

107TH CONGRESS
1ST SESSION

S. 472

To ensure that nuclear energy continues to contribute to the supply of
electricity in the United States.

IN THE SENATE OF THE UNITED STATES

MARCH 7, 2001

Mr. DOMENICI (for himself, Mrs. LINCOLN, Mr. MURKOWSKI, Ms. LANDRIEU, Mr. CRAIG, Mr. KYL, Mr. CRAPO, Mr. GRAHAM, Mr. THOMPSON, Mr. VOINOVICH, Mr. HAGEL, and Mr. INHOFE) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To ensure that nuclear energy continues to contribute to
the supply of electricity in the United States.

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 “Nuclear Energy Electricity Supply Assurance Act of
6 2001”.

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

Sec. 1. Short title; table of contents.
Sec. 2. Findings.

Sec. 3. Definitions.

TITLE I—SUPPORT FOR CONTINUED USE OF NUCLEAR ENERGY

Subtitle A—Price-Anderson Amendments

- Sec. 101. Short title.
- Sec. 102. Indemnification authority.
- Sec. 103. Maximum assessment.
- Sec. 104. Department of Energy liability limit.
- Sec. 105. Incidents outside the United States.
- Sec. 106. Reports.
- Sec. 107. Inflation adjustment.
- Sec. 108. Civil penalties.
- Sec. 109. Applicability.

Subtitle B—Leadership of the Office of Nuclear Energy, Science, and Technology and the Office of Science

- Sec. 111. Assistant Secretaries.

Subtitle C—Funding of Certain Department of Energy Programs

- Sec. 121. Establishment of programs.
- Sec. 122. Nuclear energy research initiative.
- Sec. 123. Nuclear energy plant optimization program.
- Sec. 124. Upgrading of nuclear plant operations.
- Sec. 125. University programs.
- Sec. 126. Prohibition of commercial sales of uranium and conversion held by the Department of Energy until 2006.
- Sec. 127. Cooperative research and development and special demonstration projects for the uranium mining industry.
- Sec. 128. Maintenance of a viable domestic uranium conversion industry.
- Sec. 129. Portsmouth gaseous diffusion plant.
- Sec. 130. Nuclear generation report.

TITLE II—CONSTRUCTION OF NUCLEAR PLANTS

- Sec. 201. Establishment of programs.
- Sec. 202. Nuclear plant completion initiative.
- Sec. 203. Early site permit demonstration program.
- Sec. 204. Nuclear energy technology study for Generation IV Reactors.
- Sec. 205. Research supporting regulatory processes for new reactor technologies and designs.

TITLE III—EVALUATIONS OF NUCLEAR ENERGY

- Sec. 301. Environmentally preferable purchasing.
- Sec. 302. Emission-free control measures under a State implementation plan.
- Sec. 303. Prohibition of discrimination against emission-free electricity projects in international development programs.

TITLE IV—DEVELOPMENT OF NATIONAL SPENT NUCLEAR FUEL STRATEGY

- Sec. 401. Findings.
- Sec. 402. Office of spent nuclear fuel research.
- Sec. 403. Advanced fuel recycling technology development program.

TITLE V—NATIONAL ACCELERATOR SITE

- Sec. 501. Findings.
- Sec. 502. Definitions.
- Sec. 503. Advanced Accelerator Applications Program.

TITLE VI—NUCLEAR REGULATORY COMMISSION REFORM

- Sec. 601. Definitions.
- Sec. 602. Office location.
- Sec. 603. License period.
- Sec. 604. Elimination of foreign ownership restrictions.
- Sec. 605. Elimination of duplicative antitrust review.
- Sec. 606. Gift acceptance authority.
- Sec. 607. Authority over former licensees for decommissioning funding.
- Sec. 608. Carrying of firearms by licensee employees.
- Sec. 609. Cost recovery from Government agencies.
- Sec. 610. Hearing procedures.
- Sec. 611. Unauthorized introduction of dangerous weapons.
- Sec. 612. Sabotage of nuclear facilities or fuel.
- Sec. 613. Nuclear decommissioning obligations of nonlicensees.
- Sec. 614. Effective date.

1 **SEC. 2. FINDINGS.**

2 Congress finds that—

3 (1) the standard of living for citizens of the
 4 United States is linked to the availability of reliable,
 5 low-cost, energy supplies;

6 (2) personal use patterns, manufacturing proc-
 7 esses, and advanced cyber information all fuel in-
 8 creases in the demand for electricity;

9 (3) demand-side management, while important,
 10 is not likely to halt the increase in energy demand;

11 (4)(A) nuclear power is the largest producer of
 12 essentially emission-free electricity;

13 (B) nuclear energy is one of the few energy
 14 sources that controls all pollutants;

1 (C) nuclear plants are demonstrating excellent
2 reliability as the plants produce power at low cost
3 with a superb safety record; and

4 (D) the generation costs of nuclear power are
5 not subject to price fluctuations of fossil fuels be-
6 cause nuclear fuels can be mined domestically or
7 purchased from reliable trading partners;

8 (5) requirements for new highly reliable base-
9 load generation capacity coupled with increasing en-
10 vironmental concerns and limited long-term avail-
11 ability of fossil fuels require that the United States
12 preserve the nuclear energy option into the future;

