

116TH CONGRESS
2D SESSION

S. _____

To reestablish United States global leadership in nuclear energy, revitalize domestic nuclear energy supply chain infrastructure, support the licensing of advanced nuclear technologies, and improve the regulation of nuclear energy, and for other purposes.

IN THE SENATE OF THE UNITED STATES

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

A BILL

To reestablish United States global leadership in nuclear energy, revitalize domestic nuclear energy supply chain infrastructure, support the licensing of advanced nuclear technologies, and improve the regulation of nuclear energy, and for other purposes.

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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “American Nuclear Infrastructure Act of 2020”.

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

- Sec. 1. Short title; table of contents.
 Sec. 2. Definitions.

TITLE I—REESTABLISHING AMERICAN INTERNATIONAL
 COMPETITIVENESS AND GLOBAL LEADERSHIP

- Sec. 101. International nuclear reactor export and innovation activities.
 Sec. 102. Denial of certain domestic licenses for national security purposes.

TITLE II—EXPANDING NUCLEAR ENERGY THROUGH ADVANCED
 NUCLEAR TECHNOLOGIES

- Sec. 201. Advanced nuclear reactor project environmental reviews.
 Sec. 202. Advanced nuclear reactor prizes.
 Sec. 203. New nuclear energy project application reviews.
 Sec. 204. Report on unique licensing considerations relating to the use of nuclear energy for nonelectric applications.
 Sec. 205. Enabling preparations for the demonstration of advanced nuclear reactors on Department sites.
 Sec. 206. Regulatory requirements for micro-reactors.

TITLE III—PRESERVING EXISTING NUCLEAR ENERGY
 GENERATION

- Sec. 301. Nuclear reactor incentives.
 Sec. 302. Report on lessons learned during the COVID–19 public health emergency.
 Sec. 303. Investment by allies.

TITLE IV—REVITALIZING AMERICA’S NUCLEAR SUPPLY CHAIN
 INFRASTRUCTURE

- Sec. 401. Advanced nuclear fuel approval.
 Sec. 402. National strategic uranium reserve.
 Sec. 403. Report on advanced methods of manufacturing and construction for nuclear energy applications.

TITLE V—MISCELLANEOUS

- Sec. 501. Nuclear energy workforce development.
 Sec. 502. Annual report on the spent nuclear fuel and high-level radioactive waste inventory in the United States.
 Sec. 503. Authorization of appropriations for superfund actions at abandoned mining sites on Tribal land.
 Sec. 504. Technical correction.

1 SEC. 2. DEFINITIONS.

2 In this Act:

- 3 (1) ACCIDENT TOLERANT FUEL.**—The term
4 “accident tolerant fuel” has the meaning given the
5 term in section 107(a) of the Nuclear Energy Inno-

1 vation and Modernization Act (Public Law 115–439;
2 132 Stat. 5577).

3 (2) ADMINISTRATOR.—The term “Adminis-
4 trator” means the Administrator of the Environ-
5 mental Protection Agency.

6 (3) ADVANCED NUCLEAR FUEL.—The term
7 “advanced nuclear fuel” means—

8 (A) advanced nuclear reactor fuel (as de-
9 fined in section 3 of the Nuclear Energy Inno-
10 vation and Modernization Act (42 U.S.C. 2215
11 note; Public Law 115–439)); and

12 (B) accident tolerant fuel.

13 (4) ADVANCED NUCLEAR REACTOR.—The term
14 “advanced nuclear reactor” has the meaning given
15 the term in section 3 of the Nuclear Energy Inno-
16 vation and Modernization Act (42 U.S.C. 2215 note;
17 Public Law 115–439).

18 (5) APPROPRIATE COMMITTEES OF
19 CONGRESS.—The term “appropriate committees of
20 Congress” means—

21 (A) the Committee on Environment and
22 Public Works of the Senate; and

23 (B) the Committee on Energy and Com-
24 merce of the House of Representatives.

1 (6) CHAIRMAN.—The term “Chairman” means
2 the Chairman of the Nuclear Regulatory Commis-
3 sion.

4 (7) COMMISSION.—The term “Commission”
5 means the Nuclear Regulatory Commission.

6 (8) DEPARTMENT.—The term “Department”
7 means the Department of Energy.

8 (9) EARLY SITE PERMIT.—The term “early site
9 permit” has the meaning given the term in section
10 52.1 of title 10, Code of Federal Regulations (or a
11 successor regulation).

12 (10) HIGH-ASSAY, LOW-ENRICHED URANIUM.—
13 The term “high-assay, low-enriched uranium” means
14 uranium with an assay greater than 5 weight per-
15 cent, but less than 20 weight percent, of the ura-
16 nium-235 isotope.

17 (11) INSTITUTION OF HIGHER EDUCATION.—
18 The term “institution of higher education” has the
19 meaning given the term in section 101(a) of the
20 Higher Education Act of 1965 (20 U.S.C. 1001(a)).

21 (12) MICRO-REACTOR.—The term “micro-reactor”
22 means an advanced nuclear reactor that has a
23 power production capacity that is not greater than
24 20 megawatts.

1 (13) NATIONAL LABORATORY.—The term “Na-
2 tional Laboratory” has the meaning given the term
3 in section 2 of the Energy Policy Act of 2005 (42
4 U.S.C. 15801).

5 (14) REMOVAL; REMEDIAL ACTION.—The terms
6 “removal” and “remedial action” have the meanings
7 given those terms in section 101 of the Comprehen-
8 sive Environmental Response, Compensation, and
9 Liability Act of 1980 (42 U.S.C. 9601).

10 (15) SECRETARY.—The term “Secretary”
11 means the Secretary of Energy.

12 (16) TRIBAL LAND.—The term “Tribal land”
13 has the meaning given the term “Indian country” in
14 section 1151 of title 18, United States Code.

15 **TITLE I—REESTABLISHING**
16 **AMERICAN INTERNATIONAL**
17 **COMPETITIVENESS AND**
18 **GLOBAL LEADERSHIP**

19 **SEC. 101. INTERNATIONAL NUCLEAR REACTOR EXPORT**
20 **AND INNOVATION ACTIVITIES.**

21 (a) COORDINATION.—

22 (1) IN GENERAL.—The Commission shall—

23 (A) coordinate all work of the Commission
24 relating to—

1 (i) nuclear reactor import and export
2 licensing; and

3 (ii) international regulatory coopera-
4 tion and assistance relating to nuclear re-
5 actors, including with countries that are
6 members of the Organisation for Economic
7 Co-operation and Development; and

8 (B) support interagency and international
9 coordination with respect to—

10 (i) the consideration of international
11 technical standards to establish the licens-
12 ing and regulatory basis to assist the de-
13 sign, construction, and operation of nu-
14 clear systems;

15 (ii) efforts to help build competent nu-
16 clear regulatory organizations and legal
17 frameworks in countries seeking to develop
18 nuclear power; and

19 (iii) exchange programs and training
20 provided to other countries relating to nu-
21 clear regulation and oversight to improve
22 nuclear technology licensing, in accordance
23 with paragraph (2).

24 (2) EXCHANGE PROGRAMS AND TRAINING.—

25 With respect to the exchange programs and training

1 described in paragraph (1)(B)(iii), the Commission
2 shall coordinate, as applicable, with—

3 (A) the Secretary;

4 (B) National Laboratories;

5 (C) the private sector; and

6 (D) institutions of higher education.

7 (b) AUTHORITY TO ESTABLISH BRANCH.—The Com-
8 mission may establish within the Office of International
9 Programs a branch, to be known as the “International
10 Nuclear Reactor Export and Innovation Branch”, to carry
11 out such international nuclear reactor export and innova-
12 tion activities as the Commission determines to be appro-
13 priate and within the mission of the Commission.

