TOPICAL REPORT.—The term ''topical report'' means a document submitted to the Commission that addresses a technical topic related to nuclear power plant safety or design.

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.—Section 6101(c)(2)(A) of the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214(c)(2)(A)) is amended—

(1) in clause (iii), by striking ''and'' at the end;

(2) in clause (iv), by striking the period at the end and inserting ''; and''; and

(3) by adding at the end the following:

''(v) amounts appropriated to the Commission for the fiscal year for activities related to the development of a regulatory framework for advanced nuclear re-

actor technologies, including activities required under section 103 of the Nuclear Energy Innovation and Modernization Act.''.

(b) REPEAL.—Effective October 1, 2019, section 6101 of the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214) is repealed.

SEC. 102. NUCLEAR REGULATORY COMMISSION USER FEES AND ANNUAL CHARGES FOR FISCAL YEAR 2020 AND EACH FISCAL YEAR THEREAFTER.

(a) ANNUAL BUDGET JUSTIFICATION.—

(1) IN GENERAL.—In the annual budget justification submitted by the Commission to Congress, the Commission shall expressly identify anticipated expenditures necessary for completion of the requested activities of the Commission anticipated to occur during the applicable fiscal year.

(2) RESTRICTION.—Budget authority granted to the Commission for purposes of the requested activities of the Commission shall be used, to the maximum extent practicable, solely for conducting requested activities of the Commission.

(3) LIMITATION ON CORPORATE SUPPORT COSTS.—With respect to the annual budget justification submitted to Congress, corporate support costs,

to the maximum extent practicable, shall not exceed the following percentages of the total budget authority of the Commission requested in the annual budget justification:

(A) 30 percent for each of fiscal years 2020 and 2021.

(B) 29 percent for each of fiscal years 2022 and 2023.

(C) 28 percent for fiscal year 2024 and each fiscal year thereafter.

(b) FEES AND CHARGES.—

(1) ANNUAL ASSESSMENT.—

(A) IN GENERAL.—Each fiscal year, the Commission shall assess and collect fees and charges in accordance with paragraphs (2) and (3) in a manner that ensures that, to the maximum extent practicable, the amount collected is equal to an amount that approximates—

(i) the total budget authority of the Commission for that fiscal year; less

(ii) the budget authority of the Commission for the activities described in subparagraph (B).

(B) EXCLUDED ACTIVITIES DESCRIBED.—The activities referred to in subparagraph (A)(ii) are the following:

(i) An activity not attributable to an existing NRC licensee or class of licensee as identified by the Commission in Table III of the final rule of the Commission entitled ''Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015'' (80 Fed. Reg. 37432 (June 30, 2015)).

(ii) Amounts appropriated for a fiscal year to the Commission—

(I) from the Nuclear Waste Fund established under section 302(e) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(e));

(II) for implementation of section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (50 U.S.C. 2601 note; Public Law 108–375);

(III) for the homeland security activities of the Commission (other than for the costs of fingerprinting and background checks required

~~under section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169) and the costs of conducting security inspections);~~

~~(IV) for the Inspector General services of the Commission provided to the Defense Nuclear Facilities Safety Board;~~

~~(V) for research and development at universities in areas relevant to the mission of the applicable university;~~

~~(VI) for a nuclear science and engineering grant program that will support multiyear projects that do not align with programmatic missions but are critical to maintaining the discipline of nuclear science and engineering; and~~

~~(VII) for any other fee-relief activity described in the final rule of the Commission entitled "Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015" (80 Fed. Reg. 37432 (June 30, 2015)).~~

(iii) Costs for activities related to the development of regulatory infrastructure for advanced nuclear reactor technologies, including activities required under section 103.

(C) EXCEPTION.—The exclusion described in subparagraph (B)(iii) shall cease to be effective on January 1, 2031.

(D) REPORT.—Not later than December 31, 2029, the Commission shall submit to the Committee on Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a report describing the views of the Commission on the continued appropriateness and necessity of the funding described in subparagraph (B)(iii).

(2) FEES FOR SERVICE OR THING OF VALUE.—In accordance with section 9701 of title 31, United States Code, the Commission shall charge fees to any person who receives a service or thing of value from the Commission to cover the costs to the Commission of providing the service or thing of value.

(3) ANNUAL FEES.—

(A) IN GENERAL.—Subject to subparagraph (B) and except as provided in subparagraph (D), the Commission may charge to any licensee or certificate holder of the Commission an annual fee.

(B) CAP ON ANNUAL FEES OF CERTAIN LICENSEES.—

(i) IN GENERAL.—The annual fee under subparagraph (A) charged to an operating reactor licensee, to the maximum extent practicable, shall not exceed the annual fee amount per operating reactor licensee established in the final rule of the Commission entitled ''Revision of Fee Schedules, Fee Recovery for Fiscal Year 2015'' (80 Fed. Reg. 37432 (June 30, 2015)), as may be adjusted annually by the Commission to reflect changes in the Consumer Price Index published by the Bureau of Labor Statistics of the Department of Labor.

(ii) WAIVER.—The Commission may waive, for a period of 1 year, the cap on annual fees described in clause (i) if the Commission submits to the Committee on

Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a written determination that the cap on annual fees may compromise the safety and security mission of the Commission.

(C) AMOUNT PER LICENSEE.—

(i) IN GENERAL.—The Commission shall establish by rule a schedule of fees fairly and equitably allocating the aggregate amount of charges described in subparagraph (A) among licensees and certificate holders.

(ii) REQUIREMENT.—The schedule of fees under clause (i)—

(I) to the maximum extent practicable, shall be based on the cost of providing regulatory services; and

(II) may be based on the allocation of the resources of the Commission among licensees or certificate holders or classes of licensees or certificate holders.

(D) EXEMPTION.—

(i) DEFINITION OF RESEARCH REACTOR.—In this subparagraph, the term ''research reactor'' means a nuclear reactor that—

(I) is licensed by the Commission under section 104 c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) for operation at a thermal power level of not more than 10 megawatts; and

(II) if licensed under subclause (I) for operation at a thermal power level of more than 1 megawatt, does not contain—

(aa) a circulating loop through the core in which the licensee conducts fuel experiments;

(bb) a liquid fuel loading; or

(cc) an experimental facility in the core in excess of 16 square inches in cross-section.

(ii) EXEMPTION.—Subparagraph (A) shall not apply to the holder of any license for a federally owned research reactor used

primarily for educational training and academic research purposes.

(c) PERFORMANCE AND REPORTING.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Commission shall develop for the requested activities of the Commission—

(A) performance metrics; and

(B) on each request, milestone schedules.

