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114TH CONGRESS
2D SESSION**S. 2795****[Report No. 114–285]**

To modernize the regulation of nuclear energy.

IN THE SENATE OF THE UNITED STATES

APRIL 13, 2016

Mr. INHOFE (for himself, Mr. BOOKER, Mr. WHITEHOUSE, Mr. CRAPO, Mrs. FISCHER, Ms. MURKOWSKI, Mrs. CAPITO, and Mr. MANCHIN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

JUNE 23, 2016

Reported by Mr. INHOFE, 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.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Nuclear Energy Inno-
5 vation and Modernization Act”.

1 **SEC. 2. FINDINGS.**

2 Congress finds that—

3 (1) the safe and secure operation of nuclear re-
4 actors in the United States must remain the para-
5 mount focus of the Nuclear Regulatory Commission;

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

8 (3) nuclear energy is the largest source of af-
9 fordable, reliable, emissions-free energy in the
10 United States, providing approximately 20 percent
11 of the electricity consumed in the United States and
12 60 percent of emissions-free electricity generation in
13 the United States;

14 (4) a 1,000-megawatt nuclear plant—

15 (A) provides approximately 500 permanent
16 jobs;

17 (B) pays approximately \$40,000,000 annu-
18 ally in wages;

19 (C) generates approximately \$470,000,000
20 annually in goods and services in the local com-
21 munity; and

22 (D) pays approximately \$83,000,000 annu-
23 ally in Federal, State, and local taxes;

24 (5) nuclear energy is of critical importance to
25 United States energy security and worldwide influ-
26 ence on nonproliferation;

1 (6) nuclear energy uses widely available fuel re-
2 sources to enable scientific progress, emissions-free
3 and reliable electricity generation, heat generation
4 for industrial applications, and power for deep space
5 exploration;

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

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

13 (B) the exports, manufacturing, and econ-
14 omy of the United States;

15 (8) eventual deployment of commercial ad-
16 vanced nuclear reactors will require—

17 (A) modernizing the regulatory framework;
18 and

19 (B) making other necessary changes to fa-
20 cilitate the efficient, predictable, and affordable
21 deployment of advanced nuclear reactor tech-
22 nologies;

23 (9) 2 impediments to the commercialization of
24 advanced nuclear reactors are the high costs and
25 long durations associated with applying the existing

1 nuclear regulatory framework to advanced nuclear
2 reactors;

3 (10) license application reviews should be as
4 predictable and efficient as practicable without com-
5 promising safety or security;

6 (11) the existing nuclear regulatory framework
7 and the requirements of that framework have not
8 adapted to advances in scientific understanding or
9 the features and performance characteristics of ad-
10 vanced nuclear reactor designs;

11 (12) the existing nuclear reactor licensing proce-
12 ss does not provide iterative feedback to manage
13 risk as needed for typical technology development
14 and investment cycles;

15 (13) a staged licensing structure that provides
16 clear and periodic feedback to applicants on an
17 agreed schedule will help to enable the commer-
18 cialization of safer and innovative technologies that
19 will benefit the economy, national security, and envi-
20 ronment of the United States;

21 (14) a technology-inclusive Commission regu-
22 latory framework will—

23 (A) allow greater technological innovation;
24 and

1 ~~(B)~~ enable inventors, scientists, engineers,
2 and students to pursue licensing advanced reac-
3 tor concepts;

4 ~~(15)~~ further preparation by the Commission of
5 the research and test reactor licensing process will
6 enable the Commission to more efficiently process
7 applications for research and test reactors when the
8 applications are received;

9 ~~(16)~~ it is incumbent on the Commission—

10 ~~(A)~~ to budget for adequate resources to
11 conduct licensing reviews and other work re-
12 quested by licensees and applicants; and

13 ~~(B)~~ to preserve those budgeted funds to
14 ensure responsiveness to licensees and appli-
15 cants in recognition of the dependence of the li-
16 censees and applicants on Commission approval
17 before the benefits of the technology of the li-
18 censees and applicants can be realized; and

19 ~~(17)~~ both prospective commercial advanced nu-
20 clear reactor applicants and the existing fleet of nu-
21 clear reactors in the United States would benefit
22 from modernizing the outdated fee recovery struc-
23 ture of the Commission to better manage fluctua-
24 tions in workload and the number of licensees in a
25 fair and equitable manner.

1 **SEC. 3. PURPOSE.**

2 The purpose of this Act is to provide—

3 (1) a program to develop the expertise and reg-
4 ulatory processes necessary to allow innovation and
5 the commercialization of advanced nuclear reactors;
6 and

7 (2) a revised fee recovery structure to ensure
8 the availability of resources to meet industry needs
9 without burdening existing licensees unfairly for in-
10 accurate workload projections or premature existing
11 reactor closures.

12 **SEC. 4. DEFINITIONS.**

13 In this Act:

14 (1) **ADVANCED NUCLEAR REACTOR.**—The term
15 “advanced nuclear reactor” means a nuclear fission
16 or fusion reactor, including a prototype plant (as de-
17 fined in sections 50.2 and 52.1 of title 10, Code of
18 Federal Regulations), with significant improvements
19 over existing commercial nuclear reactors, including
20 improvements such as—

- 21 (A) additional inherent safety features;
- 22 (B) lower waste yields;
- 23 (C) greater fuel utilization;
- 24 (D) enhanced reliability;
- 25 (E) increased proliferation resistance;
- 26 (F) increased thermal efficiency; or

1 (G) ability to integrate into electric and
2 nonelectric applications.

3 (2) AGREEMENT STATE.—The term “Agree-
4 ment State” means any State with which the Com-
5 mission has entered into an effective agreement
6 under section 274 b. of the Atomic Energy Act of
7 1954 (42 U.S.C. 2021(b)).

8 (3) APPLICANT.—The term “applicant” means
9 an applicant for a license, certification, permit, or
10 other form of approval from the Commission for a
11 commercial advanced nuclear reactor or a research
12 and test reactor.

13 (4) APPROPRIATE CONGRESSIONAL COMMIT-
14 TEES.—The term “appropriate congressional com-
15 mittees” means the Committee on Environment and
16 Public Works of the Senate and the Committee on
17 Energy and Commerce of the House of Representa-
18 tives.

19 (5) COMMISSION.—The term “Commission”
20 means the Nuclear Regulatory Commission.

21 (6) CORPORATE SUPPORT COSTS.—The term
22 “corporate support costs” means expenditures for
23 acquisitions, administrative services, financial man-
24 agement, human resource management, information
25 management, information technology, policy support,

1 outreach, and training, as those categories are de-
 2 scribed and calculated in Appendix A of the Con-
 3 gressional Budget Justification for Fiscal Year 2017
 4 of the Commission.

5 (7) LICENSING PROJECT PLAN.—The term “li-
 6 censing project plan” means a plan that describes—

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

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

13 (8) REGULATORY FRAMEWORK.—The term
 14 “regulatory framework” means the framework for
 15 reviewing requests for certifications, permits, ap-
 16 provals, and licenses for nuclear power plants.

17 (9) REQUESTED ACTIVITY OF THE COMMIS-
 18 SION.—The term “requested activity of the Commis-
 19 sion” means—

20 (A) the processing of applications for—

21 (i) design certifications or approvals;

22 (ii) licenses;

23 (iii) permits;

24 (iv) license amendments;

25 (v) license renewals;

1 (vi) certificates of compliance; and

2 (vii) power uprates; and

3 (B) any other activity requested by a li-
4 censee or applicant.

5 (10) RESEARCH AND TEST REACTOR.—

6 (A) IN GENERAL.—The term “research
7 and test reactor” means a reactor that—

8 (i) falls within the licensing and re-
9 lated regulatory authority of the Commis-
10 sion under section 202 of the Energy Reor-
11 ganization Act of 1974 (42 U.S.C. 5842);
12 and

13 (ii) is useful in the conduct of re-
14 search and development activities as li-
15 censed under section 104 e. of the Atomic
16 Energy Act (42 U.S.C. 2134(e)).

17 (B) EXCLUSION.—The term “research and
18 test reactor” does not include a commercial ad-
19 vanced nuclear reactor.

20 (11) STANDARD DESIGN APPROVAL.—The term
21 “standard design approval” means the approval of a
22 final standard design or a major portion of a final
23 design standard as described in subpart E of part
24 52 of title 10, Code of Federal Regulations.