14 (c) EXCLUSION OF INTERNATIONAL ACTIVITIES
15 FROM THE FEE BASE.—

16 (1) IN GENERAL.—Section 102 of the Nuclear
17 Energy Innovation and Modernization Act (42
18 U.S.C. 2215) is amended—

19 (A) in subsection (a), by adding at the end
20 the following:

21 “(4) INTERNATIONAL NUCLEAR REACTOR EX-
22 PORT AND INNOVATION ACTIVITIES.—The Commis-
23 sion shall identify in the annual budget justification
24 international nuclear reactor export and innovation

1 activities described in section 101(a) of the Amer-
2 ican Nuclear Infrastructure Act of 2020.”; and

3 (B) in subsection (b)(1)(B), by adding at
4 the end the following:

5 “(iv) Costs for international nuclear
6 reactor export and innovation activities de-
7 scribed in section 101(a) of the American
8 Nuclear Infrastructure Act of 2020.”.

9 (2) EFFECTIVE DATE.—The amendments made
10 by paragraph (1) shall take effect on October 1,
11 2021.

12 (d) SAVINGS CLAUSE.—Nothing in this section alters
13 the authority of the Commission to license and regulate
14 the civilian use of radioactive materials.

15 **SEC. 102. DENIAL OF CERTAIN DOMESTIC LICENSES FOR**
16 **NATIONAL SECURITY PURPOSES.**

17 (a) DEFINITION OF COVERED FUEL.—In this sec-
18 tion, the term “covered fuel” means enriched uranium
19 that is fabricated into fuel assemblies for nuclear reactors
20 by an entity that—

21 (1) is owned or controlled by the Government of
22 the Russian Federation or the Government of the
23 People’s Republic of China; or

1 (2) is organized under the laws of, or otherwise
2 subject to the jurisdiction of, the Russian Federation
3 or the People's Republic of China.

4 (b) PROHIBITION ON UNLICENSED POSSESSION OR
5 OWNERSHIP OF COVERED FUEL.—Unless specifically au-
6 thorized by the Commission in a license issued under sec-
7 tion 53 of the Atomic Energy Act of 1954 (42 U.S.C.
8 2073) and part 70 of title 10, Code of Federal Regulations
9 (or successor regulations), no person subject to the juris-
10 diction of the Commission may possess or own covered
11 fuel.

12 (c) LICENSE TO POSSESS OR OWN COVERED
13 FUEL.—

14 (1) CONSULTATION REQUIRED PRIOR TO
15 ISSUANCE.—The Commission shall not issue a li-
16 cense to possess or own covered fuel under section
17 53 of the Atomic Energy Act of 1954 (42 U.S.C.
18 2073) and part 70 of title 10, Code of Federal Reg-
19 ulations (or successor regulations), unless the Com-
20 mission has first consulted with the Secretary and
21 the Secretary of State before issuing the license.

22 (2) PROHIBITION ON ISSUANCE OF LICENSE.—

23 (A) IN GENERAL.—Subject to subpara-
24 graph (C), a license to possess or own covered
25 fuel shall not be issued if the Secretary and the

1 Secretary of State make the determination de-
2 scribed in subparagraph (B).

3 (B) DETERMINATION.—

4 (i) IN GENERAL.—The determination
5 referred to in subparagraph (A) is a deter-
6 mination that possession or ownership, as
7 applicable, of covered fuel poses a threat to
8 the national security of the United States
9 that adversely impacts the physical and
10 economic security of the United States.

11 (ii) JOINT DETERMINATION.—A deter-
12 mination described in clause (i) shall be
13 jointly made by the Secretary and the Sec-
14 retary of State.

15 (iii) TIMELINE.—

16 (I) NOTICE OF APPLICATION.—
17 Not later than 30 days after the date
18 on which the Commission receives an
19 application for a license to possess or
20 own covered fuel, the Commission
21 shall notify the Secretary and the Sec-
22 retary of State of the application.

23 (II) DETERMINATION.—The Sec-
24 retary and the Secretary of State shall
25 have a period of 120 days, beginning

1 on the date on which the Commission
2 notifies the Secretary and the Sec-
3 retary of State under subclause (I) of
4 an application for a license to possess
5 or own covered fuel, in which to make
6 the determination described in clause
7 (i).

8 (III) COMMISSION NOTIFICA-
9 TION.—On making the determination
10 described in clause (i), the Secretary
11 and the Secretary of State shall im-
12 mediately notify the Commission.

13 (IV) CONGRESSIONAL NOTIFICA-
14 TION.—Not later than 30 days after
15 the date on which the Secretary and
16 the Secretary of State notify the Com-
17 mission under subclause (III), the
18 Commission shall notify the appro-
19 priate committees of Congress of the
20 determination.

21 (V) PUBLIC NOTICE.—Not later
22 than 15 days after the date on which
23 the Commission notifies Congress
24 under subclause (IV) of a determina-
25 tion made under clause (i), the Com-

1 mission shall make that determination
2 publicly available.

3 (C) EFFECT OF NO DETERMINATION.—

4 The prohibition described in subparagraph (A)
5 shall not apply if the Secretary and the Sec-
6 retary of State do not make the determination
7 described in subparagraph (B) by the date de-
8 scribed in clause (iii)(II) of that subparagraph.

9 (d) SAVINGS CLAUSE.—Nothing in this section alters
10 any treaty or international agreement in effect on the date
11 of enactment of this Act.

12 **TITLE II—EXPANDING NUCLEAR**
13 **ENERGY THROUGH AD-**
14 **VANCED NUCLEAR TECH-**
15 **NOLOGIES**

16 **SEC. 201. ADVANCED NUCLEAR REACTOR PROJECT ENVI-**
17 **RONMENTAL REVIEWS.**

18 (a) DEFINITION OF ENVIRONMENTAL REVIEW PROC-
19 ESS.—In this section, the term “environmental review
20 process” means the environmental review activities carried
21 out by the Commission pursuant to part 51 of title 10,
22 Code of Federal Regulations (or successor regulations).

23 (b) REPORT.—Not later than 1 year after the date
24 on which the Commission issues the third operating or
25 combined license for an advanced nuclear reactor, the

1 Commission shall submit to the appropriate committees
2 of Congress a report that—

3 (1) describes—

4 (A) any differences between the environ-
5 mental review process for nuclear reactors li-
6 censed and in operation as of the date of enact-
7 ment of this Act and the environmental review
8 process for advanced nuclear reactors;

9 (B) ways in which the environmental re-
10 view process for advanced nuclear reactors
11 could be improved by reducing or eliminating
12 duplicative requirements or requirements that
13 are not applicable to advanced nuclear reactor
14 designs; and

15 (C) ways in which environmental regula-
16 tions other than those promulgated under the
17 National Environmental Policy Act of 1969 (42
18 U.S.C. 4321 et seq.) could be integrated into
19 the environmental review process for advanced
20 nuclear reactors to reduce the environmental
21 impacts of advanced nuclear reactors; and

22 (2) includes an assessment by the Commission
23 of whether it would be beneficial—

24 (A) to revise the applicable environmental
25 review process for advanced nuclear reactors; or

1 (B) to promulgate new regulations to es-
2 tablish a technology inclusive, risk-informed en-
3 vironmental review process for advanced nuclear
4 reactors.

5 **SEC. 202. ADVANCED NUCLEAR REACTOR PRIZES.**

6 Section 103 of the Nuclear Energy Innovation and
7 Modernization Act (Public Law 115–439; 132 Stat. 5571)
8 is amended by adding at the end the following:

9 “(f) PRIZES FOR ADVANCED NUCLEAR REACTOR LI-
10 CENSING.—

11 “(1) PRIZE FOR ADVANCED NUCLEAR REACTOR
12 LICENSING.—

13 “(A) IN GENERAL.—Subject to the avail-
14 ability of appropriations, the Secretary is au-
15 thorized to make, with respect to each award
16 category described in subparagraph (C), an
17 award in an amount described in subparagraph
18 (B) to the first non-Federal entity to which the
19 Commission issues—

20 “(i) an operating license for an ad-
21 vanced nuclear reactor under part 50 of
22 title 10, Code of Federal Regulations (or
23 successor regulations), for which an appli-
24 cation has not been approved by the Com-

1 mission as of the date of enactment of this
2 subsection; or

3 “(ii) a finding required under section
4 52.103(g) of title 10, Code of Federal Reg-
5 ulations (or successor regulations), for a
6 combined license for an advanced nuclear
7 reactor—

8 “(I) that is issued under subpart
9 C of part 52 that title (or successor
10 regulations); and

11 “(II) for which an application
12 has not been approved by the Com-
13 mission as of the date of enactment of
14 this subsection.