(2) DELAYS IN ISSUANCE OF FINAL SAFETY EVALUATION.—The Executive Director for Operations of the Commission shall inform the Commission of a delay in issuance of the final safety evaluation for a requested activity of the Commission by the completion date required by the performance metrics or milestone schedule under paragraph (1) by not later than 30 days after the completion date.

(3) DELAYS IN ISSUANCE OF FINAL SAFETY EVALUATION EXCEEDING 180 DAYS.—If the final safety evaluation for the requested activity of the Commission described in paragraph (2) is not completed by the date that is 180 days after the completion date required by the performance metrics or milestone schedule under paragraph (1), the Commission shall submit to the appropriate congres-

sional committees a timely report describing the delay, including a detailed explanation accounting for the delay and a plan for timely completion of the final safety evaluation.

(d) ACCURATE INVOICING.—With respect to invoices for fees and charges described in subsection (b)(2), the Commission shall—

(1) ensure appropriate management review and concurrence prior to the issuance of invoices;

(2) develop and implement processes to audit invoices to ensure accuracy, transparency, and fairness; and

(3) modify regulations to ensure fair and appropriate processes to provide licensees and applicants an opportunity to efficiently dispute or otherwise seek review and correction of errors in invoices for fees and charges.

(e) REPORT.—Not later than September 30, 2021, the Commission shall submit to the Committee on Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a report describing the implementation of this section, including any impacts and recommendations for improvement.

(f) EFFECTIVE DATE.—Except as provided in subsection (c), this section takes effect on October 1, 2019.

SEC. 103. ADVANCED NUCLEAR REACTOR PROGRAM.

(a) LICENSING OF COMMERCIAL ADVANCED NUCLEAR REACTORS.—

(1) STAGED LICENSING.—For the purpose of predictable, efficient, and timely reviews, not later than 270 days after the date of enactment of this Act, the Commission shall develop and implement, within the existing regulatory framework, strategies for—

(A) establishing stages in the licensing process for commercial advanced nuclear reactors; and

(B) developing procedures and processes for—

(i) using a licensing project plan; and

(ii) optional use of a conceptual design assessment.

(2) RISK-INFORMED LICENSING.—Not later than 2 years after the date of enactment of this Act, the Commission shall develop and implement, where appropriate, strategies for the increased use of risk-informed, performance-based licensing evaluation techniques and guidance for commercial advanced

nuclear reactors within existing regulatory frameworks, including evaluation techniques and guidance for the resolution of the following:

(A) Applicable policy issues identified during the course of review by the Commission of a commercial advanced nuclear reactor licensing application.

(B) The issues described in SECY–93–092 and SECY–15–077, including—

(i) licensing basis event selection and evaluation;

(ii) source terms;

(iii) containment performance; and

(iv) emergency preparedness.

(3) RESEARCH AND TEST REACTOR LICENSING.—For the purpose of predictable, efficient, and timely reviews, not later than 2 years after the date of enactment of this Act, the Commission shall develop and implement strategies within the existing regulatory framework for licensing research and test reactors, including the issuance of guidance.

(4) TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK.—Not later than December 31, 2024, the Commission shall complete a rulemaking to establish a technology-inclusive, regulatory framework

for optional use by commercial advanced nuclear reactor applicants for new reactor license applications.

(5) TRAINING AND EXPERTISE.—As soon as practicable after the date of enactment of this Act, the Commission shall provide for staff training or the hiring of experts, as necessary—

(A) to support the activities described in paragraphs (1) through (4); and

(B) to support preparations—

(i) to conduct pre-application interactions; and

(ii) to review commercial advanced nuclear reactor license applications.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Commission to carry out this subsection such sums as are necessary.

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

(1) REPORT REQUIRED.—Not later than 180 days after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for expediting and establishing stages in the licensing process for commercial

advanced nuclear reactors that will allow implementation of the licensing process by not later than 2 years after the date of enactment of this Act (referred to in this subsection as the ''report'').

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATES.—The report shall include proposed cost estimates, budgets, and timeframes for implementing strategies to establish stages in the licensing process for commercial advanced nuclear reactor technologies.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A)(i) the unique aspects of commercial advanced nuclear reactor licensing, including the use of alternative coolants, operation at or near atmospheric pressure, and the use of passive safety strategies;

(ii) strategies for the qualification of advanced nuclear reactor fuel, including the use of

~~computer modeling and simulation and experimental validation; and~~

~~(iii) for the purposes of predictable, efficient, and timely reviews, any associated legal, regulatory, and policy issues the Commission should address with regard to the licensing of commercial advanced nuclear reactor technologies;~~

~~(B) options for licensing commercial advanced nuclear reactors under the regulations of the Commission contained in title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act), including—~~

~~(i) the development and use under the regulatory framework of the Commission in effect on the date of enactment of this Act of a licensing project plan that could establish—~~

~~(I) milestones that—~~

~~(aa) correspond to stages of a licensing process for the specific situation of a commercial advanced nuclear reactor project; and~~

(bb) use knowledge of the ability of the Commission to review certain design aspects; and

(II) guidelines defining the roles and responsibilities between the Commission and the applicant at the onset of the interaction—

(aa) to provide the foundation for effective communication and effective project management; and

(bb) to ensure efficient progress;

(ii) the use of topical reports, standard design approval, and other appropriate mechanisms as tools to introduce stages into the commercial advanced nuclear reactor licensing process, including how the licensing project plan might structure the use of those mechanisms;

(iii) collaboration with standards-setting organizations to identify specific technical areas for which new or updated standards are needed and providing assistance if appropriate to ensure the new or

updated standards are developed and finalized in a timely fashion;

(iv) the incorporation of consensus-based codes and standards developed under clause (iii) into the regulatory framework—

(I) to provide predictability for the regulatory processes of the Commission; and

(II) to ensure timely completion of specific licensing actions;

(v) the development of a process for, and the use of, conceptual design assessments; and

(vi) identification of any policies and guidance for staff that will be needed to implement clauses (i) and (ii);

(C) options for improving the efficiency, timeliness, and cost-effectiveness of licensing reviews of commercial advanced nuclear reactors, including opportunities to minimize the delays that may result from any necessary amendment or supplement to an application;

(D) options for improving the predictability of the commercial advanced nuclear reactor li-

censing process, including the evaluation of opportunities to improve the process by which application review milestones are established and met; and

(E) the extent to which Commission action or modification of policy is needed to implement any part of the report.

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

(1) REPORT REQUIRED.—Not later than 180 days after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for increasing, where appropriate, the use of risk-informed and performance-based evaluation techniques and regulatory guidance in licensing commercial advanced nuclear reactors within the existing regulatory framework (referred to in this subsection as the "report").