1 (12) STATEMENT OF LICENSING FEASI-
 2 BILITY.—The term “statement of licensing feasi-
 3 bility” means an early-stage review by the Commis-
 4 sion that—

5 (A) assesses preliminary design informa-
 6 tion for consistency with applicable regulatory
 7 requirements of the Commission;

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

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

12 (13) TECHNOLOGY-INCLUSIVE REGULATORY
 13 FRAMEWORK.—The term “technology-inclusive regu-
 14 latory framework” means a regulatory framework
 15 developed using methods of evaluation that are flexi-
 16 ble and practicable for application to a variety of re-
 17 actor technologies, including the use of risk-informed
 18 and performance-based techniques and other tools
 19 and methods.

20 (14) TOPICAL REPORT.—The term “topical re-
 21 port” means a document submitted to the Commis-
 22 sion that addresses a technical topic related to nu-
 23 clear power plant safety or design.

1 **SEC. 5. NUCLEAR REGULATORY COMMISSION USER FEES**
 2 **AND ANNUAL CHARGES THROUGH FISCAL**
 3 **YEAR 2018.**

4 (a) IN GENERAL.—Section 6101(c)(2)(A) of the Om-
 5 nibus Budget Reconciliation Act of 1990 (42 U.S.C.
 6 2214(c)(2)(A)) is amended—

7 (1) in clause (iii), by striking “and” at the end;

8 (2) in clause (iv), by striking the period at the
 9 end and inserting “; and”; and

10 (3) by adding at the end the following:

11 “(v) amounts appropriated to the
 12 Commission for the fiscal year for activi-
 13 ties related to the development of a regu-
 14 latory framework for advanced nuclear re-
 15 actor technologies, including activities re-
 16 quired under section 7 of the Nuclear En-
 17 ergy Innovation and Modernization Act.”.

18 (b) REPEAL.—Effective October 1, 2018, section
 19 6101 of the Omnibus Budget Reconciliation Act of 1990
 20 (42 U.S.C. 2214) is repealed.

21 **SEC. 6. NUCLEAR REGULATORY COMMISSION USER FEES**
 22 **AND ANNUAL CHARGES FOR FISCAL YEAR**
 23 **2019 AND EACH FISCAL YEAR THEREAFTER.**

24 (a) ANNUAL BUDGET JUSTIFICATION.—

25 (1) IN GENERAL.—In the annual budget jus-
 26 tification submitted by the Commission to Congress,

1 the Commission shall expressly identify anticipated
 2 expenditures necessary for completion of the re-
 3 quested activities of the Commission anticipated to
 4 occur during the applicable fiscal year.

5 (2) RESTRICTION.—Budget authority granted
 6 to the Commission for purposes of the requested ac-
 7 tivities of the Commission shall be used solely for
 8 conducting requested activities of the Commission.

9 (3) LIMITATION ON CORPORATE SUPPORT
 10 COSTS.—With respect to the annual budget justifica-
 11 tion submitted to Congress, corporate support costs,
 12 to the maximum extent practicable, shall not exceed
 13 the following percentages of the total budget author-
 14 ity of the Commission requested in the annual budg-
 15 et justification:

16 (A) 30 percent for each of fiscal years
 17 2019 and 2020.

18 (B) 29 percent for each of fiscal years
 19 2021 and 2022.

20 (C) 28 percent for fiscal year 2023 and
 21 each fiscal year thereafter.

22 (b) FEES AND CHARGES.—

23 (1) ANNUAL ASSESSMENT.—

24 (A) IN GENERAL.—Each fiscal year, the
 25 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, including those activities 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

1 the Nuclear Waste Policy Act of 1982
2 (42 U.S.C. 10222(e));

3 (II) for implementation of section
4 3116 of the Ronald W. Reagan Na-
5 tional Defense Authorization Act for
6 Fiscal Year 2005 (50 U.S.C. 2601
7 note; Public Law 108-375);

8 (III) for the homeland security
9 activities of the Commission (other
10 than for the costs of fingerprinting
11 and background checks required
12 under section 149 of the Atomic En-
13 ergy Act of 1954 (42 U.S.C. 2169)
14 and the costs of conducting security
15 inspections);

16 (IV) for the Inspector General
17 services of the Commission provided
18 to the Defense Nuclear Facilities
19 Safety Board; and

20 (V) for any other fee-relief activ-
21 ity described in the final rule of the
22 Commission entitled “Revision of Fee
23 Schedules; Fee Recovery for Fiscal
24 Year 2015” (80 Fed. Reg. 37432
25 (June 30, 2015)).

1 (iii) Costs for activities related to the
 2 development of regulatory infrastructure
 3 for advanced nuclear reactor technologies;
 4 including activities required under section
 5 7.

6 ~~(C) EXCEPTION.—~~The exclusion described
 7 in subparagraph (B)(iii) shall cease to be effec-
 8 tive on January 1, 2030.

9 ~~(D) REPORT.—~~Not later than December
 10 31, 2028, the Commission shall submit to the
 11 Committee on Appropriations and the Com-
 12 mittee on Environment and Public Works of the
 13 Senate and the Committee on Appropriations
 14 and the Committee on Energy and Commerce
 15 of the House of Representatives a report de-
 16 scribing the views of the Commission on the
 17 continued appropriateness and necessity of the
 18 funding described in subparagraph (B)(iii).

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

25 ~~(3) ANNUAL FEES.—~~

1 (A) IN GENERAL.—Subject to subpara-
 2 graph (B) and except as provided in subpara-
 3 graph (D), the Commission may charge to any
 4 licensee or certificate holder of the Commission
 5 an annual fee.

6 (B) CAP ON ANNUAL FEES OF CERTAIN LI-
 7 CENSEES.—

8 (i) IN GENERAL.—The annual fee
 9 under subparagraph (A) charged to an op-
 10 erating reactor licensee shall not exceed
 11 the annual fee amount per operating reac-
 12 tor licensee established in the final rule of
 13 the Commission entitled “Revision of Fee
 14 Schedules; Fee Recovery for Fiscal Year
 15 2015” (80 Fed. Reg. 37432 (June 30,
 16 2015)), as may be adjusted annually by
 17 the Commission to reflect changes in the
 18 Consumer Price Index published by the
 19 Bureau of Labor Statistics of the Depart-
 20 ment of Labor.

21 (ii) WAIVER.—If the Commission de-
 22 termines that the annual fee cap described
 23 in clause (i) may compromise the safety
 24 and security missions of the Commission,
 25 the Commission shall—

(I) notify 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 of the determination, including a detailed explanation of the cause and circumstances; and

(II) request from Congress a 1-year waiver of the cap.

~~(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 Commis-

1 sion among licensees or certificate
2 holders or classes of licensees or cer-
3 tificate holders.

4 ~~(D)~~ EXEMPTION.—

5 (i) DEFINITION OF RESEARCH REAC-
6 TOR.—In this subparagraph, the term “re-
7 search reactor” means a nuclear reactor
8 that—

9 (I) is licensed by the Commission
10 under section 104 e. of the Atomic
11 Energy Act of 1954 (42 U.S.C.
12 2134(e)) for operation at a thermal
13 power level of not more than 10
14 megawatts; and

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

19 (aa) a circulating loop
20 through the core in which the li-
21 censee conducts fuel experiments;

22 (bb) a liquid fuel loading; or

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

1 (ii) EXEMPTION.—Subparagraph (A)
 2 shall not apply to the holder of any license
 3 for a federally owned research reactor used
 4 primarily for educational training and aca-
 5 demic research purposes.

6 (c) PERFORMANCE AND REPORTING.—

7 (1) IN GENERAL.—The Commission shall de-
 8 velop for the requested activities of the Commis-
 9 sion—

10 (A) performance metrics; and

11 (B) on each request, milestone schedules.

12 (2) DELAYS IN ISSUANCE OF FINAL SAFETY
 13 EVALUATION.—The Executive Director for Oper-
 14 ations of the Commission shall inform the Commis-
 15 sion of a delay in issuance of the final safety evalua-
 16 tion for a requested activity of the Commission by
 17 the completion date required by the performance
 18 metrics or milestone schedule under paragraph (1)
 19 by not later than 30 days after the completion date.

20 (3) DELAYS IN ISSUANCE OF FINAL SAFETY
 21 EVALUATION EXCEEDING 180 DAYS.—If the final
 22 safety evaluation for the requested activity of the
 23 Commission described in paragraph (2) is not com-
 24 pleted by the date that is 180 days after the comple-
 25 tion date required by the performance metrics or

1 milestone schedule under paragraph (1), the Com-
2 mission shall submit to the appropriate congres-
3 sional committees a timely report describing the
4 delay, including a detailed explanation accounting
5 for the delay and a plan for timely completion of the
6 final safety evaluation.

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

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

12 (2) develop and implement processes to audit
13 invoices to ensure accuracy, transparency, and fair-
14 ness; and

15 (3) modify regulations to ensure fair and appro-
16 priate processes to provide licensees and applicants
17 an opportunity to efficiently dispute or otherwise
18 seek review and correction of errors in invoices for
19 fees and charges.