15 “(B) AMOUNT OF AWARD.—An award
16 under subparagraph (A) shall be in an amount
17 equal to the total amount assessed by the Com-
18 mission and collected under section 102(b)(2)
19 from the entity receiving the award for costs re-
20 lating to the issuance of the license described in
21 that subparagraph, including, as applicable,
22 costs relating to the issuance of an associated
23 construction permit described in section 50.23
24 of title 10, Code of Federal Regulations (or suc-
25 cessor regulations), or early site permit (as de-

1 fined in section 52.1 of that title (or successor
2 regulations)).

3 “(C) AWARD CATEGORIES.—An award
4 under subparagraph (A) may be made for—

5 “(i) the first advanced nuclear reactor
6 for which the Commission issues—

7 “(I) a license in accordance with
8 clause (i) of subparagraph (A); or

9 “(II) a finding in accordance
10 with clause (ii) of that subparagraph;

11 “(ii) an advanced nuclear reactor
12 that—

13 “(I) uses isotopes derived from
14 spent nuclear fuel (as defined in sec-
15 tion 2 of the Nuclear Waste Policy
16 Act of 1982 (42 U.S.C. 10101)) or
17 depleted uranium as fuel for the ad-
18 vanced nuclear reactor; and

19 “(II) is the first advanced nu-
20 clear reactor described in subclause
21 (I) for which the Commission issues—

22 “(aa) a license in accordance
23 with clause (i) of subparagraph
24 (A); or

1 “(bb) a finding in accord-
2 ance with clause (ii) of that sub-
3 paragraph; and

4 “(iii) an advanced nuclear reactor
5 that—

6 “(I) operates flexibly to generate
7 electricity or high temperature process
8 heat for nonelectric applications; and

9 “(II) is the first advanced nu-
10 clear reactor described in subclause
11 (I) for which the Commission issues—

12 “(aa) a license in accordance
13 with clause (i) of subparagraph
14 (A); or

15 “(bb) a finding in accord-
16 ance with clause (ii) of that sub-
17 paragraph.

18 “(2) FEDERAL FUNDING LIMITATION.—An
19 award under this subsection shall not exceed the
20 total amount expended (excluding any expenditures
21 made with Federal funds received for the applicable
22 project and an amount equal to the minimum cost-
23 share required under section 988 of the Energy Pol-
24 icy Act of 2005 (42 U.S.C. 16352)) by the entity re-

1 ceiving the award for licensing costs relating to the
2 project for which the award is made.”.

3 **SEC. 203. NEW NUCLEAR ENERGY PROJECT APPLICATION**
4 **REVIEWS.**

5 (a) PRODUCTION, UTILIZATION, OR FUEL FACILITY
6 LOCATED AT AN EXISTING SITE.—In reviewing an appli-
7 cation for an early site permit, construction permit, oper-
8 ating license, or combined construction permit and oper-
9 ating license for a production, utilization, or fuel facility
10 located at the site of a licensed production, utilization, or
11 fuel facility, the Commission, to the maximum extent prac-
12 ticable, shall use information that was part of the licensing
13 basis of the licensed production, utilization, or fuel facility.

14 (b) RELATIONSHIP TO OTHER LAW.—Nothing in this
15 section exempts the Commission from any requirement to
16 be fully compliant with section 102(2)(C) of the National
17 Environmental Policy Act of 1969 (42 U.S.C.
18 4332(2)(C)).

19 (c) USE OF NEW INFORMATION AND ANALYSES.—
20 Nothing in this section precludes the Commission from
21 using new information or new scientific or technical anal-
22 yses that are applicable to the review of an application
23 described in subsection (a).

1 **SEC. 204. REPORT ON UNIQUE LICENSING CONSIDER-**
2 **ATIONS RELATING TO THE USE OF NUCLEAR**
3 **ENERGY FOR NONELECTRIC APPLICATIONS.**

4 (a) IN GENERAL.—Not later than 1 year after the
5 date of enactment of this Act, the Commission shall sub-
6 mit to the appropriate committees of Congress a report
7 (referred to in this section as the “report”) addressing any
8 unique licensing issues or requirements relating to—

9 (1) the flexible operation of nuclear reactors,
10 such as ramping power output and switching be-
11 tween electricity generation and nonelectric applica-
12 tions;

13 (2) the use of advanced nuclear reactors exclu-
14 sively for nonelectric applications; and

15 (3) the colocation of nuclear reactors with in-
16 dustrial plants or other facilities.

17 (b) STAKEHOLDER INPUT.—In developing the report,
18 the Commission shall seek input from—

19 (1) the Secretary;

20 (2) the nuclear energy industry;

21 (3) technology developers;

22 (4) the industrial, chemical, and medical sec-
23 tors;

24 (5) nongovernmental organizations; and

25 (6) other public stakeholders.

26 (c) CONTENTS.—

1 (1) IN GENERAL.—The report shall describe—

2 (A) any unique licensing issues or require-
3 ments relating to the matters described in para-
4 graphs (1) through (3) of subsection (a), in-
5 cluding, with respect to the nonelectric applica-
6 tions referred to in paragraphs (1) and (2) of
7 that subsection, any licensing issues or require-
8 ments relating to the use of nuclear energy in—

9 (i) hydrogen or other liquid and gas-
10 eous fuel or chemical production;

11 (ii) water desalination and wastewater
12 treatment;

13 (iii) heat for industrial processes;

14 (iv) district heating;

15 (v) energy storage;

16 (vi) industrial or medical isotope pro-
17 duction; and

18 (vii) other applications, as identified
19 by the Commission;

20 (B) options for addressing those issues or
21 requirements—

22 (i) within the existing regulatory
23 framework;

24 (ii) as part of the technology-inclusive
25 regulatory framework required under sub-

1 section (a)(4) of section 103 of the Nuclear
2 Energy Innovation and Modernization Act
3 (42 U.S.C. 2133 note; Public Law 115–
4 439) or described in the report required
5 under subsection (e) of that section (Public
6 Law 115–439; 132 Stat. 5575); or

7 (iii) through a new rulemaking; and
8 (C) the extent to which Commission action
9 is needed to implement any matter described in
10 the report.

11 (2) COST ESTIMATES, BUDGETS, AND TIME-
12 FRAMES.—The report shall include cost estimates,
13 proposed budgets, and proposed timeframes for im-
14 plementing risk-informed and performance-based
15 regulatory guidance in the licensing of nuclear reac-
16 tors for nonelectric applications.

17 **SEC. 205. ENABLING PREPARATIONS FOR THE DEMONSTRA-**
18 **TION OF ADVANCED NUCLEAR REACTORS ON**
19 **DEPARTMENT SITES.**

20 (a) IN GENERAL.—Section 102(b)(1)(B) of the Nu-
21 clear Energy Innovation and Modernization Act (42
22 U.S.C. 2215(b)(1)(B)) (as amended by section 101(c)) is
23 amended by adding at the end the following:

24 “(v) Costs for—

1 “(I) activities to review and ap-
2 prove or disapprove an application for
3 an early site permit (as defined in sec-
4 tion 52.1 of title 10, Code of Federal
5 Regulations (or a successor regula-
6 tion)) to demonstrate an advanced nu-
7 clear reactor on a Department of En-
8 ergy site; and

9 “(II) pre-application activities re-
10 lating to an early site permit (as so
11 defined) to demonstrate an advanced
12 nuclear reactor on a Department of
13 Energy site.”.