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATE.—The report shall include proposed cost estimates, budgets, and timeframes for implementing a strategy to increase the use of risk-informed and performance-based evaluation techniques and regulatory guidance in licensing commercial advanced nuclear reactors.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the ability of the Commission to develop and implement, where appropriate, risk-informed and performance-based licensing evaluation techniques and guidance for commercial advanced nuclear reactors within existing regulatory frameworks not later than 2 years after the date of enactment of this Act, including policies and guidance for the resolution of—

(i) issues relating to—

(I) licensing basis event selection and evaluation;

(II) use of mechanistic source terms;

(III) containment performance;

(IV) emergency preparedness; and

(V) the qualification of advanced nuclear reactor fuel; and

(ii) other policy issues previously identified; and

(B) the extent to which Commission action is needed to implement any part of the report.

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

(1) REPORT REQUIRED.—Not later than 1 year after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for preparing the licensing process for research and test reactors within the existing regulatory framework (referred to in this subsection as the "report").

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATES.—The report shall include proposed cost estimates, budgets,

and timeframes for preparing the licensing process for research and test reactors.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the unique aspects of research and test reactor licensing and any associated legal, regulatory, and policy issues the Commission should address to prepare the licensing process for research and test reactors;

(B) the feasibility of developing guidelines for advanced reactor demonstrations to support the review process for advanced reactors designs, including designs that use alternative coolants or alternative fuels, operate at or near atmospheric pressure, and use passive safety strategies; and

(C) the extent to which Commission action or modification of policy is needed to implement any part of the report.

(c) REPORT TO COMPLETE A RULEMAKING TO ESTABLISH A TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK FOR OPTIONAL USE BY COMMERCIAL ADVANCED NUCLEAR REACTOR TECHNOLOGIES IN NEW RE-

ACTOR LICENSE APPLICATIONS AND TO ENHANCE COMMISSION EXPERTISE RELATING TO ADVANCED NUCLEAR REACTOR TECHNOLOGIES.—

(1) REPORT REQUIRED.—Not later than 30 months after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report (referred to in this subsection as the ''report'') for—

(A) completing a rulemaking to establish a technology-inclusive regulatory framework for optional use by applicants in licensing commercial advanced nuclear reactor technologies in new reactor license applications; and

(B) ensuring that the Commission has adequate expertise, modeling, and simulation capabilities, or access to those capabilities, to support the evaluation of advanced reactor license applications, including the qualification of advanced nuclear reactor fuel.

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATE.—The report shall include proposed cost estimates, budgets, and timeframes for developing and implementing a technology-inclusive regulatory framework for licensing commercial advanced nuclear reactor technologies, including completion of a rulemaking.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the ability of the Commission to complete a rulemaking to establish a technology-inclusive regulatory framework for licensing commercial advanced nuclear reactor technologies by December 31, 2024;

(B) the extent to which additional legislation, or Commission action or modification of policy, is needed to implement any part of the new regulatory framework;

(C) the need for additional Commission expertise, modeling, and simulation capabilities, or access to those capabilities, to support the evaluation of licensing applications for commercial advanced nuclear reactors and research and test reactors, including applications that use al-

ternative coolants or alternative fuels, operate at or near atmospheric pressure, and use passive safety strategies; and

(D) the budgets and timeframes for acquiring or accessing the necessary expertise to support the evaluation of license applications for commercial advanced nuclear reactors and research and test reactors.

SEC. 104. ADVANCED NUCLEAR ENERGY LICENSING COST-SHARE GRANT PROGRAM.

(a) ESTABLISHMENT.—The Secretary shall establish a grant program to be known as the ''Advanced Nuclear Energy Cost-Share Grant Program'' (referred to in this section as the ''program''), under which the Secretary shall make cost-share grants to applicants for the purpose of funding a portion of the Commission fees of the applicant for pre-application and application review activities.

(b) REQUIREMENT.—The Secretary shall seek out technology diversity in making grants under the program.

(c) COST-SHARE AMOUNT.—The Secretary shall determine the cost-share amount for each grant.

(d) USE OF FUNDS.—Recipients of grants under the program may use the grant funds to cover Commission fees, including those fees associated with—

(1) developing a licensing project plan;

(2) obtaining a conceptual design assessment;

(3) reviewing topical reports; and

(4) other pre-application and application review activities and interactions with the Commission.

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section such sums as are necessary.

SEC. 105. BAFFLE-FORMER BOLT GUIDANCE.

(a) REVISIONS TO GUIDANCE.—Not later than September 30, 2017, the Commission shall publish any necessary revisions to the guidance on the baseline examination schedule and subsequent examination frequency for baffle-former bolts in pressurized water reactors with down-flow configurations.

(b) REPORT.—Not later than September 30, 2017, the Commission shall submit to the appropriate congressional committees—

(1) a report explaining any revisions made to the guidance described in subsection (a); or

(2) if no revisions were made, a report explaining why the guidance, as in effect on the date of submission of the report, is sufficient.

SEC. 106. EVACUATION REPORT.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Commission shall sub-

mit to the appropriate congressional committees a report describing the actions the Commission has taken, or plans to take, to consider lessons learned since September 11, 2001, Superstorm Sandy, Fukushima, and other recent natural disasters regarding directed or spontaneous evacuations in densely populated urban and suburban areas.

(b) INCLUSIONS.—The report under subsection (a) shall—

(1) describe the actions of the Commission—

(A) to consider the results from—

(i) the State-of-the-Art Reactor Consequence Analyses project; and

(ii) the current examination by the Commission of emergency planning zones for small modular reactors and advanced nuclear reactors; and

(B) to monitor international reviews, including reviews conducted by—

(i) the United Nations Scientific Committee on the Effects of Atomic Radiation;

(ii) the World Health Organization; and

(iii) the Fukushima Health Management Survey; and

(2) with respect to a disaster similar to a disaster described in subsection (a), include information about—

(A) potential shadow evacuations in response to the disaster; and

(B) what levels of self-evacuation should be expected during the disaster, including outside the 10-mile evacuation zone.

(c) CONSULTATION REQUIRED.—The report under subsection (a) shall be prepared after consultation with—

(1) the Federal Radiological Preparedness Coordinating Committee;

(2) State emergency planning officials from States that the Commission determines to be relevant to the report; and

(3) experts in analyzing human behavior and probable responses to a radiological emission event.

TITLE II—URANIUM

SEC. 201. URANIUM RECOVERY REPORT.

Not later than December 31, 2017, the Commission shall submit to the appropriate congressional committees a report describing—

(1) the safety and feasibility of extending the duration of uranium recovery licenses from 10 to 20

years, including any potential benefits of the extension;

(2) the duration of uranium recovery license issuance and amendment reviews; and

(3) recommendations to improve efficiency and transparency of uranium recovery license issuance and amendment reviews.