20 (e) REPORT.—Not later than September 30, 2020,
21 the Commission shall submit to the Committee on Appro-
22 priations and the Committee on Environment and Public
23 Works of the Senate and the Committee on Appropria-
24 tions and the Committee on Energy and Commerce of the
25 House of Representatives a report describing the imple-

1 mentation of this section, including any impacts and rec-
 2 ommendations for improvement.

3 ~~(f) EFFECTIVE DATE.—This section takes effect on~~
 4 ~~October 1, 2018.~~

5 **SEC. 7. ADVANCED NUCLEAR REACTOR PROGRAM.**

6 ~~(a) LICENSING OF COMMERCIAL ADVANCED NU-~~
 7 ~~CLEAR REACTORS.—~~

8 ~~(1) STAGED LICENSING.—For the purpose of~~
 9 ~~predictable, efficient, and timely reviews, not later~~
 10 ~~than 2 years after the date of enactment of this Act,~~
 11 ~~the Commission shall develop and implement, within~~
 12 ~~the existing regulatory framework, strategies for—~~

13 ~~(A) establishing stages in the licensing~~
 14 ~~process for commercial advanced nuclear reac-~~
 15 ~~tors; and~~

16 ~~(B) developing procedures and processes~~
 17 ~~for—~~

18 ~~(i) using a licensing project plan; and~~

19 ~~(ii) optional use of a statement of li-~~
 20 ~~censing feasibility.~~

21 ~~(2) RISK-INFORMED LICENSING.—Not later~~
 22 ~~than 2 years after the date of enactment of this Act,~~
 23 ~~the Commission shall develop and implement strate-~~
 24 ~~gies for the increased use of risk-informed, perform-~~
 25 ~~ance-based licensing evaluation techniques and guid-~~

1 ance for commercial advanced nuclear reactors with-
 2 in existing regulatory frameworks, including evalua-
 3 tion techniques and guidance for the resolution of
 4 the following:

5 (A) Applicable policy issues identified dur-
 6 ing the course of review by the Commission of
 7 a commercial advanced nuclear reactor licensing
 8 application.

9 (B) The issues described in ~~SECY-93-092~~
 10 and ~~SECY-15-077~~, including—

11 (i) licensing basis event selection and
 12 evaluation;

13 (ii) source terms;

14 (iii) containment performance; and

15 (iv) emergency preparedness.

16 ~~(3) RESEARCH AND TEST REACTOR LICENS-~~
 17 ~~ING.—~~For the purpose of predictable, efficient, and
 18 timely reviews, not later than 2 years after the date
 19 of enactment of this Act, the Commission shall de-
 20 velop and implement strategies to prepare an appro-
 21 priate regulatory framework for licensing research
 22 and test reactors, including the issuance of guidance.

23 ~~(4) TECHNOLOGY-INCLUSIVE REGULATORY~~
 24 ~~FRAMEWORK.—~~Not later than December 31, 2023,
 25 the Commission shall complete a rulemaking to es-

1 tablish a technology-inclusive, regulatory framework
 2 for optional use by commercial advanced nuclear re-
 3 actor applicants for new reactor license applications.

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

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

10 ~~(B)~~ to support preparations—

11 (i) to conduct pre-application inter-
 12 actions; and

13 (ii) to review commercial advanced nu-
 14 clear reactor license applications.

15 ~~(6) AUTHORIZATION OF APPROPRIATIONS.—~~

16 There are authorized to be appropriated to the Com-
 17 mission to carry out this subsection such sums as
 18 are necessary.

19 ~~(b) PLAN TO ESTABLISH STAGES IN THE COMMER-~~
 20 ~~CIAL ADVANCED NUCLEAR REACTOR LICENSING PROC-~~
 21 ~~ESS.—~~

22 ~~(1) PLAN REQUIRED.—~~Not later than 180 days
 23 after the date of enactment of this Act, the Commis-
 24 sion shall submit to the appropriate congressional
 25 committees a plan for expediting and establishing

1 stages in the licensing process for commercial ad-
 2 vanced nuclear reactors that will allow implementa-
 3 tion of the licensing process by not later than 2
 4 years after the date of enactment of this Act (re-
 5 ferred to in this subsection as the “plan”).

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

11 (3) COST AND SCHEDULE ESTIMATES.—The
 12 plan shall include proposed cost estimates, budgets,
 13 and timeframes for implementing strategies to estab-
 14 lish stages in the licensing process for commercial
 15 advanced nuclear reactor technologies.

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

20 (A)(i) the unique aspects of commercial
 21 advanced nuclear reactor licensing, including
 22 the use of alternative coolants or alternative
 23 fuels, operation at or near atmospheric pres-
 24 sure, and the use of passive safety strategies;
 25 and

1 (ii) for the purposes of predictable, effi-
2 cient, and timely reviews, any associated legal,
3 regulatory, and policy issues the Commission
4 should address with regard to the licensing of
5 commercial advanced nuclear reactor tech-
6 nologies;

7 (B) options for licensing commercial ad-
8 vanced nuclear reactors under the regulations
9 of the Commission contained in title 10, Code
10 of Federal Regulations (as in effect on the date
11 of enactment of this Act), including—

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

17 (I) milestones that—

18 (aa) correspond to stages of
19 a licensing process for the spe-
20 cific situation of a commercial
21 advanced nuclear reactor project;
22 and

23 (bb) use knowledge of the
24 ability of the Commission to re-
25 view certain design aspects; and

1 (II) guidelines defining the roles
2 and responsibilities between the Com-
3 mission and the applicant at the onset
4 of the interaction—

5 (aa) to provide the founda-
6 tion for effective communication
7 and effective project manage-
8 ment; and

9 (bb) to ensure efficient
10 progress and rapid resolution of
11 conflicts;

12 (ii) the use of topical reports, stand-
13 ard design approval, and other appropriate
14 mechanisms as tools to introduce stages
15 into the commercial advanced nuclear reac-
16 tor licensing process, including how the li-
17 censing project plan might structure the
18 use of those mechanisms;

19 (iii) collaboration with standards-set-
20 ting organizations to identify specific tech-
21 nical areas for which new or updated
22 standards are needed and providing assist-
23 ance if appropriate to ensure the new or
24 updated standards are developed and final-
25 ized in a timely fashion;

1 (iv) the incorporation of consensus-
2 based codes and standards developed under
3 clause (iii) into the regulatory frame-
4 work—

5 (I) to provide predictability for
6 the regulatory processes of the Com-
7 mission; and

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

10 (v) the development of a process for,
11 and the use of, statements of licensing fea-
12 sibility; and

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

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

22 (D) options for improving the predictability
23 of the commercial advanced nuclear reactor li-
24 censing process; including the evaluation of op-
25 portunities to improve the process by which ap-

1 plication review milestones are established and
2 met; and

3 ~~(E)~~ the extent to which Commission action
4 or modification of policy is needed to implement
5 any part of the plan.

6 ~~(c) PLAN TO INCREASE THE USE OF RISK-IN-~~
7 ~~FORMED AND PERFORMANCE-BASED EVALUATION TECH-~~
8 ~~NIQUES AND REGULATORY GUIDANCE.—~~

9 ~~(1) PLAN REQUIRED.—~~Not later than 180 days
10 after the date of enactment of this Act, the Commis-
11 sion shall submit to the appropriate congressional
12 committees a plan for increasing the use of risk-in-
13 formed and performance-based evaluation techniques
14 and regulatory guidance in licensing commercial ad-
15 vanced nuclear reactors within the existing regu-
16 latory framework (referred to in this subsection as
17 the “plan”).

18 ~~(2) COORDINATION AND STAKEHOLDER~~
19 ~~INPUT.—~~In developing the plan, the Commission
20 shall seek input from the Secretary of Energy, the
21 nuclear energy industry, technology developers, and
22 other public stakeholders.

23 ~~(3) COST AND SCHEDULE ESTIMATE.—~~The plan
24 shall include proposed cost estimates, budgets, and
25 timeframes for implementing a strategy to increase

1 the use of risk-informed and performance-based
 2 evaluation techniques and regulatory guidance in li-
 3 censing commercial advanced nuclear reactors.