14 (b) **EFFECTIVE DATE.**—The amendment made by
15 subsection (a) shall take effect on October 1, 2021.

16 **SEC. 206. REGULATORY REQUIREMENTS FOR MICRO-REAC-**
17 **TORS.**

18 (a) **IN GENERAL.**—The Commission shall develop
19 risk-informed and performance-based strategies and guid-
20 ance to support a timely and efficient licensing and regu-
21 latory process for micro-reactors that takes into consider-
22 ation—

23 (1) the unique characteristics of micro-reactors;
24 and

1 (2) the development timeframes of micro-reactors.
2

3 (b) IMPLEMENTATION.—The Commission shall implement the strategies and guidance developed under subsection (a)—
4
5

6 (1) not later than the date on which the technology-inclusive regulatory framework required under section 103(a)(4) of the Nuclear Energy Innovation and Modernization Act (42 U.S.C. 2133 note; Public Law 115–439) is established; and
7
8
9
10

11 (2) in a manner that is consistent with that technology-inclusive regulatory framework.
12

13 **TITLE III—PRESERVING EXISTING NUCLEAR ENERGY GENERATION**
14
15

16 **SEC. 301. NUCLEAR REACTOR INCENTIVES.**

17 (a) FINDINGS.—Congress finds that—

18 (1) as of December 31, 2019, 96 nuclear reactors provided approximately 20 percent of the electricity used in the United States and more than 55 percent of the carbon-free, clean energy used in the United States;
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20
21
22

23 (2) from 2013 through September 2020, 11 nuclear reactors ceased operation prior to the end of the operating licenses of those reactors;
24
25

1 (3) as of September 2020, an additional 8 nu-
2 clear reactors are scheduled to cease operations by
3 2025;

4 (4) 25 percent, or more, of the nuclear reactors
5 in the current nuclear fleet, primarily in the com-
6 petitive electricity market, are projected to cease op-
7 erations prior to the end of the operating licenses of
8 those reactors;

9 (5) emissions of carbon dioxide, nitrogen oxides,
10 sulfur oxides, particulate matter, and hazardous air
11 pollutants typically increase when a nuclear reactor
12 ceases operations; and

13 (6) a program to incentivize nuclear energy
14 generation to avoid emissions of carbon dioxide, ni-
15 trogen oxides, sulfur oxides, particulate matter, and
16 hazardous air pollutants offers substantial environ-
17 mental benefits to the United States.

18 (b) DEFINITIONS.—In this section:

19 (1) CERTIFIED NUCLEAR REACTOR.—The term
20 “certified nuclear reactor” means a nuclear reactor
21 that—

22 (A) operates in a competitive electricity
23 market; and

1 (B) is certified under subsection
2 (d)(2)(A)(i) to submit a sealed bid in accord-
3 ance with subsection (e).

4 (2) CREDIT.—The term “credit” means a credit
5 allocated to a certified nuclear reactor under sub-
6 section (f)(2).

7 (c) ESTABLISHMENT OF PROGRAM.—The Adminis-
8 trator, in consultation with the Secretary, shall establish
9 an emissions avoidance program—

10 (1) to evaluate nuclear reactors that are pro-
11 jected to cease operations due to economic factors;
12 and

13 (2) to allocate credits to certified nuclear reac-
14 tors that are selected under paragraph (1)(B) of
15 subsection (f) to receive credits under paragraph (2)
16 of that subsection.

17 (d) CERTIFICATION.—

18 (1) APPLICATION.—

19 (A) IN GENERAL.—In order to be certified
20 under paragraph (2)(A)(i), the owner or oper-
21 ator of a nuclear reactor that is projected to
22 cease operations due to economic factors shall
23 submit to the Administrator an application at
24 such time, in such manner, and containing such

1 information as the Administrator determines to
2 be appropriate, including—

3 (i) information on the operating costs
4 necessary to make the examination de-
5 scribed in paragraph (2)(A)(ii)(II), includ-
6 ing—

7 (I) the average annual operating
8 loss per megawatt-hour expected to be
9 incurred by the nuclear reactor over
10 the 2-year period for which credits
11 would be allocated;

12 (II) any private or publicly avail-
13 able data with respect to current or
14 projected bulk power market prices;

15 (III) out-of-market revenue
16 streams;

17 (IV) operations and maintenance
18 costs;

19 (V) capital costs, including fuel;
20 and

21 (VI) operational and market
22 risks;

23 (ii) an estimate of the potential incre-
24 mental emissions of carbon dioxide, nitro-
25 gen oxides, sulfur oxides, particulate mat-

1 ter, and hazardous air pollutants that
2 would result if the nuclear reactor were to
3 cease operations;

4 (iii) information on the source of re-
5 covered uranium and the location where
6 the uranium is converted, enriched, and
7 fabricated into fuel assemblies for the nu-
8 clear reactor for the 2-year period for
9 which credits would be allocated; and

10 (iv) a detailed plan to sustain oper-
11 ations at the conclusion of the applicable
12 2-year period for which credits would be
13 allocated—

14 (I) without receiving additional
15 credits; or

16 (II) with the receipt of additional
17 credits of a lower amount than the
18 credits allocated during that 2-year
19 credit period.

20 (B) TIMELINE.—The Administrator shall
21 accept applications described in subparagraph

22 (A)—

23 (i) until the date that is 120 days
24 after the date of enactment of this Act;
25 and

1 (ii) not less frequently than every 2
2 years thereafter.

3 (2) DETERMINATION TO CERTIFY.—

4 (A) DETERMINATION.—

5 (i) IN GENERAL.—Not later than 60
6 days after the applicable date under sub-
7 paragraph (B) of paragraph (1), the Ad-
8 ministrator, in consultation with the Sec-
9 retary, shall determine whether to certify,
10 in accordance with clauses (ii) and (iii),
11 each nuclear reactor for which an applica-
12 tion is submitted under subparagraph (A)
13 of that paragraph.

14 (ii) MINIMUM REQUIREMENTS.—To
15 the maximum extent practicable, the Ad-
16 ministrator, in consultation with the Sec-
17 retary, shall only certify a nuclear reactor
18 under clause (i) if—

19 (I) the nuclear reactor has a
20 good safety record, as determined by
21 the Action Matrix of the Commission
22 or the Performance Indicators of the
23 Reactor Oversight Process, such that
24 the nuclear reactor falls under the “li-

1 censee response” column indicating no
2 current significant safety issues;

3 (II) after considering the infor-
4 mation submitted under paragraph
5 (1)(A)(i), the Administrator deter-
6 mines that the nuclear reactor is pro-
7 jected to cease operations due to eco-
8 nomic factors; and

9 (III) after considering the esti-
10 mate submitted under paragraph
11 (1)(A)(ii), the Administrator deter-
12 mines that emissions of carbon diox-
13 ide, nitrogen oxides, sulfur oxides,
14 particulate matter, and hazardous air
15 pollutants would increase if the nu-
16 clear reactor were to cease operations
17 and be replaced with other types of
18 power generation.

19 (iii) PRIORITY.—In determining
20 whether to certify a nuclear reactor under
21 clause (i), the Administrator, in consulta-
22 tion with the Secretary, shall give priority
23 to a nuclear reactor that uses uranium
24 that is recovered, converted, enriched, and

1 fabricated into fuel assemblies in the
2 United States.

3 (B) NOTICE.—For each application re-
4 ceived under paragraph (1)(A), the Adminis-
5 trator, in consultation with the Secretary, shall
6 provide to the applicable owner or operator, as
7 applicable—

8 (i) a notice of the certification of the
9 applicable nuclear reactor; or

10 (ii) a notice that describes the reasons
11 why the certification of the applicable nu-
12 clear reactor was denied.