SEC. 202. PILOT PROGRAM FOR URANIUM RECOVERY FEES.

Not later than July 31, 2018, the Commission shall—

(1) complete a voluntary pilot initiative to determine the feasibility of the establishment of a flat fee structure for routine licensing matters relating to uranium recovery; and

(2) provide to the appropriate congressional committees a report describing the results of the pilot initiative under paragraph (1).

SEC. 203. URANIUM TRANSFERS AND SALES.

Section 3112 of the USEC Privatization Act (42 U.S.C. 2297h–10) is amended—

(1) by redesignating subsections (b) through (f) as subsections (d) through (h), respectively;

(2) by striking subsection (a) and inserting the following:

''(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 by-product 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 shall not provide enrichment services, or transfer, sell or otherwise provide any uranium to any person 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 inven-

tories 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, selling, or otherwise providing 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.'';

(3) in subsection (d) (as redesignated by paragraph (1))—

(A) in the sixth sentence of paragraph (3), by striking ''subsections (b)(5), (b)(6) and (b)(7) of this section'' and inserting ''paragraphs (5), (6), and (7)''; and

(B) in paragraph (8), by striking ''(b)'';

(4) in subsection (e)(1) (as redesignated by paragraph (1)), by striking ''subsection (e)(2)'' and inserting ''paragraph (2)'';

(5) in subsection (f) (as redesignated by paragraph (1))—

(A) by striking paragraph (1) and inserting the following:

"(1) IN GENERAL.—Notwithstanding the transfers authorized under subsections (e) and (g), the Secretary may transfer, sell, or otherwise provide any uranium from the stockpile of the Department of Energy, subject to the following limitations:

"(A) Effective for the period of calendar years 2017 through 2025, and notwithstanding any other provision of law, the Secretary shall not transfer, sell, or otherwise provide 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, and notwithstanding any other provision of law, the Secretary shall not transfer, sell, or otherwise provide 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.";

(B) in paragraph (2), in the matter preceding subparagraph (A), by striking "(2) Ex-

cept as provided in subsections (b), (c), and (e)'' and inserting the following:

''(2) DETERMINATIONS.—Except as provided in subsections (d), (e), and (g), and subject to paragraph (3)''; and

(C) by adding at the end the following:

''(3) REQUIREMENTS FOR DETERMINATIONS.—

''(A) PROPOSED DETERMINATION.—Before making a determination under paragraph (2)(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 (2)(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 integ-

~~rity 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 (2)(B) shall be waived for transferring, selling, or otherwise providing 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)."; and~~

~~(6) in subsection (g) (as redesignated by paragraph (1)), in the matter preceding paragraph (1), by striking "(d)(2)" and inserting "(f)(2)".~~

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Nuclear Energy Innovation and Modernization Act".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

SEC. 2. FINDINGS.

Congress finds that—

(1) the safe and secure operation of nuclear reactors in the United States must remain the paramount focus of the Nuclear Regulatory Commission;

(2) the existing fleet of nuclear reactors in the United States is operating safely and securely;

(3) nuclear energy is the largest source of affordable, reliable, emissions-free energy in the United States, providing approximately 20 percent of the electricity consumed in the United States and 60 percent of emissions-free electricity generation in the United States;

(4) a 1,000-megawatt nuclear plant—

(A) provides approximately 500 permanent jobs;

(B) pays approximately $40,000,000 annually in wages;

(C) generates approximately $470,000,000 annually in goods and services in the local community; and

(D) pays approximately $83,000,000 annually in Federal, State, and local taxes;

(5) nuclear energy is of critical importance to United States energy security and worldwide influence on nonproliferation;

(6) nuclear energy uses widely available fuel resources to enable scientific progress, emissions-free and reliable electricity generation, heat generation for industrial applications, and power for deep space exploration;

(7) the private sector, the National Laboratories (as defined in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801)), and institutions of higher education are pursuing innovations in nuclear energy technology that will play a crucial role in—

(A) the future global and United States energy supply; and

(B) the exports, manufacturing, and economy of the United States;

(8) eventual deployment of commercial advanced nuclear reactors will require—

(A) modernizing the regulatory framework; and

(B) making other necessary changes to facilitate the efficient, predictable, and affordable

deployment of advanced nuclear reactor technologies;

(9) 2 impediments to the commercialization of advanced nuclear reactors are the high costs and long durations associated with applying the existing nuclear regulatory framework to advanced nuclear reactors;

(10) license application reviews should be as predictable, efficient, and timely as practicable without compromising safety or security;

(11) the development of advanced nuclear reactors would benefit from the early identification of policy issues for timely consideration and resolution by the Commission to improve the efficient development of designs as well as preparing for design review and licensing;

(12) the existing nuclear regulatory framework and the requirements of that framework have not adapted to advances in scientific understanding or the features and performance characteristics of advanced nuclear reactor designs;

(13) the existing nuclear reactor licensing process does not provide iterative feedback to manage risk as needed for typical technology development and investment cycles;

(14) a staged licensing structure that provides clear and periodic feedback to applicants on an agreed schedule will help to enable the commercialization of safer and innovative technologies that will benefit the economy, national security, and environment of the United States;

(15) a technology-inclusive Commission regulatory framework will—

(A) allow greater technological innovation; and

(B) enable inventors, scientists, engineers, and students to pursue licensing advanced reactor concepts;

(16) further preparation by the Commission of the research and test reactor licensing process will enable the Commission to more efficiently process applications for research and test reactors when the applications are received;

(17) it is incumbent on the Commission—

(A) to budget appropriate resources to undertake an active role in design familiarization activities with potential applicants with advanced reactor designs;

(B) to budget for adequate resources to conduct licensing reviews and other work requested by licensees and applicants; and

(C) to use those budgeted funds to ensure responsiveness to licensees and applicants in recognition of the dependence of the licensees and applicants on Commission approval before the benefits of the technology of the licensees and applicants can be realized; and

(18) both prospective advanced nuclear reactor applicants and the existing fleet of nuclear reactors in the United States would benefit from modernizing the outdated fee recovery structure of the Commission to better manage fluctuations in workload and the number of licensees in a fair and equitable manner.

SEC. 3. PURPOSE.

The purpose of this Act is to provide—

(1) a program to develop the expertise and regulatory processes necessary to allow innovation and the commercialization of advanced nuclear reactors;

(2) a revised fee recovery structure to ensure the availability of resources to meet industry needs without burdening existing licensees unfairly for inaccurate workload projections or premature existing reactor closures; and

(3) more efficient regulation of uranium recovery.

SEC. 4. DEFINITIONS.