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

8 (A) the ability of the Commission to de-
 9 velop and implement risk-informed and per-
 10 formance-based licensing evaluation techniques
 11 and guidance for commercial advanced nuclear
 12 reactors within existing regulatory frameworks
 13 not later than 2 years after the date of enact-
 14 ment of this Act, including policies and guid-
 15 ance for the resolution of—

16 (i) issues relating to—

17 (I) licensing basis event selection
 18 and evaluation;

19 (II) use of mechanistic source
 20 terms;

21 (III) containment performance;
 22 and

23 (IV) emergency preparedness;
 24 and

1 (ii) other policy issues previously iden-
 2 tified; and

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

5 (d) PLAN TO COMPLETE A RULEMAKING TO ESTAB-
 6 LISH A TECHNOLOGY-INCLUSIVE REGULATORY FRAME-
 7 WORK FOR OPTIONAL USE BY COMMERCIAL ADVANCED
 8 NUCLEAR REACTOR TECHNOLOGIES IN NEW REACTOR
 9 LICENSE APPLICATIONS.—

10 (1) PLAN REQUIRED.—Not later than 18
 11 months after the date of enactment of this Act, the
 12 Commission shall submit to the appropriate congres-
 13 sional committees a plan for completing a rule-
 14 making to establish a technology-inclusive regulatory
 15 framework for optional use by applicants in licensing
 16 commercial advanced nuclear reactor technologies in
 17 new reactor license applications (referred to in this
 18 subsection as the “plan”).

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

24 (3) COST AND SCHEDULE ESTIMATE.—The plan
 25 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 plan 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, 2023; and

(B) the extent to which additional legislation, or Commission action or modification of policy, is needed to implement any part of the plan.

(c) PLAN TO PREPARE THE RESEARCH AND TEST REACTOR LICENSING PROCESS.—

(1) PLAN REQUIRED.—Not later than 1 year after the date of enactment of this Act, the Commission shall submit to the appropriate congressional committees a plan for preparing the licensing process for research and test reactors (referred to in this subsection as the “plan”).

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

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

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

14 (A) the unique aspects of research and test
 15 reactor licensing and any associated legal, regu-
 16 latory, and policy issues the Commission should
 17 address to prepare the licensing process for re-
 18 search and test reactors;

19 (B) the feasibility of developing guidelines
 20 for advanced reactor demonstrations to support
 21 the review process for advanced reactor designs,
 22 including designs that use alternative coolants
 23 or alternative fuels, operate at or near atmos-
 24 pheric pressure, and use passive safety strate-
 25 gies; and

1 (C) the extent to which Commission action
 2 or modification of policy is needed to implement
 3 any part of the plan.

4 (F) PLAN TO ENHANCE COMMISSION EXPERTISE RE-
 5 LATING TO ADVANCED NUCLEAR REACTOR TECH-
 6 NOLOGIES.—

7 (1) PLAN REQUIRED.—Not later than 1 year
 8 after the date of enactment of this Act, the Commis-
 9 sion shall submit to the appropriate congressional
 10 committees a plan for ensuring that the Commission
 11 has adequate expertise, modeling, and simulation ca-
 12 pabilities, or access to those capabilities, to support
 13 the evaluation of licensing applications for commer-
 14 cial advanced nuclear reactors and research and test
 15 reactors, including applications that use alternative
 16 coolants or alternative fuels, operate at or near at-
 17 mospheric pressure, and use passive safety strategies
 18 (referred to in this subsection as the “plan”).

19 (2) COST AND SCHEDULE ESTIMATES.—The
 20 plan shall include proposed cost estimates, budgets,
 21 and timeframes for acquiring or accessing the nec-
 22 essary expertise to support the evaluation of license
 23 applications for commercial advanced nuclear reac-
 24 tors and research and test reactors.

1 ~~(3) ANNUAL UPDATES TO PLAN.—~~The Commis-
 2 sion shall—

3 ~~(A) update the plan on an annual basis;~~
 4 and

5 ~~(B) submit for review to the appropriate~~
 6 congressional committees the updated plan.

7 **SEC. 8. HEARINGS UNDER ATOMIC ENERGY ACT OF 1954.**

8 ~~(a) IN GENERAL.—~~Section 189 of the Atomic Energy
 9 Act of 1954 (42 U.S.C. 2239) is amended—

10 ~~(1) in subsection a.—~~

11 ~~(A) in paragraph (1)(A), by striking the~~
 12 second and third sentences and inserting the
 13 following: “On each application under section
 14 103 or 104 b. for a construction permit or an
 15 operating license, on application under section
 16 104 e. for a construction permit or an operating
 17 license for a testing facility, and on application
 18 for an amendment to a construction permit or
 19 an operating license under those sections, the
 20 Commission may, in the absence of a request
 21 for a hearing by any person whose interest may
 22 be affected and after 30-day notice and publica-
 23 tion of notice in the Federal Register, issue a
 24 construction permit, an operating license, or an

1 amendment to a construction permit or an op-
 2 erating license without a hearing.”; and

3 ~~(B) in paragraph (2)(A), in the second~~
 4 sentence, by striking “required hearing” and in-
 5 serting “hearing held by the Commission under
 6 this section”; and

7 ~~(2) in subsection b. (2), by striking “to begin~~
 8 operating” and inserting “to operate”.

9 ~~(b) CONFORMING AMENDMENTS.—~~

10 ~~(1) Section 185 b. of the Atomic Energy Act of~~
 11 ~~1954 (42 U.S.C. 2235(b)) is amended in the first~~
 12 sentence by striking “After holding a public hearing
 13 under section 189 a. (1)(A),” and inserting “After
 14 holding a hearing under section 189 a. (1)(A), or as
 15 soon as practicable if the Commission has deter-
 16 mined that no hearing is required to be held under
 17 that section,”.

18 ~~(2) Section 193(b) of the Atomic Energy Act of~~
 19 ~~1954 (42 U.S.C. 2243(b)) is amended—~~

20 ~~(A) by striking paragraph (1) and insert-~~
 21 ~~ing the following:~~

22 ~~“(1) IN GENERAL.—The Commission shall con-~~
 23 ~~duct a single adjudicatory hearing if a person whose~~
 24 ~~interest may be affected by the construction and op-~~
 25 ~~eration of a facility under sections 53 and 63 has re-~~

1 requested a hearing regarding the licensing of the con-
 2 struction and operation of the facility.”; and

3 (B) in paragraph (2), by striking “Such
 4 hearing” and inserting “If a hearing is held
 5 under paragraph (1), the hearing”.

6 (c) EFFECT.—The amendments made by this section
 7 shall apply to all applications and proceedings pending be-
 8 fore the Commission on or after the date of enactment
 9 of this Act.

10 **SEC. 9. ADVANCED NUCLEAR ENERGY LICENSING COST-**
 11 **SHARE GRANT PROGRAM.**

12 (a) ESTABLISHMENT.—The Secretary of Energy (re-
 13 ferred to in this section as the “Secretary”) shall establish
 14 a grant program to be known as the “Advanced Nuclear
 15 Energy Cost-Share Grant Program” (referred to in this
 16 section as the “program”), under which the Secretary
 17 shall make cost-share grants to applicants for the purpose
 18 of funding a portion of the Commission fees of the appli-
 19 cant for pre-application and application review activities.

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

22 (c) COST-SHARE AMOUNT.—The Secretary shall de-
 23 termine the cost-share amount for each grant.

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

- 4 (1) developing a licensing project plan;
- 5 (2) obtaining a statement of licensing feasi-
- 6 bility;
- 7 (3) reviewing topical reports; and
- 8 (4) other pre-application and application review
- 9 activities and interactions with the Commission.

10 (e) ~~AUTHORIZATION OF APPROPRIATIONS.—~~There
 11 are authorized to be appropriated to the Secretary to carry
 12 out this section such sums as are necessary.

