

S. 512

One Hundred Fifteenth Congress  
of the  
United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Wednesday,  
the third day of January, two thousand and eighteen*

An Act

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. 1. Short title; table of contents.  
Sec. 2. Purpose.  
Sec. 3. Definitions.

**TITLE I—ADVANCED NUCLEAR REACTORS AND USER FEES**

- Sec. 101. Nuclear Regulatory Commission user fees and annual charges through fiscal year 2020.  
Sec. 102. Nuclear Regulatory Commission user fees and annual charges for fiscal year 2021 and each fiscal year thereafter.  
Sec. 103. Advanced nuclear reactor program.  
Sec. 104. Baffle-former bolt guidance.  
Sec. 105. Evacuation report.  
Sec. 106. Encouraging private investment in research and test reactors.  
Sec. 107. Commission report on accident tolerant fuel.  
Sec. 108. Report identifying best practices for establishment and operation of local community advisory boards.  
Sec. 109. Report on study recommendations.

**TITLE II—URANIUM**

- Sec. 201. Uranium recovery report.  
Sec. 202. Pilot program for uranium recovery fees.

**SEC. 2. 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. 3. 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 2018 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 2020.

(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, 2020, 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 2021 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 2021 and 2022.

(B) 29 percent for each of fiscal years 2023 and 2024.

(C) 28 percent for fiscal year 2025 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 assessed and 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, as identified by the Commission.

(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 assess and collect fees from 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 CHARGES.—

(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 charge in addition to the fees assessed and collected under paragraph (2).

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

(i) OPERATING REACTORS.—The annual charge 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 charges 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 charges 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 annual charges fairly and equitably allocating the aggregate amount of charges described in subparagraph (A) among licensees and certificate holders.

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

(I) to the maximum extent practicable, shall be reasonably related to 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) 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 described in subsection (b)(2), the Commission shall—

(1) ensure appropriate review and approval 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 those fees.

(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, 2020.

**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, 2027, 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 is authorized to be appropriated to the Commission to carry out this subsection \$14,420,000 for each of fiscal years 2020 through 2024.

(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 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 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 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, 2027;

(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 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. BAFFLE-FORMER BOLT GUIDANCE.**

(a) **REVISIONS TO GUIDANCE.**—Not later than 90 days after the date of enactment of this Act, 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 90 days after the date of enactment of this Act, 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. 105. EVACUATION REPORT.**

(a) **IN GENERAL.**—Not later than 180 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. 106. 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. 107. 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.

**SEC. 108. REPORT IDENTIFYING BEST PRACTICES FOR ESTABLISHMENT AND OPERATION OF LOCAL COMMUNITY ADVISORY BOARDS.**

(a) BEST PRACTICES REPORT.—Not later than 18 months after the date of enactment of this Act, the Commission shall submit to Congress, and make publicly available, a report identifying best practices with respect to the establishment and operation of a local community advisory board to foster communication and information exchange between a licensee planning for and involved in decommissioning activities and members of the community that decommissioning activities may affect, including lessons learned

from any such board in existence before the date of enactment of this Act.

(b) CONTENTS.—The report described in subsection (a) shall include—

(1) a description of—

(A) the topics that could be brought before a local community advisory board;

(B) how such a board’s input could be used to inform the decision-making processes of stakeholders for various decommissioning activities;

(C) what interactions such a board could have with the Commission and other Federal regulatory bodies to support the board members’ overall understanding of the decommissioning process and promote dialogue between the affected stakeholders and the licensee involved in decommissioning activities; and

(D) how such a board could offer opportunities for public engagement throughout all phases of the decommissioning process;

(2) a discussion of the composition of a local community advisory board; and

(3) best practices relating to the establishment and operation of a local community advisory board, including—

(A) the time of establishment of such a board;

(B) the frequency of meetings of such a board;

(C) the selection of board members;

(D) the term of board members;

(E) the responsibility for logistics required to support such a board’s meetings and other routine activities; and

(F) any other best practices relating to such a local community advisory board that are identified by the Commission.

(c) CONSULTATION.—In developing the report described under subsection (a), the Commission shall consult with any host State, any community within the emergency planning zone of an applicable nuclear power reactor, and any existing local community advisory board.

(d) PUBLIC MEETINGS.—

(1) IN GENERAL.—The consultation required under subsection (c) shall include public meetings.

(2) PUBLIC PARTICIPATION.—The public meetings under paragraph (1) shall be conducted under the requirements applicable to category 3 meetings under the policy statement of the Commission entitled “Enhancing Public Participation in NRC Meetings; Policy Statement” (67 Fed. Reg. 36920 (May 28, 2002)) (or a successor policy statement).

(3) NUMBER OF MEETINGS.—

(A) IN GENERAL.—The Commission shall conduct not less than 10 public meetings under paragraph (1) in locations that ensure geographic diversity across the United States.

(B) PRIORITY.—In determining locations in which to conduct a public meeting under subparagraph (A), the Commission shall give priority to States that—

(i) have a nuclear power reactor currently undergoing the decommissioning process; and

(ii) request a public meeting under this paragraph.

(4) WRITTEN SUMMARY.—The report under subsection (a) shall include a written summary of the public meetings conducted under paragraph (1).

**SEC. 109. REPORT ON STUDY RECOMMENDATIONS.**

Not later than 90 days after the date of enactment of this Act, the Commission shall submit to Congress a report describing the status of addressing and implementing the recommendations contained in the memorandum of the Executive Director of Operations of the Commission entitled “Tasking in Response to the Assessment of the Considerations Identified in a ‘Study of Reprisal and Chilling Effect for Raising Mission-Related Concerns and Differing Views at the Nuclear Regulatory Commission’” and dated June 19, 2018 (ADAMS Accession No.: ML18165A296).

## **TITLE II—URANIUM**

**SEC. 201. URANIUM RECOVERY REPORT.**

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—

- (1) the duration of uranium recovery license issuance and amendment reviews; and
- (2) 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 1 year after the date of enactment of this Act, 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).

*Speaker of the House of Representatives.*

*Vice President of the United States and  
President of the Senate.*