In this Act:

(1) ADVANCED NUCLEAR REACTOR.—The term "advanced nuclear reactor" means a nuclear fission or fusion reactor, including a prototype plant (as defined in sections 50.2 and 52.1 of title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act)), with significant improvements compared to commercial nuclear reactors under construction as of the date of enactment of this Act, including improvements such as—

(A) additional inherent safety features;

(B) significantly lower levelized cost of electricity;

(C) lower waste yields;

(D) greater fuel utilization;

(E) enhanced reliability;

(F) increased proliferation resistance;

(G) increased thermal efficiency; or

(H) ability to integrate into electric and nonelectric applications.

(2) ADVANCED NUCLEAR REACTOR FUEL.—The term "advanced nuclear reactor fuel" means fuel for

use in an advanced nuclear reactor or a research and test reactor, including fuel with a low uranium enrichment level of not greater than 20 percent.

(3) AGREEMENT STATE.—The term "Agreement State" means any State with which the Commission has entered into an effective agreement under section 274 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2021(b)).

(4) APPROPRIATE CONGRESSIONAL COMMITTEES.—The term "appropriate congressional committees" means the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives.

(5) COMMISSION.—The term "Commission" means the Nuclear Regulatory Commission.

(6) CONCEPTUAL DESIGN ASSESSMENT.—The term "conceptual design assessment" means an early-stage review by the Commission that—

(A) assesses preliminary design information for consistency with applicable regulatory requirements of the Commission;

(B) is performed on a set of topic areas agreed to in the licensing project plan; and

(C) is performed at a cost and schedule agreed to in the licensing project plan.

(7) CORPORATE SUPPORT COSTS.—The term "corporate support costs" means expenditures for acquisitions, administrative services, financial management, human resource management, information management, information technology, policy support, outreach, and training, as those categories are described and calculated in Appendix A of the Congressional Budget Justification for Fiscal Year 2017 of the Commission.

(8) LICENSING PROJECT PLAN.—The term "licensing project plan" means a plan that describes—

(A) the interactions between an applicant and the Commission; and

(B) project schedules and deliverables in specific detail to support long-range resource planning undertaken by the Commission and an applicant.

(9) REGULATORY FRAMEWORK.—The term "regulatory framework" means the framework for reviewing requests for certifications, permits, approvals, and licenses for nuclear reactors.

(10) REQUESTED ACTIVITY OF THE COMMISSION.—The term "requested activity of the Commission" means—

(A) the processing of applications for—

(i) design certifications or approvals;

(ii) licenses;

(iii) permits;

(iv) license amendments;

(v) license renewals;

(vi) certificates of compliance; and

(vii) power uprates; and

(B) any other activity requested by a licensee or applicant.

(11) RESEARCH AND TEST REACTOR.—

(A) IN GENERAL.—The term "research and test reactor" means a reactor that—

(i) falls within the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (42 U.S.C. 5842); and

(ii) is useful in the conduct of research and development activities as licensed under section 104 c. of the Atomic Energy Act (42 U.S.C. 2134(c)).

(B) EXCLUSION.—The term "research and test reactor" does not include a commercial nuclear reactor.

(12) SECRETARY.—The term "Secretary" means the Secretary of Energy.

(13) STANDARD DESIGN APPROVAL.—The term "standard design approval" means the approval of a final standard design or a major portion of a final design standard as described in subpart E of part 52 of title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act).

(14) TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK.—The term "technology-inclusive regulatory framework" means a regulatory framework developed using methods of evaluation that are flexible and practicable for application to a variety of reactor technologies, including, where appropriate, the use of risk-informed and performance-based techniques and other tools and methods.

(15) TOPICAL REPORT.—The term "topical report" means a document submitted to the Commission that addresses a technical topic related to nuclear reactor safety or design.

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.—Section 6101(c)(2)(A) of the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214(c)(2)(A)) is amended—

(1) in clause (iii), by striking "and" at the end;

(2) in clause (iv), by striking the period at the end and inserting "; and"; and

(3) by adding at the end the following:

"(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.".

(b) REPEAL.—Effective October 1, 2019, section 6101 of the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214) is repealed.

SEC. 102. NUCLEAR REGULATORY COMMISSION USER FEES AND ANNUAL CHARGES FOR FISCAL YEAR 2020 AND EACH FISCAL YEAR THEREAFTER.

(a) ANNUAL BUDGET JUSTIFICATION.—

(1) IN GENERAL.—In the annual budget justification submitted by the Commission to Congress, the Commission shall expressly identify anticipated expenditures necessary for completion of the requested activities of the Commission anticipated to occur during the applicable fiscal year.

(2) RESTRICTION.—Budget authority granted to the Commission for purposes of the requested activities of the Commission shall be used, to the maximum extent practicable, solely for conducting requested activities of the Commission.

(3) LIMITATION ON CORPORATE SUPPORT COSTS.—With respect to the annual budget justification submitted to Congress, corporate support costs, to the maximum extent practicable, shall not exceed the following percentages of the total budget authority of the Commission requested in the annual budget justification:

(A) 30 percent for each of fiscal years 2020 and 2021.

(B) 29 percent for each of fiscal years 2022 and 2023.

(C) 28 percent for fiscal year 2024 and each fiscal year thereafter.

(b) FEES AND CHARGES.—

(1) ANNUAL ASSESSMENT.—

(A) IN GENERAL.—Each fiscal year, the Commission shall assess and collect fees and charges in accordance with paragraphs (2) and (3) in a manner that ensures that, to the maximum extent practicable, the amount collected is equal to an amount that approximates—

(i) the total budget authority of the Commission for that fiscal year; less

(ii) the budget authority of the Commission for the activities described in subparagraph (B).

(B) EXCLUDED ACTIVITIES DESCRIBED.—The activities referred to in subparagraph (A)(ii) are the following:

(i) Any fee relief activity identified by the Commission in the final rule of the Commission entitled "Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015" (80 Fed. Reg. 37432 (June 30, 2015)).

(ii) Amounts appropriated for a fiscal year to the Commission—

(I) from the Nuclear Waste Fund established under section 302(c) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(c));

(II) for implementation of section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (50 U.S.C. 2601 note; Public Law 108–375);

(III) for the homeland security activities of the Commission (other than for the costs of fingerprinting and background checks required under section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169) and the costs of conducting security inspections);

(IV) for the Inspector General services of the Commission provided to the Defense Nuclear Facilities Safety Board;

(V) for research and development at universities in areas relevant to the mission of the Commission; and

(VI) for a nuclear science and engineering grant program that will support multiyear projects that do not align with programmatic missions but are critical to maintaining the discipline of nuclear science and engineering.

(iii) Costs for activities related to the development of regulatory infrastructure for advanced nuclear reactor technologies, including activities required under section 103.

(C) EXCEPTION.—The exclusion described in subparagraph (B)(iii) shall cease to be effective on January 1, 2031.