13 **SECTION 1. SHORT TITLE.**

14 *This Act may be cited as the “Nuclear Energy Innova-*
 15 *tion and Modernization Act”.*

16 **SEC. 2. FINDINGS.**

17 *Congress finds that—*

18 (1) *the safe and secure operation of nuclear reac-*
 19 *tors in the United States must remain the paramount*
 20 *focus of the Nuclear Regulatory Commission;*

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

23 (3) *nuclear energy is the largest source of afford-*
 24 *able, reliable, emissions-free energy in the United*
 25 *States, providing approximately 20 percent of the*

1 *electricity consumed in the United States and 60 per-*
2 *cent of emissions-free electricity generation in the*
3 *United States;*

4 *(4) a 1,000-megawatt nuclear plant—*

5 *(A) provides approximately 500 permanent*
6 *jobs;*

7 *(B) pays approximately \$40,000,000 annu-*
8 *ally in wages;*

9 *(C) generates approximately \$470,000,000*
10 *annually in goods and services in the local com-*
11 *munity; and*

12 *(D) pays approximately \$83,000,000 annu-*
13 *ally in Federal, State, and local taxes;*

14 *(5) nuclear energy is of critical importance to*
15 *United States energy security and worldwide influ-*
16 *ence on nonproliferation;*

17 *(6) nuclear energy uses widely available fuel re-*
18 *sources to enable scientific progress, emissions-free*
19 *and reliable electricity generation, heat generation for*
20 *industrial applications, and power for deep space ex-*
21 *ploration;*

22 *(7) the private sector, the National Laboratories*
23 *(as defined in section 2 of the Energy Policy Act of*
24 *2005 (42 U.S.C. 15801)), and institutions of higher*

1 *education are pursuing innovations in nuclear energy*
 2 *technology that will play a crucial role in—*

3 *(A) the future global and United States en-*
 4 *ergy supply; and*

5 *(B) the exports, manufacturing, and econ-*
 6 *omy of the United States;*

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

9 *(A) modernizing the regulatory framework;*
 10 *and*

11 *(B) making other necessary changes to fa-*
 12 *cilitate the efficient, predictable, and affordable*
 13 *deployment of advanced nuclear reactor tech-*
 14 *nologies;*

15 *(9) 2 impediments to the commercialization of*
 16 *advanced nuclear reactors are the high costs and long*
 17 *durations associated with applying the existing nu-*
 18 *clear regulatory framework to advanced nuclear reac-*
 19 *tors;*

20 *(10) license application reviews should be as pre-*
 21 *dictable and efficient as practicable without compro-*
 22 *mitting safety or security;*

23 *(11) the development of advanced nuclear reac-*
 24 *tors would benefit from the early identification of pol-*
 25 *icy issues for timely consideration and resolution by*

1 *the Commission to improve the efficient development*
2 *of designs as well as preparing for design review and*
3 *licensing;*

4 *(12) the existing nuclear regulatory framework*
5 *and the requirements of that framework have not*
6 *adapted to advances in scientific understanding or*
7 *the features and performance characteristics of ad-*
8 *vanced nuclear reactor designs;*

9 *(13) the existing nuclear reactor licensing proc-*
10 *ess does not provide iterative feedback to manage risk*
11 *as needed for typical technology development and in-*
12 *vestment cycles;*

13 *(14) a staged licensing structure that provides*
14 *clear and periodic feedback to applicants on an*
15 *agreed schedule will help to enable the commercializa-*
16 *tion of safer and innovative technologies that will*
17 *benefit the economy, national security, and environ-*
18 *ment of the United States;*

19 *(15) a technology-inclusive Commission regu-*
20 *latory framework will—*

21 *(A) allow greater technological innovation;*

22 *and*

23 *(B) enable inventors, scientists, engineers,*
24 *and students to pursue licensing advanced reac-*
25 *tor concepts;*

1 (16) *further preparation by the Commission of*
2 *the research and test reactor licensing process will en-*
3 *able the Commission to more efficiently process appli-*
4 *cations for research and test reactors when the appli-*
5 *cations are received;*

6 (17) *it is incumbent on the Commission—*

7 (A) *to budget appropriate resources to un-*
8 *dertake an active role in design familiarization*
9 *activities with potential applicants with ad-*
10 *vanced reactor designs;*

11 (B) *to budget for adequate resources to con-*
12 *duct licensing reviews and other work requested*
13 *by licensees and applicants; and*

14 (C) *to preserve those budgeted funds to en-*
15 *sure responsiveness to licensees and applicants in*
16 *recognition of the dependence of the licensees and*
17 *applicants on Commission approval before the*
18 *benefits of the technology of the licensees and ap-*
19 *plicants can be realized; and*

20 (18) *both prospective advanced nuclear reactor*
21 *applicants and the existing fleet of nuclear reactors in*
22 *the United States would benefit from modernizing the*
23 *outdated fee recovery structure of the Commission to*
24 *better manage fluctuations in workload and the num-*
25 *ber of licensees in a fair and equitable manner.*

1 **SEC. 3. PURPOSE.**

2 *The purpose of this Act is to provide—*

3 *(1) a program to develop the expertise and regu-*
 4 *latory processes necessary to allow innovation and the*
 5 *commercialization of advanced nuclear reactors; and*

6 *(2) a revised fee recovery structure to ensure the*
 7 *availability of resources to meet industry needs with-*
 8 *out burdening existing licensees unfairly for inac-*
 9 *curate workload projections or premature existing re-*
 10 *actor closures.*

11 **SEC. 4. DEFINITIONS.**

12 *In this Act:*

13 *(1) ADVANCED NUCLEAR REACTOR.—The term*
 14 *“advanced nuclear reactor” means a nuclear fission*
 15 *or fusion reactor, including a prototype plant (as de-*
 16 *finied in sections 50.2 and 52.1 of title 10, Code of*
 17 *Federal Regulations), with significant improvements*
 18 *compared to commercial nuclear reactors under con-*
 19 *struction as of the date of enactment of this Act, in-*
 20 *cluding improvements such as—*

21 *(A) additional inherent safety features;*

22 *(B) significantly lower levelized cost of elec-*
 23 *tricity;*

24 *(C) lower waste yields;*

25 *(D) greater fuel utilization;*

26 *(E) enhanced reliability;*

1 (F) increased proliferation resistance;
 2 (G) increased thermal efficiency; or
 3 (H) ability to integrate into electric and
 4 nonelectric applications.

5 (2) *AGREEMENT STATE*.—The term “Agreement
 6 State” means any State with which the Commission
 7 has entered into an effective agreement under section
 8 274 b. of the Atomic Energy Act of 1954 (42 U.S.C.
 9 2021(b)).

10 (3) *APPLICANT*.—The term “applicant” means
 11 an applicant for a license, certification, permit, or
 12 other form of approval from the Commission for a
 13 commercial advanced nuclear reactor or a research
 14 and test reactor.

15 (4) *APPROPRIATE CONGRESSIONAL COMMIT-*
 16 *TEES*.—The term “appropriate congressional commit-
 17 *tees” means the Committee on Environment and Pub-*
 18 *lic Works of the Senate and the Committee on Energy*
 19 *and Commerce of the House of Representatives.*

20 (5) *COMMISSION*.—The term “Commission”
 21 means the Nuclear Regulatory Commission.

22 (6) *CORPORATE SUPPORT COSTS*.—The term
 23 “corporate support costs” means expenditures for ac-
 24 quisitions, administrative services, financial manage-
 25 ment, human resource management, information

1 *management, information technology, policy support,*
 2 *outreach, and training, as those categories are de-*
 3 *scribed and calculated in Appendix A of the Congres-*
 4 *sional Budget Justification for Fiscal Year 2017 of*
 5 *the Commission.*

6 (7) *LICENSING PROJECT PLAN.*—*The term “li-*
 7 *censing project plan” means a plan that describes—*

8 (A) *the interactions between an applicant*
 9 *and the Commission; and*

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

14 (8) *REGULATORY FRAMEWORK.*—*The term “reg-*
 15 *ulatory framework” means the framework for review-*
 16 *ing requests for certifications, permits, approvals, and*
 17 *licenses for nuclear power plants.*

18 (9) *REQUESTED ACTIVITY OF THE COMMIS-*
 19 *SION.*—*The term “requested activity of the Commis-*
 20 *sion” means—*

21 (A) *the processing of applications for—*

22 (i) *design certifications or approvals;*

23 (ii) *licenses;*

24 (iii) *permits;*

25 (iv) *license amendments;*

1 (v) license renewals;

2 (vi) certificates of compliance; and

3 (vii) power uprates; and

4 (B) any other activity requested by a li-
5 censee or applicant.

6 (10) *RESEARCH AND TEST REACTOR.*—

7 (A) *IN GENERAL.*—The term “research and
8 test reactor” means a reactor that—

9 (i) falls within the licensing and re-
10 lated regulatory authority of the Commis-
11 sion under section 202 of the Energy Reor-
12 ganization Act of 1974 (42 U.S.C. 5842);
13 and

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

18 (B) *EXCLUSION.*—The term “research and
19 test reactor” does not include a commercial ad-
20 vanced nuclear reactor.

21 (11) *STANDARD DESIGN APPROVAL.*—The term
22 “standard design approval” means the approval of a
23 final standard design or a major portion of a final
24 design standard as described in subpart E of part 52
25 of title 10, Code of Federal Regulations.

