

114TH CONGRESS  
2D SESSION

**S.** \_\_\_\_\_

To modernize the regulation of nuclear energy.

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IN THE SENATE OF THE UNITED STATES

Mr. INHOFE (for himself, Mr. BOOKER, Mr. WHITEHOUSE, and Mr. CRAPO)  
introduced the following bill; which was read twice and referred to the  
Committee on \_\_\_\_\_

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## **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”.

6       **SEC. 2. FINDINGS.**

7       Congress finds that—

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

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

3           (3) nuclear energy is the largest source of af-  
4 fordable, reliable, emissions-free energy in the  
5 United States, providing approximately 20 percent  
6 of the electricity consumed in the United States and  
7 60 percent of emissions-free electricity generation in  
8 the United States;

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

10           (A) provides approximately 500 permanent  
11 jobs;

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

14           (C) generates approximately \$470,000,000  
15 annually in goods and services in the local com-  
16 munity; and

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

19           (5) nuclear energy is of critical importance to  
20 United States energy security and worldwide influ-  
21 ence on nonproliferation;

22           (6) nuclear energy uses widely available fuel re-  
23 sources to enable scientific progress, emissions-free  
24 and reliable electricity generation, heat generation

1 for industrial applications, and power for deep space  
2 exploration;

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

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

10 (B) the exports, manufacturing, and econ-  
11 omy of the United States;

12 (8) eventual deployment of commercial ad-  
13 vanced nuclear reactors will require—

14 (A) modernizing the regulatory framework;  
15 and

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

20 (9) 2 impediments to the commercialization of  
21 advanced nuclear reactors are the high costs and  
22 long durations associated with applying the existing  
23 nuclear regulatory framework to advanced nuclear  
24 reactors;

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

4           (11) 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           (12) the existing nuclear reactor licensing proc-  
10          ess does not provide iterative feedback to manage  
11          risk as needed for typical technology development  
12          and investment cycles;

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

19          (14) 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           (15) further preparation by the Commission of  
2           the research and test reactor licensing process will  
3           enable the Commission to more efficiently process  
4           applications for research and test reactors when the  
5           applications are received;

6           (16) it is incumbent on the Commission—

7                   (A) to budget for adequate resources to  
8                   conduct licensing reviews and other work re-  
9                   quested by licensees and applicants; and

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

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

23 **SEC. 3. PURPOSE.**

24           The purpose of this Act is to provide—

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

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

10 **SEC. 4. DEFINITIONS.**

11       In this Act:

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

19                   (A) additional inherent safety features;

20                   (B) lower waste yields;

21                   (C) greater fuel utilization;

22                   (D) enhanced reliability;

23                   (E) increased proliferation resistance;

24                   (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 the Environment  
16          and Public Works of the Senate and the Committee  
17          on Energy and Commerce of the House of Rep-  
18          resentatives.

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 c. of the Atomic  
16 Energy Act (42 U.S.C. 2134(c)).

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 year 2021  
19 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

1 charges in accordance with paragraphs (2) and  
2 (3) in a manner that ensures that, to the max-  
3 imum extent practicable, the amount collected  
4 is equal to an amount that approximates—

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

7 (ii) the budget authority of the Com-  
8 mission for the activities described in sub-  
9 paragraph (B).

10 (B) EXCLUDED ACTIVITIES DESCRIBED.—

11 The activities referred to in subparagraph  
12 (A)(ii) are the following:

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

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

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

1 the Nuclear Waste Policy Act of 1982  
2 (42 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  
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 the Environment and Public Works of  
13 the Senate and the Committee on Appropria-  
14 tions and the Committee on Energy and Com-  
15 merce of the House of Representatives a report  
16 describing 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—

1 (I) notify the Committee on Ap-  
2 propriations and the Committee on  
3 the Environment and Public Works of  
4 the Senate and the Committee on Ap-  
5 propriations and the Committee on  
6 Energy and Commerce of the House  
7 of Representatives of the determina-  
8 tion, including a detailed explanation  
9 of the cause and circumstances; and

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

12 (C) AMOUNT PER LICENSEE.—

13 (i) IN GENERAL.—The Commission  
14 shall establish by rule a schedule of fees  
15 fairly and equitably allocating the aggre-  
16 gate amount of charges described in sub-  
17 paragraph (A) among licensees and certifi-  
18 cate holders.

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

21 (I) to the maximum extent prac-  
22 ticable, shall be based on the cost of  
23 providing regulatory services; and

24 (II) may be based on the alloca-  
25 tion 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 c. of the Atomic  
11                  Energy Act of 1954 (42 U.S.C.  
12                  2134(c)) 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 the Environment and  
23 Public Works of the Senate and the Committee on Appro-  
24 priations and the Committee on Energy and Commerce  
25 of the House of Representatives a report describing the

1 implementation of this section, including any impacts and  
2 recommendations 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        establish 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) 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-INFORMED  
7 AND PERFORMANCE-BASED EVALUATION TECHNIQUES  
8 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

1       timeframes for developing and implementing a tech-  
2       nology-inclusive regulatory framework for licensing  
3       commercial advanced nuclear reactor technologies,  
4       including completion of a rulemaking.

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

9                       (A) the ability of the Commission to com-  
10       plete a rulemaking to establish a technology-in-  
11       clusive regulatory framework for licensing com-  
12       mercial advanced nuclear reactor technologies  
13       by December 31, 2023; and

14                      (B) the extent to which additional legisla-  
15       tion, or Commission action or modification of  
16       policy, is needed to implement any part of the  
17       plan.

18       (e) PLAN TO PREPARE THE RESEARCH AND TEST  
19       REACTOR LICENSING PROCESS.—

20               (1) PLAN REQUIRED.—Not later than 1 year  
21       after the date of enactment of this Act, the Commis-  
22       sion shall submit to the appropriate congressional  
23       committees a plan for preparing the licensing proc-  
24       ess for research and test reactors (referred to in this  
25       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 reactors de-  
22 signs, including designs that use alternative  
23 coolants or alternative fuels, operate at or near  
24 atmospheric pressure, and use passive safety  
25 strategies; 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 c. 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.