(D) REPORT.—Not later than December 31, 2029, the Commission shall submit to the Committee on Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a report describing the views of the Commission on the continued appropriateness and necessity of the funding described in subparagraph (B)(iii).

(2) FEES FOR SERVICE OR THING OF VALUE.—In accordance with section 9701 of title 31, United States Code, the Commission shall charge fees to any person who receives a service or thing of value from the Commission to cover the costs to the Commission of providing the service or thing of value.

(3) ANNUAL FEES.—

(A) IN GENERAL.—Subject to subparagraph (B) and except as provided in subparagraph (D), the Commission may charge to any licensee or certificate holder of the Commission an annual fee.

(B) CAP ON ANNUAL FEES OF CERTAIN LICENSEES.—

(i) IN GENERAL.—The annual fee under subparagraph (A) charged to an operating reactor licensee, to the maximum extent practicable, shall not exceed the annual fee amount per operating reactor licensee established in the final rule of the Commission entitled "Revision of Fee Schedules; Fee Recovery for Fiscal Year 2015" (80 Fed. Reg. 37432 (June 30, 2015)), as may be adjusted annually by the Commission to reflect changes in the Consumer Price Index

published by the Bureau of Labor Statistics of the Department of Labor.

(ii) WAIVER.—The Commission may waive, for a period of 1 year, the cap on annual fees described in clause (i) if the Commission submits to the Committee on Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a written determination that the cap on annual fees may compromise the safety and security mission of the Commission.

(C) AMOUNT PER LICENSEE.—

(i) IN GENERAL.—The Commission shall establish by rule a schedule of fees fairly and equitably allocating the aggregate amount of charges described in subparagraph (A) among licensees and certificate holders.

(ii) REQUIREMENT.—The schedule of fees under clause (i)—

(I) to the maximum extent practicable, shall be based on the cost of providing regulatory services; and

(II) may be based on the allocation of the resources of the Commission among licensees or certificate holders or classes of licensees or certificate holders.

(D) EXEMPTION.—

(i) DEFINITION OF RESEARCH REACTOR.—In this subparagraph, the term "research reactor" means a nuclear reactor that—

(I) is licensed by the Commission under section 104 c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) for operation at a thermal power level of not more than 10 megawatts; and

(II) if licensed under subclause (I) for operation at a thermal power level of more than 1 megawatt, does not contain—

(aa) a circulating loop through the core in which the licensee conducts fuel experiments;

(bb) a liquid fuel loading; or

(cc) an experimental facility in the core in excess of 16 square inches in cross-section.

(ii) EXEMPTION.—Subparagraph (A) shall not apply to the holder of any license for a federally owned research reactor used primarily for educational training and academic research purposes.

(c) PERFORMANCE AND REPORTING.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Commission shall develop for the requested activities of the Commission—

(A) performance metrics; and

(B) on each request, milestone schedules.

(2) DELAYS IN ISSUANCE OF FINAL SAFETY EVALUATION.—The Executive Director for Operations of the Commission shall inform the Commission of a delay in issuance of the final safety evaluation for a requested activity of the Commission by the completion date required by the performance metrics or milestone schedule under paragraph (1) by not later than 30 days after the completion date.

(3) DELAYS IN ISSUANCE OF FINAL SAFETY EVALUATION EXCEEDING 180 DAYS.—If the final safety evaluation for the requested activity of the Commission described in paragraph (2) is not completed by the date that is 180 days after the completion date required by the performance metrics or milestone schedule under paragraph (1), the Commission shall submit to the appropriate congressional committees a timely report describing the delay, including a detailed explanation accounting for the delay and a plan for timely completion of the final safety evaluation.

(d) ACCURATE INVOICING.—With respect to invoices for fees and charges described in subsection (b)(2), the Commission shall—

(1) ensure appropriate management review and concurrence prior to the issuance of invoices;

(2) develop and implement processes to audit invoices to ensure accuracy, transparency, and fairness; and

(3) modify regulations to ensure fair and appropriate processes to provide licensees and applicants an opportunity to efficiently dispute or otherwise seek review and correction of errors in invoices for fees and charges.

(e) REPORT.—Not later than September 30, 2021, the Commission shall submit to the Committee on Appropriations and the Committee on Environment and Public Works of the Senate and the Committee on Appropriations and the Committee on Energy and Commerce of the House of Representatives a report describing the implementation of this section, including any impacts and recommendations for improvement.

(f) EFFECTIVE DATE.—Except as provided in subsection (c), this section takes effect on October 1, 2019.

SEC. 103. ADVANCED NUCLEAR REACTOR PROGRAM.

(a) LICENSING.—

(1) STAGED LICENSING.—For the purpose of predictable, efficient, and timely reviews, not later than 270 days after the date of enactment of this Act, the Commission shall develop and implement, within the existing regulatory framework, strategies for—

(A) establishing stages in the licensing process for commercial advanced nuclear reactors; and

(B) developing procedures and processes for—

(i) using a licensing project plan; and

(ii) optional use of a conceptual design assessment.

(2) RISK-INFORMED LICENSING.—Not later than 2 years after the date of enactment of this Act, the Commission shall develop and implement, where appropriate, strategies for the increased use of risk-informed, performance-based licensing evaluation techniques and guidance for commercial advanced nuclear reactors within the existing regulatory framework, including evaluation techniques and guidance for the resolution of the following:

(A) Applicable policy issues identified during the course of review by the Commission of a commercial advanced nuclear reactor licensing application.

(B) The issues described in SECY–93–092 and SECY–15–077, including—

(i) licensing basis event selection and evaluation;

(ii) source terms;

(iii) containment performance; and

(iv) emergency preparedness.

(3) RESEARCH AND TEST REACTOR LICENSING.—For the purpose of predictable, efficient, and timely reviews, not later than 2 years after the date of enactment of this Act, the Commission shall develop and implement strategies within the existing regulatory

framework for licensing research and test reactors, including the issuance of guidance.

(4) TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK.—Not later than December 31, 2024, the Commission shall complete a rulemaking to establish a technology-inclusive, regulatory framework for optional use by commercial advanced nuclear reactor applicants for new reactor license applications.

(5) TRAINING AND EXPERTISE.—As soon as practicable after the date of enactment of this Act, the Commission shall provide for staff training or the hiring of experts, as necessary—

(A) to support the activities described in paragraphs (1) through (4); and

(B) to support preparations—

(i) to conduct pre-application interactions; and

(ii) to review commercial advanced nuclear reactor license applications.

(6) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Commission to carry out this subsection such sums as are necessary.