1 (12) *STATEMENT OF LICENSING FEASIBILITY.*—

2 *The term “statement of licensing feasibility” means*
 3 *an early-stage review by the Commission that—*

4 *(A) assesses preliminary design information*
 5 *for consistency with applicable regulatory re-*
 6 *quirements of the Commission;*

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

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

11 (13) *TECHNOLOGY-INCLUSIVE REGULATORY*

12 *FRAMEWORK.*—*The term “technology-inclusive regu-*
 13 *latory framework” means a regulatory framework de-*
 14 *veloped using methods of evaluation that are flexible*
 15 *and practicable for application to a variety of reactor*
 16 *technologies, including, where appropriate, the use of*
 17 *risk-informed and performance-based techniques and*
 18 *other tools and methods.*

19 (14) *TOPICAL REPORT.*—*The term “topical re-*
 20 *port” means a document submitted to the Commission*
 21 *that addresses a technical topic related to nuclear*
 22 *power plant safety or design.*

1 **SEC. 5. NUCLEAR REGULATORY COMMISSION USER FEES**
 2 **AND ANNUAL CHARGES THROUGH FISCAL**
 3 **YEAR 2018.**

4 (a) *IN GENERAL.*—Section 6101(c)(2)(A) of the Omni-
 5 bus Budget Reconciliation Act of 1990 (42 U.S.C.
 6 2214(c)(2)(A)) is amended—

7 (1) in clause (iii), by striking “and” at the end;

8 (2) in clause (iv), by striking the period at the
 9 end and inserting “; and”; and

10 (3) by adding at the end the following:

11 “(v) amounts appropriated to the
 12 Commission for the fiscal year for activities
 13 related to the development of a regulatory
 14 framework for advanced nuclear reactor
 15 technologies, including activities required
 16 under section 7 of the Nuclear Energy Inno-
 17 vation and Modernization Act.”.

18 (b) *REPEAL.*—Effective October 1, 2018, section 6101
 19 of the Omnibus Budget Reconciliation Act of 1990 (42
 20 U.S.C. 2214) is repealed.

21 **SEC. 6. NUCLEAR REGULATORY COMMISSION USER FEES**
 22 **AND ANNUAL CHARGES FOR FISCAL YEAR**
 23 **2019 AND EACH FISCAL YEAR THEREAFTER.**

24 (a) *ANNUAL BUDGET JUSTIFICATION.*—

25 (1) *IN GENERAL.*—In the annual budget jus-
 26 tification submitted by the Commission to Congress,

1 *the Commission shall expressly identify anticipated*
 2 *expenditures necessary for completion of the requested*
 3 *activities of the Commission anticipated to occur dur-*
 4 *ing the applicable fiscal year.*

5 (2) *RESTRICTION.—Budget authority granted to*
 6 *the Commission for purposes of the requested activi-*
 7 *ties of the Commission shall be used, to the maximum*
 8 *extent practicable, solely for conducting requested ac-*
 9 *tivities of the Commission.*

10 (3) *LIMITATION ON CORPORATE SUPPORT*
 11 *COSTS.—With respect to the annual budget justifica-*
 12 *tion submitted to Congress, corporate support costs, to*
 13 *the maximum extent practicable, shall not exceed the*
 14 *following percentages of the total budget authority of*
 15 *the Commission requested in the annual budget jus-*
 16 *tification:*

17 (A) *30 percent for each of fiscal years 2019*
 18 *and 2020.*

19 (B) *29 percent for each of fiscal years 2021*
 20 *and 2022.*

21 (C) *28 percent for fiscal year 2023 and each*
 22 *fiscal year thereafter.*

23 (b) *FEES AND CHARGES.—*

24 (1) *ANNUAL ASSESSMENT.—*

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

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

9 *(ii) the budget authority of the Com-*
 10 *mission for the activities described in sub-*
 11 *paragraph (B).*

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

15 *(i) An activity not attributable to an*
 16 *existing NRC licensee or class of licensee as*
 17 *identified by the Commission in Table III*
 18 *of the final rule of the Commission entitled*
 19 *“Revision of Fee Schedules; Fee Recovery*
 20 *for Fiscal Year 2015” (80 Fed. Reg. 37432*
 21 *(June 30, 2015)).*

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

24 *(I) from the Nuclear Waste Fund*
 25 *established under section 302(c) of the*

1 *Nuclear Waste Policy Act of 1982 (42*
2 *U.S.C. 10222(c));*

3 *(II) for implementation of section*
4 *3116 of the Ronald W. Reagan Na-*
5 *tional Defense Authorization Act for*
6 *Fiscal Year 2005 (50 U.S.C. 2601 note;*
7 *Public Law 108–375);*

8 *(III) for the homeland security ac-*
9 *tivities of the Commission (other than*
10 *for the costs of fingerprinting and*
11 *background checks required under sec-*
12 *tion 149 of the Atomic Energy Act of*
13 *1954 (42 U.S.C. 2169) and the costs of*
14 *conducting security inspections);*

15 *(IV) for the Inspector General*
16 *services of the Commission provided to*
17 *the Defense Nuclear Facilities Safety*
18 *Board;*

19 *(V) for research and development*
20 *at universities in areas relevant to the*
21 *mission of the applicable university;*

22 *(VI) for a nuclear science and en-*
23 *gineering grant program that will sup-*
24 *port multiyear projects that do not*
25 *align with programmatic missions but*

1 are critical to maintaining the dis-
2 cipline of nuclear science and engineer-
3 ing; and

4 (VII) for any other fee-relief activ-
5 ity described in the final rule of the
6 Commission entitled “Revision of Fee
7 Schedules; Fee Recovery for Fiscal
8 Year 2015” (80 Fed. Reg. 37432 (June
9 30, 2015)).

10 (iii) Costs for activities related to the
11 development of regulatory infrastructure for
12 advanced nuclear reactor technologies, in-
13 cluding activities required under section 7.

14 (C) *EXCEPTION.*—The exclusion described
15 in subparagraph (B)(iii) shall cease to be effec-
16 tive on January 1, 2030.

17 (D) *REPORT.*—Not later than December 31,
18 2028, the Commission shall submit to the Com-
19 mittee on Appropriations and the Committee on
20 Environment and Public Works of the Senate
21 and the Committee on Appropriations and the
22 Committee on Energy and Commerce of the
23 House of Representatives a report describing the
24 views of the Commission on the continued appro-

1 *priateness and necessity of the funding described*
 2 *in subparagraph (B)(iii).*

3 (2) *FEES FOR SERVICE OR THING OF VALUE.—*

4 *In accordance with section 9701 of title 31, United*
 5 *States Code, the Commission shall charge fees to any*
 6 *person who receives a service or thing of value from*
 7 *the Commission to cover the costs to the Commission*
 8 *of providing the service or thing of value.*

9 (3) *ANNUAL FEES.—*

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

15 (B) *CAP ON ANNUAL FEES OF CERTAIN LI-*
 16 *CENSEES.—*

17 (i) *IN GENERAL.—The annual fee*
 18 *under subparagraph (A) charged to an op-*
 19 *erating reactor licensee, to the maximum ex-*
 20 *tent practicable, shall not exceed the annual*
 21 *fee amount per operating reactor licensee es-*
 22 *tablished in the final rule of the Commis-*
 23 *sion entitled “Revision of Fee Schedules;*
 24 *Fee Recovery for Fiscal Year 2015” (80*
 25 *Fed. Reg. 37432 (June 30, 2015)), as may*

1 *be adjusted annually by the Commission to*
 2 *reflect changes in the Consumer Price Index*
 3 *published by the Bureau of Labor Statistics*
 4 *of the Department of Labor.*

5 (ii) *WAIVER.—The Commission may*
 6 *waive, for a period of 1 year, the cap on*
 7 *annual fees described in clause (i) if the*
 8 *Commission submits to the Committee on*
 9 *Appropriations and the Committee on En-*
 10 *vironment and Public Works of the Senate*
 11 *and the Committee on Appropriations and*
 12 *the Committee on Energy and Commerce of*
 13 *the House of Representatives a written de-*
 14 *termination that the cap on annual fees*
 15 *may compromise the safety and security*
 16 *mission of the Commission.*

17 (C) *AMOUNT PER LICENSEE.—*

18 (i) *IN GENERAL.—The Commission*
 19 *shall establish by rule a schedule of fees fair-*
 20 *ly and equitably allocating the aggregate*
 21 *amount of charges described in subpara-*
 22 *graph (A) among licensees and certificate*
 23 *holders.*

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

1 (I) to the maximum extent prac-
 2 ticable, shall be based on the cost of
 3 providing regulatory services; and

4 (II) may be based on the alloca-
 5 tion of the resources of the Commission
 6 among licensees or certificate holders
 7 or classes of licensees or certificate
 8 holders.

9 (D) EXEMPTION.—

10 (i) DEFINITION OF RESEARCH REAC-
 11 TOR.—In this subparagraph, the term “re-
 12 search reactor” means a nuclear reactor
 13 that—

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

19 (II) if licensed under subclause (I)
 20 for operation at a thermal power level
 21 of more than 1 megawatt, does not con-
 22 tain—

23 (aa) a circulating loop
 24 through the core in which the li-
 25 censee conducts fuel experiments;

1 (bb) a liquid fuel loading; or
 2 (cc) an experimental facility
 3 in the core in excess of 16 square
 4 inches in cross-section.