13 (e) BIDDING PROCESS.—

14 (1) IN GENERAL.—Subject to paragraph (2),
15 the Administrator shall establish a deadline by which
16 each certified nuclear reactor shall submit to the Ad-
17 ministrators a sealed bid that—

18 (A) describes the price per megawatt-hour
19 required to maintain operations of the certified
20 nuclear reactor during the 2-year period for
21 which the certified nuclear reactor would receive
22 credits; and

23 (B) includes a commitment, subject to the
24 receipt of credits, to provide a specific number

1 of megawatt-hours of generation during the 2-
2 year period for which credits would be allocated.

3 (2) REQUIREMENT.—The deadline established
4 under paragraph (1) shall be not later than 30 days
5 after the first date on which the Administrator has
6 made the determination described in paragraph
7 (2)(A)(i) of subsection (d) with respect to each ap-
8 plication submitted under paragraph (1)(A) of that
9 subsection.

10 (f) ALLOCATION.—

11 (1) AUCTION.—The Administrator, in consulta-
12 tion with the Secretary, shall—

13 (A) in consultation with the heads of appli-
14 cable Federal agencies, establish a process for
15 evaluating bids submitted under subsection
16 (e)(1) through an auction process; and

17 (B) select certified nuclear reactors to be
18 allocated credits.

19 (2) CREDITS.—Subject to subsection (g)(2), on
20 selection under paragraph (1), a certified nuclear re-
21 actor shall be allocated credits for a 2-year period
22 beginning on the date of the selection.

23 (3) REQUIREMENT.—To the maximum extent
24 practicable, the Administrator shall use the amounts
25 made available for credits under this section to allo-

1 cate credits to as many certified nuclear reactors as
2 possible.

3 (g) RENEWAL.—

4 (1) IN GENERAL.—The owner or operator of a
5 certified nuclear reactor may seek to recertify the
6 nuclear reactor in accordance with this section.

7 (2) LIMITATION.—Notwithstanding any other
8 provision of this section, the Administrator may not
9 allocate any credits after September 30, 2030.

10 (h) ADDITIONAL REQUIREMENTS.—

11 (1) AUDIT.—During the 2-year period begin-
12 ning on the date on which a certified nuclear reactor
13 first receives a credit, the Administrator, in con-
14 sultation with the Secretary, shall periodically audit
15 the certified nuclear reactor.

16 (2) RECAPTURE.—The Administrator shall, by
17 regulation, provide for the recapture of the alloca-
18 tion of any credit to a certified nuclear reactor that,
19 during the period described in paragraph (1)—

20 (A) terminates operations; or

21 (B) does not operate at an annual loss in
22 the absence of an allocation of credits to the
23 certified nuclear reactor.

24 (3) CONFIDENTIALITY.—The Administrator, in
25 consultation with the Secretary, shall establish pro-

1 cedures to ensure that any confidential, private, pro-
2 prietary, or privileged information that is included in
3 a sealed bid submitted under this section is not pub-
4 licly disclosed or otherwise improperly used.

5 (i) REPORT.—Not later than January 1, 2024, the
6 Comptroller General of the United States shall submit to
7 Congress a report with respect to the credits allocated to
8 certified nuclear reactors, which shall include—

9 (1) an evaluation of the effectiveness of the
10 credits in avoiding emissions of carbon dioxide, ni-
11 trogen oxides, sulfur oxides, particulate matter, and
12 hazardous air pollutants while ensuring grid reli-
13 ability;

14 (2) a quantification of the ratepayer savings
15 achieved under this section; and

16 (3) any recommendations to renew or expand
17 the credits.

18 (j) AUTHORIZATION OF APPROPRIATIONS.—There
19 are authorized to be appropriated such sums as are nec-
20 essary to carry out this section for each of fiscal years
21 2021 through 2030.

22 **SEC. 302. REPORT ON LESSONS LEARNED DURING THE**
23 **COVID-19 PUBLIC HEALTH EMERGENCY.**

24 (a) IN GENERAL.—Not later than 180 days after the
25 date of enactment of this Act, the Commission shall sub-

1 mit to the appropriate committees of Congress and make
2 publicly available a report on actions taken by the Com-
3 mission during the public health emergency declared by
4 the Secretary of Health and Human Services under sec-
5 tion 319 of the Public Health Service Act (42 U.S.C.
6 247d) on January 31, 2020, with respect to COVID–19.

7 (b) CONTENTS.—The report under subsection (a)
8 shall include—

9 (1) an identification of the processes, proce-
10 dures, and other regulatory policies that were re-
11 vised or temporarily suspended during the public
12 health emergency described in subsection (a);

13 (2) a review of actions, if any, taken by the
14 Commission that examines how any revision or tem-
15 porary suspension of a process, procedure, or other
16 regulatory policy identified under paragraph (1) may
17 or may not have compromised the ability of the
18 Commission to license and regulate the civilian use
19 of radioactive materials in the United States to pro-
20 tect public health and safety, promote the common
21 defense and security, and protect the environment;

22 (3) a description of any process efficiencies or
23 challenges that resulted from the matters identified
24 under paragraph (1);

1 (b) ENTITIES DESCRIBED.—An entity referred to in
2 subsection (a) is a corporation or other entity that is
3 owned, controlled, or dominated by—

4 (1) the government of—

5 (A) a country that is a member of the
6 North Atlantic Treaty Organization;

7 (B) Japan; or

8 (C) the Republic of Korea;

9 (2) a corporation that is incorporated in a
10 country described in any of subparagraphs (A)
11 through (C) of paragraph (1); or

12 (3) an alien who is a national of a country de-
13 scribed in any of subparagraphs (A) through (C) of
14 paragraph (1).

15 (c) TECHNICAL AMENDMENT.—Section 103 d. of the
16 Atomic Energy Act of 1954 (42 U.S.C. 2133(d)) is
17 amended, in the second sentence, by striking “any any”
18 and inserting “any”.

19 **TITLE IV—REVITALIZING AMER-**
20 **ICA’S NUCLEAR SUPPLY**
21 **CHAIN INFRASTRUCTURE**

22 **SEC. 401. ADVANCED NUCLEAR FUEL APPROVAL.**

23 (a) AGENCY COORDINATION.—

24 (1) IN GENERAL.—Not later than 1 year after
25 the date of enactment of this Act, the Chairman and

1 the Secretary shall enter into a memorandum of un-
2 derstanding relating to advanced nuclear fuels.

3 (2) MEMORANDUM OF UNDERSTANDING CON-
4 TENTS.—The memorandum of understanding en-
5 tered into under paragraph (1) shall require the De-
6 partment and the Commission to coordinate, as ap-
7 propriate—

8 (A) to ensure that the Department has
9 sufficient technical expertise to support the
10 timely research, development, demonstration,
11 and commercial application by the civilian nu-
12 clear industry of innovative advanced nuclear
13 fuels, including by facilitating the development
14 and sharing of criticality benchmark data to
15 support—

16 (i) the licensing of fuel enrichment,
17 deconversion, and fabrication facilities
18 for—

19 (I) advanced nuclear fuels con-
20 taining high-assay, low-enriched ura-
21 nium with an assay greater than 5
22 weight percent, but less than 10
23 weight percent, of the uranium-235
24 isotope; and

1 (II) advanced nuclear fuels con-
2 taining high-assay, low-enriched ura-
3 nium with an assay greater than or
4 equal to 10 weight percent, but less
5 than 20 weight percent, of the ura-
6 nium-235 isotope; and

7 (ii) the certification of transportation
8 packages for—

9 (I) advanced nuclear fuels con-
10 taining high-assay, low-enriched ura-
11 nium with an assay greater than 5
12 weight percent, but less than 10
13 weight percent, of the uranium-235
14 isotope; and

15 (II) advanced nuclear fuels con-
16 taining high-assay, low-enriched ura-
17 nium with an assay greater than or
18 equal to 10 weight percent, but less
19 than 20 weight percent, of the ura-
20 nium-235 isotope;

21 (B) to ensure that the Commission has
22 sufficient technical expertise to support the
23 evaluation of advanced nuclear fuels;

24 (C) to identify methods to improve the use
25 of computers and software codes to calculate

1 the behavior and performance of advanced nu-
2 clear fuels based on mathematical models of the
3 physical behavior of advanced nuclear fuels;

4 (D) to ensure that the Department main-
5 tains and develops the facilities necessary to en-
6 able the timely research, development, dem-
7 onstration, and commercial application by the
8 civilian nuclear industry of innovative advanced
9 nuclear fuels; and

10 (E) to ensure that the Commission has ac-
11 cess to the facilities described in subparagraph
12 (D), as needed.