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

(1) REPORT REQUIRED.—Not later than 180 days after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for expediting and establishing stages in the licensing process for commercial advanced nuclear reactors that will allow implementation of the licensing process by not later than 2 years after the date of enactment of this Act (referred to in this subsection as the "report").

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATES.—The report shall include proposed cost estimates, budgets, and timeframes for implementing strategies to establish stages in the licensing process for commercial advanced nuclear reactor technologies.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health

and safety and common defense and security, the report shall evaluate—

(A)(i) the unique aspects of commercial advanced nuclear reactor licensing, including the use of alternative coolants, operation at or near atmospheric pressure, and the use of passive safety strategies;

(ii) strategies for the qualification of advanced nuclear reactor fuel, including the use of computer modeling and simulation and experimental validation; and

(iii) for the purposes of predictable, efficient, and timely reviews, any associated legal, regulatory, and policy issues the Commission should address with regard to the licensing of commercial advanced nuclear reactor technologies;

(B) options for licensing commercial advanced nuclear reactors under the regulations of the Commission contained in title 10, Code of Federal Regulations (as in effect on the date of enactment of this Act), including—

(i) the development and use under the regulatory framework of the Commission in effect on the date of enactment of this Act

of a licensing project plan that could establish—

(I) milestones that—

(aa) correspond to stages of a licensing process for the specific situation of a commercial advanced nuclear reactor project; and

(bb) use knowledge of the ability of the Commission to review certain design aspects; and

(II) guidelines defining the roles and responsibilities between the Commission and the applicant at the onset of the interaction—

(aa) to provide the foundation for effective communication and effective project management; and

(bb) to ensure efficient progress;

(ii) the use of topical reports, standard design approval, and other appropriate mechanisms as tools to introduce stages into the commercial advanced nuclear reactor li-

censing process, including how the licensing project plan might structure the use of those mechanisms;

(iii) collaboration with standards-setting organizations to identify specific technical areas for which new or updated standards are needed and providing assistance if appropriate to ensure the new or updated standards are developed and finalized in a timely fashion;

(iv) the incorporation of consensus-based codes and standards developed under clause (iii) into the regulatory framework—

(I) to provide predictability for the regulatory processes of the Commission; and

(II) to ensure timely completion of specific licensing actions;

(v) the development of a process for, and the use of, conceptual design assessments; and

(vi) identification of any policies and guidance for staff that will be needed to implement clauses (i) and (ii);

(C) options for improving the efficiency, timeliness, and cost-effectiveness of licensing reviews of commercial advanced nuclear reactors, including opportunities to minimize the delays that may result from any necessary amendment or supplement to an application;

(D) options for improving the predictability of the commercial advanced nuclear reactor licensing process, including the evaluation of opportunities to improve the process by which application review milestones are established and met; and

(E) the extent to which Commission action or modification of policy is needed to implement any part of the report.

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

(1) REPORT REQUIRED.—Not later than 180 days after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for increasing, where appropriate, the use of risk-informed and performance-based evaluation techniques and regulatory guidance in licensing commercial advanced nuclear reactors

within the existing regulatory framework (referred to in this subsection as the ''report'').

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy industry, technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATE.—The report shall include proposed cost estimates, budgets, and timeframes for implementing a strategy to increase the use of risk-informed and performance-based evaluation techniques and regulatory guidance in licensing commercial advanced nuclear reactors.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the ability of the Commission to develop and implement, where appropriate, risk-informed and performance-based licensing evaluation techniques and guidance for commercial advanced nuclear reactors within existing regulatory frameworks not later than 2 years after the date of enactment of this Act, including policies and guidance for the resolution of—

(i) issues relating to—

(I) licensing basis event selection and evaluation;

(II) use of mechanistic source terms;

(III) containment performance;

(IV) emergency preparedness; and

(V) the qualification of advanced nuclear reactor fuel; and

(ii) other policy issues previously identified; and

(B) the extent to which Commission action is needed to implement any part of the report.

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

(1) REPORT REQUIRED.—Not later than 1 year after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report for preparing the licensing process for research and test reactors within the existing regulatory framework (referred to in this subsection as the "report").

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek input from the Secretary, the nuclear energy indus-

try, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATES.—The report shall include proposed cost estimates, budgets, and timeframes for preparing the licensing process for research and test reactors.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the unique aspects of research and test reactor licensing and any associated legal, regulatory, and policy issues the Commission should address to prepare the licensing process for research and test reactors;

(B) the feasibility of developing guidelines for advanced reactor demonstrations and prototypes to support the review process for advanced reactors designs, including designs that use alternative coolants or alternative fuels, operate at or near atmospheric pressure, and use passive safety strategies; and

(C) the extent to which Commission action or modification of policy is needed to implement any part of the report.

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

(1) REPORT REQUIRED.—Not later than 30 months after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report (referred to in this subsection as the "report") for—

(A) completing a rulemaking to establish a technology-inclusive regulatory framework for optional use by applicants in licensing commercial advanced nuclear reactor technologies in new reactor license applications; and

(B) ensuring that the Commission has adequate expertise, modeling, and simulation capabilities, or access to those capabilities, to support the evaluation of commercial advanced reactor license applications, including the qualification of advanced nuclear reactor fuel.

(2) COORDINATION AND STAKEHOLDER INPUT.—In developing the report, the Commission shall seek

input from the Secretary, the nuclear energy industry, a diverse set of technology developers, and other public stakeholders.

(3) COST AND SCHEDULE ESTIMATE.—The report shall include proposed cost estimates, budgets, and timeframes for developing and implementing a technology-inclusive regulatory framework for licensing commercial advanced nuclear reactor technologies, including completion of a rulemaking.

(4) REQUIRED EVALUATIONS.—Consistent with the role of the Commission in protecting public health and safety and common defense and security, the report shall evaluate—

(A) the ability of the Commission to complete a rulemaking to establish a technology-inclusive regulatory framework for licensing commercial advanced nuclear reactor technologies by December 31, 2024;

(B) the extent to which additional legislation, or Commission action or modification of policy, is needed to implement any part of the new regulatory framework;

(C) the need for additional Commission expertise, modeling, and simulation capabilities, or access to those capabilities, to support the eval-

uation of licensing applications for commercial advanced nuclear reactors and research and test reactors, including applications that use alternative coolants or alternative fuels, operate at or near atmospheric pressure, and use passive safety strategies; and

(D) the budgets and timeframes for acquiring or accessing the necessary expertise to support the evaluation of license applications for commercial advanced nuclear reactors and research and test reactors.

SEC. 104. ADVANCED NUCLEAR ENERGY LICENSING COST-SHARE GRANT PROGRAM.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE APPLICANT.—The term "eligible applicant" means an applicant for a grant under the program that is seeking a license for an advanced nuclear reactor or a research and test reactor.