5 (ii) *EXEMPTION.*—Subparagraph (A)
 6 shall not apply to the holder of any license
 7 for a federally owned research reactor used
 8 primarily for educational training and aca-
 9 demic research purposes.

10 (c) *PERFORMANCE AND REPORTING.*—

11 (1) *IN GENERAL.*—The Commission shall develop
 12 for the requested activities of the Commission—

13 (A) performance metrics; and

14 (B) on each request, milestone schedules.

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

23 (3) *DELAYS IN ISSUANCE OF FINAL SAFETY*
 24 *EVALUATION EXCEEDING 180 DAYS.*—If the final safety
 25 evaluation for the requested activity of the Commis-

1 *sion described in paragraph (2) is not completed by*
2 *the date that is 180 days after the completion date re-*
3 *quired by the performance metrics or milestone sched-*
4 *ule under paragraph (1), the Commission shall sub-*
5 *mit to the appropriate congressional committees a*
6 *timely report describing the delay, including a de-*
7 *tailed explanation accounting for the delay and a*
8 *plan for timely completion of the final safety evalua-*
9 *tion.*

10 *(d) ACCURATE INVOICING.—With respect to invoices*
11 *for fees and charges described in subsection (b)(2), the Com-*
12 *mission shall—*

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

15 *(2) develop and implement processes to audit in-*
16 *voices to ensure accuracy, transparency, and fairness;*
17 *and*

18 *(3) modify regulations to ensure fair and appro-*
19 *priate processes to provide licensees and applicants*
20 *an opportunity to efficiently dispute or otherwise seek*
21 *review and correction of errors in invoices for fees*
22 *and charges.*

23 *(e) REPORT.—Not later than September 30, 2020, the*
24 *Commission shall submit to the Committee on Appropria-*
25 *tions and the Committee on Environment and Public Works*

1 of the Senate and the Committee on Appropriations and
 2 the Committee on Energy and Commerce of the House of
 3 Representatives a report describing the implementation of
 4 this section, including any impacts and recommendations
 5 for improvement.

6 (f) *EFFECTIVE DATE.*—This section takes effect on Oc-
 7 tober 1, 2018.

8 **SEC. 7. ADVANCED NUCLEAR REACTOR PROGRAM.**

9 (a) *LICENSING OF COMMERCIAL ADVANCED NUCLEAR*
 10 *REACTORS.*—

11 (1) *STAGED LICENSING.*—For the purpose of pre-
 12 dictable, efficient, and timely reviews, not later than
 13 2 years after the date of enactment of this Act, the
 14 Commission shall develop and implement, within the
 15 existing regulatory framework, strategies for—

16 (A) establishing stages in the licensing proc-
 17 ess for commercial advanced nuclear reactors;
 18 and

19 (B) developing procedures and processes
 20 for—

21 (i) using a licensing project plan; and
 22 (ii) optional use of a statement of li-
 23 censing feasibility.

24 (2) *RISK-INFORMED LICENSING.*—Not later than
 25 2 years after the date of enactment of this Act, the

1 *Commission shall develop and implement, where ap-*
 2 *propriate, strategies for the increased use of risk-in-*
 3 *formed, performance-based licensing evaluation tech-*
 4 *niques and guidance for commercial advanced nuclear*
 5 *reactors within existing regulatory frameworks, in-*
 6 *cluding evaluation techniques and guidance for the*
 7 *resolution of the following:*

8 *(A) Applicable policy issues identified dur-*
 9 *ing the course of review by the Commission of a*
 10 *commercial advanced nuclear reactor licensing*
 11 *application.*

12 *(B) The issues described in SECY-93-092*
 13 *and SECY-15-077, including—*

14 *(i) licensing basis event selection and*
 15 *evaluation;*

16 *(ii) source terms;*

17 *(iii) containment performance; and*

18 *(iv) emergency preparedness.*

19 *(3) RESEARCH AND TEST REACTOR LICENSING.—*
 20 *For the purpose of predictable, efficient, and timely*
 21 *reviews, not later than 2 years after the date of enact-*
 22 *ment of this Act, the Commission shall develop and*
 23 *implement strategies within the existing regulatory*
 24 *framework for licensing research and test reactors, in-*
 25 *cluding the issuance of guidance.*

1 (4) *TECHNOLOGY-INCLUSIVE REGULATORY*
 2 *FRAMEWORK.—Not later than December 31, 2023, the*
 3 *Commission shall complete a rulemaking to establish*
 4 *a technology-inclusive, regulatory framework for op-*
 5 *tional use by commercial advanced nuclear reactor*
 6 *applicants for new reactor license applications.*

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

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

13 *(B) to support preparations—*

14 *(i) to conduct pre-application inter-*
 15 *actions; and*

16 *(ii) to review commercial advanced nu-*
 17 *clear reactor license applications.*

18 (6) *AUTHORIZATION OF APPROPRIATIONS.—*
 19 *There are authorized to be appropriated to the Com-*
 20 *mission to carry out this subsection such sums as are*
 21 *necessary.*

22 (b) *REPORT TO ESTABLISH STAGES IN THE COMMERCIAL*
 23 *ADVANCED NUCLEAR REACTOR LICENSING PROC-*
 24 *ESS.—*

1 (1) *REPORT REQUIRED.*—Not later than 180
2 days after the date of enactment of this Act, the Com-
3 mission shall submit to the appropriate congressional
4 committees a report for expediting and establishing
5 stages in the licensing process for commercial ad-
6 vanced nuclear reactors that will allow implementa-
7 tion of the licensing process by not later than 2 years
8 after the date of enactment of this Act (referred to in
9 this subsection as the “report”).

10 (2) *COORDINATION AND STAKEHOLDER INPUT.*—
11 In developing the report, the Commission shall seek
12 input from the Secretary of Energy, the nuclear en-
13 ergy industry, a diverse set of technology developers,
14 and other public stakeholders.

15 (3) *COST AND SCHEDULE ESTIMATES.*—The re-
16 port shall include proposed cost estimates, budgets,
17 and timeframes for implementing strategies to estab-
18 lish stages in the licensing process for commercial ad-
19 vanced nuclear reactor technologies.

20 (4) *REQUIRED EVALUATIONS.*—Consistent with
21 the role of the Commission in protecting public health
22 and safety and common defense and security, the re-
23 port shall evaluate—

24 (A)(i) the unique aspects of commercial ad-
25 vanced nuclear reactor licensing, including the

1 *use of alternative coolants or alternative fuels,*
2 *operation at or near atmospheric pressure, and*
3 *the use of passive safety strategies; and*

4 *(ii) for the purposes of predictable, efficient,*
5 *and timely reviews, any associated legal, regu-*
6 *latory, and policy issues the Commission should*
7 *address with regard to the licensing of commer-*
8 *cial advanced nuclear reactor technologies;*

9 *(B) options for licensing commercial ad-*
10 *vanced nuclear reactors under the regulations of*
11 *the Commission contained in title 10, Code of*
12 *Federal Regulations (as in effect on the date of*
13 *enactment of this Act), including—*

14 *(i) the development and use under the*
15 *regulatory framework of the Commission in*
16 *effect on the date of enactment of this Act*
17 *of a licensing project plan that could estab-*
18 *lish—*

19 *(I) milestones that—*

20 *(aa) correspond to stages of a*
21 *licensing process for the specific*
22 *situation of a commercial ad-*
23 *vanced nuclear reactor project;*
24 *and*

1 (bb) use knowledge of the
 2 ability of the Commission to re-
 3 view certain design aspects; and
 4 (II) guidelines defining the roles
 5 and responsibilities between the Com-
 6 mission and the applicant at the onset
 7 of the interaction—

8 (aa) to provide the founda-
 9 tion for effective communication
 10 and effective project management;
 11 and

12 (bb) to ensure efficient
 13 progress;

14 (ii) the use of topical reports, standard
 15 design approval, and other appropriate
 16 mechanisms as tools to introduce stages into
 17 the commercial advanced nuclear reactor li-
 18 censing process, including how the licensing
 19 project plan might structure the use of those
 20 mechanisms;

21 (iii) collaboration with standards-set-
 22 ting organizations to identify specific tech-
 23 nical areas for which new or updated stand-
 24 ards are needed and providing assistance if
 25 appropriate to ensure the new or updated

1 standards are developed and finalized in a
2 timely fashion;

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

6 (I) to provide predictability for
7 the regulatory processes of the Commis-
8 sion; and

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

11 (v) the development of a process for,
12 and the use of, statements of licensing feasi-
13 bility; and

14 (vi) identification of any policies and
15 guidance for staff that will be needed to im-
16 plement clauses (i) and (ii);

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

23 (D) options for improving the predictability
24 of the commercial advanced nuclear reactor li-
25 censing process, including the evaluation of op-

1 opportunities to improve the process by which ap-
 2 plication review milestones are established and
 3 met; and

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

7 (c) *REPORT TO INCREASE THE USE OF RISK-IN-*
 8 *FORMED AND PERFORMANCE-BASED EVALUATION TECH-*
 9 *NIQUES AND REGULATORY GUIDANCE.*—

10 (1) *REPORT REQUIRED.*—Not later than 180
 11 days after the date of enactment of this Act, the Com-
 12 mission shall submit to the appropriate congressional
 13 committees a report for increasing, where appro-
 14 priate, the use of risk-informed and performance-
 15 based evaluation techniques and regulatory guidance
 16 in licensing commercial advanced nuclear reactors
 17 within the existing regulatory framework (referred to
 18 in this subsection as the “report”).