13 (b) REPORTING REQUIREMENTS.—Not later than
14 180 days after the date of enactment of this Act, the Com-
15 mission shall submit to the appropriate committees of
16 Congress a report that—

17 (1) identifies criticality benchmark data to as-
18 sist—

19 (A) the licensing of fuel enrichment,
20 deconversion, and fabrication facilities for—

21 (i) advanced nuclear fuels containing
22 high-assay, low-enriched uranium with an
23 assay greater than 5 weight percent, but
24 less than 10 weight percent, of the ura-
25 nium-235 isotope; and

1 (ii) advanced nuclear fuels containing
2 high-assay, low-enriched uranium with an
3 assay greater than or equal to 10 weight
4 percent, but less than 20 weight percent,
5 of the uranium-235 isotope; and

6 (B) the certification of transportation
7 packages for—

8 (i) advanced nuclear fuels containing
9 high-assay, low-enriched uranium with an
10 assay greater than 5 weight percent, but
11 less than 10 weight percent, of the ura-
12 nium-235 isotope; and

13 (ii) advanced nuclear fuels containing
14 high-assay, low-enriched uranium with an
15 assay greater than or equal to 10 weight
16 percent, but less than 20 weight percent,
17 of the uranium-235 isotope;

18 (2) identifies and describes any updates to reg-
19 ulations, certifications, and other regulatory policies
20 that the Commission determines are necessary for li-
21 censing and oversight relating to high-assay, low-en-
22 riched uranium, including—

23 (A) certifications relating to transportation
24 packages for—

1 (i) high-assay, low-enriched uranium
2 with an assay greater than 5 weight per-
3 cent, but less than 10 weight percent, of
4 the uranium-235 isotope; and

5 (ii) high-assay, low-enriched uranium
6 with an assay greater than or equal to 10
7 weight percent, but less than 20 weight
8 percent, of the uranium-235 isotope; and

9 (B) licensing of fuel enrichment,
10 deconversion, and fabrication facilities for high-
11 assay, low-enriched uranium, and associated
12 physical security plans for those facilities;

13 (3) identifies and describes any updates to reg-
14 ulations, certifications, and other regulatory policies
15 that the Commission determines are necessary to ad-
16 dress nuclear nonproliferation considerations that—

17 (A) are within the mission of the Commis-
18 sion; and

19 (B) are associated with—

20 (i) high-assay, low-enriched uranium
21 with an assay greater than 5 weight per-
22 cent, but less than 10 weight percent, of
23 the uranium-235 isotope; or

24 (ii) high-assay, low-enriched uranium
25 with an assay greater than or equal to 10

1 weight percent, but less than 20 weight
2 percent, of the uranium-235 isotope;

3 (4) identifies and describes—

4 (A) any data needs, regulatory require-
5 ments, or policies identified under paragraph
6 (1), (2), or (3) that—

7 (i) differ based on whether they are
8 related to—

9 (I) high-assay, low-enriched ura-
10 nium with an assay greater than 5
11 weight percent, but less than 10
12 weight percent, of the uranium-235
13 isotope; or

14 (II) high-assay, low-enriched ura-
15 nium with an assay greater than or
16 equal to 10 weight percent, but less
17 than 20 weight percent, of the ura-
18 nium-235 isotope; or

19 (ii) are unique to—

20 (I) high-assay, low-enriched ura-
21 nium with an assay greater than 5
22 weight percent, but less than 10
23 weight percent, of the uranium-235
24 isotope; or

1 (II) high-assay, low-enriched ura-
2 nium with an assay greater than or
3 equal to 10 weight percent, but less
4 than 20 weight percent, of the ura-
5 nium-235 isotope;

6 (B) the manner in which the data needs,
7 regulatory requirements, or policies identified
8 under subparagraph (A)(i) differ as described
9 in that subparagraph; and

10 (C) the extent to which the data needs,
11 regulatory requirements, or policies identified
12 under subparagraph (A)(ii) are unique to ei-
13 ther—

14 (i) high-assay, low-enriched uranium
15 with an assay greater than 5 weight per-
16 cent, but less than 10 weight percent, of
17 the uranium-235 isotope; or

18 (ii) high-assay, low-enriched uranium
19 with an assay greater than or equal to 10
20 weight percent, but less than 20 weight
21 percent, of the uranium-235 isotope; and

22 (5) includes a timeline for completing the up-
23 dates described in paragraphs (2) and (3) within the
24 existing regulatory framework.

1 **SEC. 402. NATIONAL STRATEGIC URANIUM RESERVE.**

2 (a) DEFINITIONS.—In this section:

3 (1) PROGRAM.—The term “program” means
4 the program established under subsection (b)(1).

5 (2) URANIUM RESERVE.—The term “Uranium
6 Reserve” means the uranium reserve operated pur-
7 suant to the program.

8 (b) ESTABLISHMENT.—

9 (1) IN GENERAL.—Not later than 60 days after
10 the date of enactment of this Act, the Secretary,
11 subject to the availability of appropriations, shall es-
12 tablish a program to operate a uranium reserve in
13 accordance with this section.

14 (2) AUTHORITY.—In establishing the program
15 and operating the Uranium Reserve, the Secretary
16 shall use the authority granted to the Secretary by
17 sections 53, 63, and 161 g. of the Atomic Energy
18 Act of 1954 (42 U.S.C. 2073, 2093, 2201(g)).

19 (c) PURPOSES.—The purposes of the Uranium Re-
20 serve are—

21 (1) to provide assurance of the availability of
22 uranium recovered in the United States in the event
23 of a market disruption; and

24 (2) to support strategic fuel cycle capabilities in
25 the United States.

1 (d) EXCLUSION.—The Secretary shall exclude from
2 the Uranium Reserve uranium that is recovered in the
3 United States by an entity that—

4 (1) is owned or controlled by the Government of
5 the Russian Federation or the Government of the
6 People’s Republic of China; or

7 (2) is organized under the laws of, or otherwise
8 subject to the jurisdiction of, the Russian Federation
9 or the People’s Republic of China.

10 (e) ACQUISITION.—

11 (1) IN GENERAL.—The Secretary may acquire
12 for the Uranium Reserve only uranium recovered
13 from a facility described in paragraph (2), including,
14 subject to paragraph (3), uranium ore that has been
15 mined.

16 (2) FACILITIES DESCRIBED.—A facility referred
17 to in paragraph (1) is a facility that—

18 (A)(i) is licensed by the Commission as of
19 the date of enactment of this Act;

20 (ii) is not located on Tribal land; and

21 (iii) is not the subject of an enforcement
22 action that—

23 (I) was taken—

24 (aa) in response to a violation of
25 a regulation in part 40 of title 10,

1 Code of Federal Regulations (or suc-
2 cessor regulations); and

3 (bb) during the 1-year period
4 ending on the date on which the ura-
5 nium is acquired for the Uranium Re-
6 serve; and

7 (II) was characterized as “escalated
8 enforcement”; or

9 (B)(i) as of the date of enactment of this
10 Act, is licensed by a State that has entered into
11 an agreement with the Commission under sec-
12 tion 274 b. of the Atomic Energy Act of 1954
13 (42 U.S.C. 2021(b));

14 (ii) is not located on Tribal land; and

15 (iii) is not the subject of an enforcement
16 action that—

17 (I) was taken—

18 (aa) in response to a violation of
19 an applicable State requirement that
20 is compatible with the regulations of
21 the Commission in part 40 of title 10,
22 Code of Federal Regulations (or suc-
23 cessor regulations); and

24 (bb) during the 1-year period
25 ending on the date on which the ura-

1 uranium is acquired for the Uranium Re-
2 serve; and

3 (II) was subject to further administra-
4 tive actions, further orders, or the equiva-
5 lent of further administrative actions or or-
6 ders.