(2) PROGRAM.—The term "program" means the Advanced Nuclear Energy Cost-Share Grant Program established under subsection (b).

(b) ESTABLISHMENT.—The Secretary shall establish a grant program to be known as the "Advanced Nuclear Energy Cost-Share Grant Program", under which the Secretary shall make cost-share grants to eligible applicants

for the purpose of funding a portion of the Commission fees and other costs of the eligible applicant for pre-application and application review activities.

(c) REQUIREMENT.—The Secretary shall seek out technology diversity in making grants under the program.

(d) COST-SHARE AMOUNT.—The Secretary shall determine the cost-share amount for each grant.

(e) USE OF FUNDS.—Recipients of grants under the program may use the grant funds to cover Commission fees and other costs, including those fees or other costs associated with—

(1) developing a licensing project plan;

(2) preparing an application for and obtaining a conceptual design assessment;

(3) preparing and reviewing topical reports; and

(4) other pre-application and application review activities and interactions with the Commission.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section such sums as are necessary.

SEC. 105. BAFFLE-FORMER BOLT GUIDANCE.

(a) REVISIONS TO GUIDANCE.—Not later than September 30, 2017, the Commission shall publish any necessary revisions to the guidance on the baseline examination schedule and subsequent examination frequency for baffle-

former bolts in pressurized water reactors with down-flow configurations.

(b) REPORT.—Not later than September 30, 2017, the Commission shall submit to the appropriate congressional committees—

(1) a report explaining any revisions made to the guidance described in subsection (a); or

(2) if no revisions were made, a report explaining why the guidance, as in effect on the date of submission of the report, is sufficient.

SEC. 106. EVACUATION REPORT.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a report describing the actions the Commission has taken, or plans to take, to consider lessons learned since September 11, 2001, Superstorm Sandy, Fukushima, and other recent natural disasters regarding directed or spontaneous evacuations in densely populated urban and suburban areas.

(b) INCLUSIONS.—The report under subsection (a) shall—

(1) describe the actions of the Commission—

(A) to consider the results from—

(i) the State-of-the-Art Reactor Consequence Analyses project; and

(ii) the current examination by the Commission of emergency planning zones for small modular reactors and advanced nuclear reactors; and

(B) to monitor international reviews, including reviews conducted by—

(i) the United Nations Scientific Committee on the Effects of Atomic Radiation;

(ii) the World Health Organization; and

(iii) the Fukushima Health Management Survey; and

(2) with respect to a disaster similar to a disaster described in subsection (a), include information about—

(A) potential shadow evacuations in response to the disaster; and

(B) what levels of self-evacuation should be expected during the disaster, including outside the 10-mile evacuation zone.

(c) CONSULTATION REQUIRED.—The report under subsection (a) shall be prepared after consultation with—

(1) the Federal Radiological Preparedness Coordinating Committee;

(2) State emergency planning officials from States that the Commission determines to be relevant to the report; and

(3) experts in analyzing human behavior and probable responses to a radiological emission event.

SEC. 107. ENCOURAGING PRIVATE INVESTMENT IN RESEARCH AND TEST REACTORS.

(a) PURPOSE.—The purpose of this section is to encourage private investment in research and test reactors.

(b) RESEARCH AND DEVELOPMENT ACTIVITIES.—Section 104 c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) is amended—

(1) in the first sentence, by striking "and which are not facilities of the type specified in subsection 104 b." and inserting a period; and

(2) by adding at the end the following: "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.''.

SEC. 108. COMMISSION REPORT ON ACCIDENT TOLERANT FUEL.

(a) DEFINITION OF ACCIDENT TOLERANT FUEL.—In this section, the term ''accident tolerant fuel'' means a new technology that—

(1) makes an existing commercial nuclear reactor more resistant to a nuclear incident (as defined in section 11 of the Atomic Energy Act of 1954 (42 U.S.C. 2014)); and

(2) lowers the cost of electricity over the licensed lifetime of an existing commercial nuclear reactor.

(b) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Commission shall submit to Congress a report describing the status of the licensing process of the Commission for accident tolerant fuel.

TITLE II—URANIUM

SEC. 201. URANIUM RECOVERY REPORT.

Not later than December 31, 2017, the Commission shall submit to the appropriate congressional committees a report describing—

(1) the safety and feasibility of extending the duration of uranium recovery licenses from 10 to 20

years, including any potential benefits of the extension;

(2) the duration of uranium recovery license issuance and amendment reviews; and

(3) recommendations to improve efficiency and transparency of uranium recovery license issuance and amendment reviews.

SEC. 202. PILOT PROGRAM FOR URANIUM RECOVERY FEES.

Not later than July 31, 2018, the Commission shall—

(1) complete a voluntary pilot initiative to determine the feasibility of the establishment of a flat fee structure for routine licensing matters relating to uranium recovery; and

(2) provide to the appropriate congressional committees a report describing the results of the pilot initiative under paragraph (1).

SEC. 203. URANIUM TRANSFERS AND SALES.

Section 3112 of the USEC Privatization Act (42 U.S.C. 2297h–10) is amended—

(1) by redesignating subsections (b) through (f) as subsections (d) through (h), respectively;

(2) by striking subsection (a) and inserting the following:

"(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 by-product 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.";

(3) in subsection (d) (as redesignated by paragraph (1))—

(A) in the sixth sentence of paragraph (3), by striking "subsections (b)(5), (b)(6) and (b)(7) of this section" and inserting "paragraphs (5), (6), and (7)"; and

(B) in paragraph (8), by striking "(b)";

(4) in subsection (e)(1) (as redesignated by paragraph (1)), by striking "subsection (c)(2)" and inserting "paragraph (2)";

(5) in subsection (f) (as redesignated by paragraph (1))—

(A) in paragraph (1), by striking "(c) and (e)" and all that follows through "uranium)" and inserting "(e) and (g), the Secretary may, from time to time, sell uranium";

(B) by redesignating paragraph (2) as paragraph (3);

(C) by inserting after paragraph (1) the following:

"(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.";

(D) in paragraph (3) (as redesignated by subparagraph (B))—

(i) in the matter preceding subparagraph (A), by striking the paragraph designation and all that follows through "unless—" and inserting the following:

"(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—"; and

(ii) in subparagraph (B), by striking "the sale" and inserting "the sale or transfer"; and

(E) by adding at the end the following:

"(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 con-

sistent 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).";

and

(6) in subsection (g) (as redesignated by paragraph (1)), in the matter preceding paragraph (1), by striking "(d)(2)" and inserting "(f)(3), but subject to subsection (f)(2)".

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[Report No. 115–86]

A BILL

To modernize the regulation of nuclear energy.

MAY 25, 2017
Reported with an amendment