19 (2) *COORDINATION AND STAKEHOLDER INPUT.*—
 20 In developing the report, the Commission shall seek
 21 input from the Secretary of Energy, the nuclear en-
 22 ergy industry, technology developers, and other public
 23 stakeholders.

24 (3) *COST AND SCHEDULE ESTIMATE.*—The re-
 25 port shall include proposed cost estimates, budgets,

1 *and timeframes for implementing a strategy to in-*
 2 *crease the use of risk-informed and performance-based*
 3 *evaluation techniques and regulatory guidance in li-*
 4 *censing commercial advanced nuclear reactors.*

5 (4) *REQUIRED EVALUATIONS.*—*Consistent with*
 6 *the role of the Commission in protecting public health*
 7 *and safety and common defense and security, the re-*
 8 *port shall evaluate—*

9 (A) *the ability of the Commission to develop*
 10 *and implement, where appropriate, risk-in-*
 11 *formed and performance-based licensing evalua-*
 12 *tion techniques and guidance for commercial ad-*
 13 *vanced nuclear reactors within existing regu-*
 14 *latory frameworks not later than 2 years after*
 15 *the date of enactment of this Act, including poli-*
 16 *cies and guidance for the resolution of—*

17 (i) *issues relating to—*

18 (I) *licensing basis event selection*
 19 *and evaluation;*

20 (II) *use of mechanistic source*
 21 *terms;*

22 (III) *containment performance;*
 23 *and*

24 (IV) *emergency preparedness; and*

1 (ii) other policy issues previously iden-
2 tified; and

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

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

7 (1) *REPORT REQUIRED.*—Not later than 1 year
8 after the date of enactment of this Act, the Commis-
9 sion shall submit to the appropriate congressional
10 committees a report for preparing the licensing proc-
11 ess for research and test reactors within the existing
12 regulatory framework (referred to in this subsection
13 as the “report”).

14 (2) *COORDINATION AND STAKEHOLDER INPUT.*—
15 In developing the report, the Commission shall seek
16 input from the Secretary of Energy, the nuclear en-
17 ergy industry, a diverse set of technology developers,
18 and other public stakeholders.

19 (3) *COST AND SCHEDULE ESTIMATES.*—The re-
20 port shall include proposed cost estimates, budgets,
21 and timeframes for preparing the licensing process for
22 research and test reactors.

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

1 *and safety and common defense and security, the re-*
 2 *port shall evaluate—*

3 *(A) the unique aspects of research and test*
 4 *reactor licensing and any associated legal, regu-*
 5 *latory, and policy issues the Commission should*
 6 *address to prepare the licensing process for re-*
 7 *search and test reactors;*

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

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

17 *(e) REPORT TO COMPLETE A RULEMAKING TO ESTAB-*
 18 *LISH A TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK*
 19 *FOR OPTIONAL USE BY COMMERCIAL ADVANCED NUCLEAR*
 20 *REACTOR TECHNOLOGIES IN NEW REACTOR LICENSE AP-*
 21 *PLICATIONS AND TO ENHANCE COMMISSION EXPERTISE*
 22 *RELATING TO ADVANCED NUCLEAR REACTOR TECH-*
 23 *NOLOGIES.—*

24 *(1) REPORT REQUIRED.—Not later than 30*
 25 *months after the date of enactment of this Act, the*

1 *Commission shall submit to the appropriate congres-*
 2 *sional committees a report (referred to in this sub-*
 3 *section as the “report”) for—*

4 *(A) completing a rulemaking to establish a*
 5 *technology-inclusive regulatory framework for*
 6 *optional use by applicants in licensing commer-*
 7 *cial advanced nuclear reactor technologies in*
 8 *new reactor license applications; and*

9 *(B) ensuring that the Commission has ade-*
 10 *quate expertise, modeling, and simulation capa-*
 11 *bilities, or access to those capabilities, to support*
 12 *the evaluation of advanced reactor license appli-*
 13 *cations.*

14 *(2) COORDINATION AND STAKEHOLDER INPUT.—*

15 *In developing the report, the Commission shall seek*
 16 *input from the Secretary of Energy, the nuclear en-*
 17 *ergy industry, a diverse set of technology developers,*
 18 *and other public stakeholders.*

19 *(3) COST AND SCHEDULE ESTIMATE.—The re-*

20 *port shall include proposed cost estimates, budgets,*
 21 *and timeframes for developing and implementing a*
 22 *technology-inclusive regulatory framework for licens-*
 23 *ing commercial advanced nuclear reactor technologies,*
 24 *including completion of a rulemaking.*

1 (4) *REQUIRED EVALUATIONS.*—*Consistent with*
2 *the role of the Commission in protecting public health*
3 *and safety and common defense and security, the re-*
4 *port shall evaluate—*

5 (A) *the ability of the Commission to com-*
6 *plete a rulemaking to establish a technology-in-*
7 *clusive regulatory framework for licensing com-*
8 *mercial advanced nuclear reactor technologies by*
9 *December 31, 2023;*

10 (B) *the extent to which additional legisla-*
11 *tion, or Commission action or modification of*
12 *policy, is needed to implement any part of the*
13 *new regulatory framework;*

14 (C) *the need for additional Commission ex-*
15 *pertise, modeling, and simulation capabilities, or*
16 *access to those capabilities, to support the eval-*
17 *uation of licensing applications for commercial*
18 *advanced nuclear reactors and research and test*
19 *reactors, including applications that use alter-*
20 *native coolants or alternative fuels, operate at or*
21 *near atmospheric pressure, and use passive safe-*
22 *ty strategies; and*

23 (D) *the budgets and timeframes for acquir-*
24 *ing or accessing the necessary expertise to sup-*
25 *port the evaluation of license applications for*

1 *commercial advanced nuclear reactors and re-*
 2 *search and test reactors.*

3 **SEC. 8. ADVANCED NUCLEAR ENERGY LICENSING COST-**
 4 **SHARE GRANT PROGRAM.**

5 *(a) ESTABLISHMENT.—The Secretary of Energy (re-*
 6 *ferred to in this section as the “Secretary”) shall establish*
 7 *a grant program to be known as the “Advanced Nuclear*
 8 *Energy Cost-Share Grant Program” (referred to in this sec-*
 9 *tion as the “program”), under which the Secretary shall*
 10 *make cost-share grants to applicants for the purpose of*
 11 *funding a portion of the Commission fees of the applicant*
 12 *for pre-application and application review activities.*

13 *(b) REQUIREMENT.—The Secretary shall seek out tech-*
 14 *nology diversity in making grants under the program.*

15 *(c) COST-SHARE AMOUNT.—The Secretary shall deter-*
 16 *mine the cost-share amount for each grant.*

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

- 20 *(1) developing a licensing project plan;*
- 21 *(2) obtaining a statement of licensing feasibility;*
- 22 *(3) reviewing topical reports; and*
- 23 *(4) other pre-application and application review*
 24 *activities and interactions with the Commission.*

1 (e) *AUTHORIZATION OF APPROPRIATIONS.*—*There are*
2 *authorized to be appropriated to the Secretary to carry out*
3 *this section such sums as are necessary.*

4 ***SEC. 9. URANIUM RECOVERY REPORT.***

5 *Not later than 1 year after the date of enactment of*
6 *this Act, the Commission shall submit to the appropriate*
7 *congressional committees a report regarding the safety and*
8 *feasibility of extending the duration of uranium recovery*
9 *licenses from 10 to 20 years, including any potential bene-*
10 *fits of the extension.*

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To modernize the regulation of nuclear energy.

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