7 (3) REQUIREMENT.—

8 (A) IN GENERAL.—Except as provided in
9 subparagraph (B), with respect to any uranium
10 ore acquired by a facility described in para-
11 graph (2) that has been mined, the Secretary
12 may acquire for the Uranium Reserve only ura-
13 nium extracted from a conventional mine that
14 is not located on—

15 (i) Tribal land;

16 (ii) Federal land temporarily with-
17 drawn from location and entry pursuant to
18 the record of decision described in the no-
19 tice of availability entitled “Notice of
20 Availability of Record of Decision for the
21 Northern Arizona Proposed Withdrawal”
22 (77 Fed. Reg. 2317 (January 17, 2012));
23 or

24 (iii) Federal land that, as of October
25 1, 2020, is permanently withdrawn from

1 location and entry under sections 2319
2 through 2344 of the Revised Statutes
3 (commonly known as the “Mining Law of
4 1872”) (30 U.S.C. 22 et seq.).

5 (B) REMOVAL AND REMEDIAL ACTIONS.—

6 The Secretary may acquire for the Uranium
7 Reserve uranium recovered from material ob-
8 tained as a result of removal or remedial ac-
9 tions carried out on abandoned mine land lo-
10 cated on Tribal land.

11 (f) REQUEST FOR INFORMATION.—Not later than 90
12 days after the date of enactment of this Act, the Secretary
13 shall publish a request for information to help the Sec-
14 retary evaluate—

15 (1) options for the operation and management
16 of the Uranium Reserve;

17 (2) contractual mechanisms pursuant to which
18 the Secretary could acquire uranium; and

19 (3) the quantities, form, transportation, and
20 storage of uranium in the Uranium Reserve.

21 (g) BUDGET REQUEST.—For each fiscal year begin-
22 ning after the date of enactment of this Act, the Secretary
23 shall include in the budget justification submitted to Con-
24 gress pursuant to section 1105 of title 31, United States
25 Code—

1 (1) a request for amounts for the acquisition,
2 transportation, and storage of uranium in the Ura-
3 nium Reserve; or

4 (2) an explanation of why amounts are not re-
5 quested for the acquisition, transportation, or stor-
6 age of uranium in the Uranium Reserve.

7 **SEC. 403. REPORT ON ADVANCED METHODS OF MANUFAC-**
8 **TURING AND CONSTRUCTION FOR NUCLEAR**
9 **ENERGY APPLICATIONS.**

10 (a) IN GENERAL.—Not later than 180 days after the
11 date of enactment of this Act, the Commission shall sub-
12 mit to the appropriate committees of Congress a report
13 (referred to in this subsection as the “report”) on manu-
14 facturing and construction for nuclear energy applications.

15 (b) STAKEHOLDER INPUT.—In developing the report,
16 the Commission shall seek input from—

17 (1) the Secretary;

18 (2) the nuclear energy industry;

19 (3) National Laboratories;

20 (4) institutions of higher education;

21 (5) nuclear and manufacturing technology de-
22 velopers;

23 (6) the manufacturing and construction indus-
24 tries;

25 (7) standards development organizations;

- 1 (8) labor unions;
2 (9) nongovernmental organizations; and
3 (10) other public stakeholders.

4 (c) CONTENTS.—

5 (1) IN GENERAL.—The report shall—

6 (A) examine any unique licensing issues or
7 requirements relating to the use of innovative—

8 (i) advanced manufacturing processes;

9 and

10 (ii) advanced construction techniques;

11 (B) examine—

12 (i) the requirements for nuclear-grade
13 components in manufacturing and con-
14 struction for nuclear energy applications;

15 (ii) opportunities to use standard ma-
16 terials, parts, or components in manufac-
17 turing and construction for nuclear energy
18 applications; and

19 (iii) opportunities to use standard ma-
20 terials that are in compliance with existing
21 codes to provide acceptable approaches to
22 support or encapsulate new materials that
23 do not yet have applicable codes;

24 (C) identify any safety aspects of innova-
25 tive advanced manufacturing processes and ad-

1 vanced construction techniques that are not ad-
2 dressed by existing codes and standards, so that
3 generic guidance may be updated or created, as
4 necessary;

5 (D) identify options for addressing the
6 issues, requirements, and opportunities exam-
7 ined under subparagraphs (A) and (B)—

8 (i) within the existing regulatory
9 framework; or

10 (ii) through a new rulemaking; and

11 (E) describe the extent to which Commis-
12 sion action is needed to implement any matter
13 described in the report.

14 (2) COST ESTIMATES, BUDGETS, AND TIME-
15 FRAMES.—The report shall include cost estimates,
16 proposed budgets, and proposed timeframes for im-
17 plementing risk-informed and performance-based
18 regulatory guidance for manufacturing and construc-
19 tion for nuclear energy applications.

20 **TITLE V—MISCELLANEOUS**

21 **SEC. 501. NUCLEAR ENERGY WORKFORCE DEVELOPMENT.**

22 Section 313 of division C of the Omnibus Appropria-
23 tions Act, 2009 (42 U.S.C. 16274a) is amended—

24 (1) in subsection (b), in the matter preceding
25 paragraph (1), by striking “in each of fiscal years

1 2009 to 2019” and inserting “for each of fiscal
2 years 2021 through 2030,”; and

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

4 “(d) NUCLEAR ENERGY TRAINEESHIP SUBPRO-
5 GRAM.—

6 “(1) DEFINITIONS.—In this subsection:

7 “(A) COMMISSION.—The term ‘Commis-
8 sion’ means the Nuclear Regulatory Commis-
9 sion.

10 “(B) INSTITUTION OF HIGHER EDU-
11 CATION.—The term ‘institution of higher edu-
12 cation’ has the meaning given the term in sec-
13 tion 101(a) of the Higher Education Act of
14 1965 (20 U.S.C. 1001(a)).

15 “(C) NATIONAL LABORATORY.—The term
16 ‘National Laboratory’ has the meaning given
17 the term in section 2 of the Energy Policy Act
18 of 2005 (42 U.S.C 15801).

19 “(2) ESTABLISHMENT.—The Commission shall
20 establish, as a subprogram of the Integrated Univer-
21 sity Program established under this section, a work-
22 force development subprogram under which the
23 Commission, in coordination with institutions of
24 higher education and trade schools, shall competi-
25 tively award traineeships that provide focused train-

1 ing to meet critical mission needs of the Commission
2 and nuclear workforce needs, including needs relat-
3 ing to—

4 “(A) nuclear criticality safety; and

5 “(B) the nuclear tradecraft workforce.

6 “(3) REQUIREMENTS.—In carrying out the
7 workforce development program described in para-
8 graph (2), the Commission shall—

9 “(A) coordinate with the Secretary to
10 prioritize the funding of traineeships that focus
11 on—

12 “(i) nuclear workforce needs; and

13 “(ii) critical mission needs of the
14 Commission;

15 “(B) encourage appropriate partnerships
16 among—

17 “(i) National Laboratories;

18 “(ii) institutions of higher education;

19 “(iii) trade schools; and

20 “(iv) the nuclear energy industry; and

21 “(C) on an annual basis, evaluate nuclear
22 workforce needs for the purpose of imple-
23 menting traineeships in focused topical areas
24 that—

1 “(i) address the workforce needs of
2 that community; and

3 “(ii) support critical mission needs of
4 the Commission.”.

5 **SEC. 502. ANNUAL REPORT ON THE SPENT NUCLEAR FUEL**
6 **AND HIGH-LEVEL RADIOACTIVE WASTE IN-**
7 **VENTORY IN THE UNITED STATES.**

8 (a) DEFINITIONS.—In this section:

9 (1) HIGH-LEVEL RADIOACTIVE WASTE.—The
10 term “high-level radioactive waste” has the meaning
11 given the term in section 2 of the Nuclear Waste
12 Policy Act of 1982 (42 U.S.C. 10101).

13 (2) SPENT NUCLEAR FUEL.—The term “spent
14 nuclear fuel” has the meaning given the term in sec-
15 tion 2 of the Nuclear Waste Policy Act of 1982 (42
16 U.S.C. 10101).

17 (3) STANDARD CONTRACT.—The term “stand-
18 ard contract” has the meaning given the term “con-
19 tract” in section 961.3 of title 10, Code of Federal
20 Regulations (or a successor regulation).

21 (b) REPORT.—Not later than January 1, 2022, and
22 annually thereafter, the Secretary shall submit to Con-
23 gress a report that describes—

24 (1) the annual and cumulative amount of pay-
25 ments made by the United States to the holder of

1 a standard contract due to a partial breach of con-
2 tract under the Nuclear Waste Policy Act of 1982
3 (42 U.S.C. 10101 et seq.) resulting in financial
4 damages to the holder;

5 (2) the amount spent by the Department to re-
6 duce future payments projected to be made by the
7 United States to any holder of a standard contract
8 due to a partial breach of contract under the Nu-
9 clear Waste Policy Act of 1982 (42 U.S.C. 10101 et
10 seq.);

11 (3) the cumulative amount spent by the Depart-
12 ment to store, manage, and dispose of spent nuclear
13 fuel and high-level radioactive waste in the United
14 States as of the date of the report;

15 (4) the projected lifecycle costs to store, man-
16 age, transport, and dispose of the projected inven-
17 tory of spent nuclear fuel and high-level radioactive
18 waste in the United States, including spent nuclear
19 fuel and high-level radioactive waste expected to be
20 generated from existing reactors through 2050;

21 (5) any mechanisms for better accounting of li-
22 abilities for the lifecycle costs of the spent nuclear
23 fuel and high-level radioactive waste inventory in the
24 United States; and

1 (6) any recommendations for improving the
2 methods used by the Department for the accounting
3 of spent nuclear fuel and high-level radioactive waste
4 costs and liabilities.

5 **SEC. 503. AUTHORIZATION OF APPROPRIATIONS FOR**
6 **SUPERFUND ACTIONS AT ABANDONED MIN-**
7 **ING SITES ON TRIBAL LAND.**

8 (a) DEFINITIONS.—In this section:

9 (1) ELIGIBLE NON-NPL SITE.—The term “eli-
10 gible non-NPL site” means a site that—

11 (A) is not on the National Priorities List;

12 but

13 (B) the Administrator determines would be
14 eligible for listing on the National Priorities
15 List based on the presence of hazards from con-
16 tamination at the site, applying the hazard
17 ranking system described in section 105(c) of
18 the Comprehensive Environmental Response,
19 Compensation, and Liability Act of 1980 (42
20 U.S.C. 9605(c)).

21 (2) INDIAN TRIBE.—The term “Indian Tribe”
22 has the meaning given the term “Indian tribe” in
23 section 101 of the Comprehensive Environmental
24 Response, Compensation, and Liability Act of 1980
25 (42 U.S.C. 9601).

1 (3) NATIONAL PRIORITIES LIST.—The term
2 “National Priorities List” means the National Prior-
3 ities List developed by the President in accordance
4 with section 105(a)(8)(B) of the Comprehensive En-
5 vironmental Response, Compensation, and Liability
6 Act of 1980 (42 U.S.C. 9605(a)(8)(B)).

7 (b) AUTHORIZATION OF APPROPRIATIONS.—There is
8 authorized to be appropriated to the Administrator to
9 carry out this section \$100,000,000 for each of fiscal
10 years 2021 through 2030, to remain available until ex-
11 pended.

12 (c) USES OF AMOUNTS.—Amounts appropriated
13 under subsection (b) shall be used by the Administrator—

14 (1) to carry out removal actions on abandoned
15 mine land located on Tribal land;

16 (2) to carry out remedial actions on abandoned
17 mine land located on Tribal land at—

18 (A) eligible non-NPL sites; and

19 (B) sites listed on the National Priorities
20 List; and

21 (3) to make grants under subsection (e).

22 (d) HEALTH ASSESSMENTS.—Subject to the avail-
23 ability of appropriations, the Agency for Toxic Substances
24 and Disease Registry, in coordination with Tribal health
25 authorities, shall perform 1 or more health assessments

1 at each eligible non-NPL site that is located on Tribal
2 land.

3 (e) GRANTS FOR TECHNICAL ASSISTANCE.—

4 (1) IN GENERAL.—The Administrator may use
5 amounts appropriated under subsection (b) to make
6 grants to Indian Tribes on whose land is located an
7 eligible non-NPL site.

8 (2) USE OF GRANT FUNDS.—A grant under
9 paragraph (1) shall be used in accordance with the
10 second sentence of section 117(e)(1) of the Com-
11 prehensive Environmental Response, Compensation,
12 and Liability Act of 1980 (42 U.S.C. 9617(e)(1)).

13 (3) LIMITATIONS.—A grant under paragraph
14 (1) shall be governed by the rules, procedures, and
15 limitations described in section 117(e)(2) of the
16 Comprehensive Environmental Response, Compensa-
17 tion, and Liability Act of 1980 (42 U.S.C.
18 9617(e)(2)), except that—

19 (A) “Administrator of the Environmental
20 Protection Agency” shall be substituted for
21 “President” each place it appears in that sec-
22 tion; and

23 (B) in the first sentence of that section,
24 “under section 503 of the American Nuclear In-

1 frastructure Act of 2020” shall be substituted
2 for “under this subsection”.

3 (f) STATUTE OF LIMITATIONS.—If a remedial action
4 described in subsection (c)(2) is scheduled at an eligible
5 non-NPL site, no action may be commenced for damages
6 (as defined in section 101 of the Comprehensive Environ-
7 mental Response, Compensation, and Liability Act of
8 1980 (42 U.S.C. 9601)) with respect to that eligible non-
9 NPL site unless the action is commenced within the time-
10 frame provided for such actions with respect to facilities
11 on the National Priorities List in the first sentence of the
12 matter following subparagraph (B) of section 113(g)(1)
13 of that Act (42 U.S.C. 9613(g)(1)).

14 (g) COORDINATION.—The Administrator shall coordi-
15 nate with the Indian Tribe on whose land the applicable
16 site is located in—

17 (1) selecting and prioritizing sites for removal
18 actions and remedial actions under paragraphs (1)
19 and (2) of subsection (c); and

20 (2) carrying out those removal actions and re-
21 medial actions.

22 **SEC. 504. TECHNICAL CORRECTION.**

23 Section 104 c. of the Atomic Energy Act of 1954 (42
24 U.S.C. 2134(c)) is amended—

1 (1) by striking the third sentence and inserting
2 the following:

3 “(3) LIMITATION ON UTILIZATION FACILI-
4 TIES.—The Commission may issue a license under
5 this section for a utilization facility useful in the
6 conduct of research and development activities of the
7 types specified in section 31 if—

8 “(A) not more than 75 percent of the an-
9 nual costs to the licensee of owning and oper-
10 ating the facility are devoted to the sale, other
11 than for research and development or education
12 and training, of—

13 “(i) nonenergy services;

14 “(ii) energy; or

15 “(iii) a combination of nonenergy
16 services and energy; and

17 “(B) not more than 50 percent of the an-
18 nual costs to the licensee of owning and oper-
19 ating the facility are devoted to the sale of en-
20 ergy.”;

21 (2) in the second sentence, by striking “The
22 Commission” and inserting the following:

23 “(2) REGULATION.—The Commission”; and

24 (3) by striking “c. The Commission” and in-
25 serting the following:

1 “c. RESEARCH AND DEVELOPMENT ACTIVITIES.—
2 “(1) IN GENERAL.—Subject to paragraphs (2)
3 and (3), the Commission”.