13 (6) to ensure the reliability of electricity supply
14 and delivery, the United States needs programs to
15 encourage the extended or more efficient operation
16 of currently existing nuclear plants and the con-
17 struction of new nuclear plants;

18 (7) a qualified workforce is a prerequisite to
19 continued safe operation of—

20 (A) nuclear plants;

21 (B) the nuclear navy;

22 (C) programs dealing with high-level or
23 low-level waste from civilian or defense facili-
24 ties; and

1 (D) research and medical uses of nuclear
2 technologies;

3 (8) uncertainty surrounding the costs associ-
4 ated with regulatory approval for siting, con-
5 structing, and operating nuclear plants confuses the
6 economics for new plant investments;

7 (9) to ensure the long-term reliability of sup-
8 plies of nuclear fuel, the United States must ensure
9 that the domestic uranium mining, conversion, and
10 enrichment service industries remain viable;

11 (10)(A) technology developed in the United
12 States and worldwide, broadly labeled as the Genera-
13 tion IV Reactor, is demonstrating that new designs
14 of nuclear reactors are feasible;

15 (B) plants using the new designs would have
16 improved safety, minimized proliferation risks, re-
17 duced spent fuel, and much lower costs; and

18 (C)(i) the nuclear facility infrastructure needed
19 to conduct nuclear energy research and development
20 in the United States has been allowed to erode over
21 the past decade; and

22 (ii) that infrastructure must be restored to sup-
23 port development of Generation IV nuclear energy
24 systems;

1 (11)(A) to ensure the long-term viability of nu-
2 clear power, the public must be confident that final
3 waste forms resulting from spent fuel are controlled
4 so as to have negligible impact on the environment;
5 and

6 (B) continued research on repositories, and on
7 approaches to mitigate the toxicity of materials en-
8 tering any future repository, would serve that public
9 interest; and

10 (12)(A) the Nuclear Regulatory Commission
11 must continue its stewardship of the safety of our
12 nuclear industry;

13 (B) at the same time, the Commission must
14 streamline processes wherever possible to provide
15 timely responses to a wide range of safety, upgrade,
16 and licensing issues;

17 (C) the Commission should conduct research on
18 new reactor technologies to support future regu-
19 latory decisions; and

20 (D) a revision of certain Commission proce-
21 dures would assist in more timely processing of li-
22 cense applications and other requests for regulatory
23 action.

24 **SEC. 3. DEFINITIONS.**

25 In this Act:

1 (1) COMMISSION.—The term “Commission”
2 means the Nuclear Regulatory Commission.

3 (2) EARLY SITE PERMIT.—The term “Early
4 Site Permit” means a permit for a site to be a fu-
5 ture location for a nuclear plant under subpart A of
6 part 52 of title 10, Code of Federal Regulations.

7 (3) NUCLEAR PLANT.—The term “nuclear
8 plant” means a nuclear energy facility that gen-
9 erates electricity.

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

12 **TITLE I—SUPPORT FOR CONTIN-**
13 **UED USE OF NUCLEAR EN-**
14 **ERGY**

15 **Subtitle A—Price-Anderson**
16 **Amendments**

17 **SEC. 101. SHORT TITLE.**

18 This subtitle may be cited as the “Price-Anderson
19 Amendments Act of 2001”.

20 **SEC. 102. INDEMNIFICATION AUTHORITY.**

21 (a) INDEMNIFICATION OF NUCLEAR REGULATORY
22 COMMISSION LICENSEES.—Section 170c. of the Atomic
23 Energy Act of 1954 (42 U.S.C. 2210(c)) is amended—

24 (1) in the subsection heading, by striking “LI-
25 CENSES” and inserting “LICENSEES”; and

1 (2) by striking “August 1, 2002” each place it
2 appears and inserting “August 1, 2012”.

3 (b) INDEMNIFICATION OF DEPARTMENT OF ENERGY
4 CONTRACTORS.—Section 170d.(1)(A) of the Atomic En-
5 ergy Act of 1954 (42 U.S.C. 2210(d)(1)(A)) is amended
6 by striking “, until August 1, 2002,”.

7 (c) INDEMNIFICATION OF NONPROFIT EDUCATIONAL
8 INSTITUTIONS.—Section 170k. of the Atomic Energy Act
9 of 1954 (42 U.S.C. 2210(k)) is amended by striking “Au-
10 gust 1, 2002” each place it appears and inserting “August
11 1, 2012”.

12 **SEC. 103. MAXIMUM ASSESSMENT.**

13 Section 170b.(1) of the Atomic Energy Act of 1954
14 (42 U.S.C. 2210(b)(1)) is amended in the second proviso
15 of the third sentence by striking “\$10,000,000” and in-
16 serting “\$20,000,000”.

17 **SEC. 104. DEPARTMENT OF ENERGY LIABILITY LIMIT.**

18 (a) AGGREGATE LIABILITY LIMIT.—Section 170d. of
19 the Atomic Energy Act of 1954 (42 U.S.C. 2210(d)) is
20 amended by striking paragraph (2) and inserting the fol-
21 lowing:

22 “(2) LIABILITY LIMIT.—In an agreement of in-
23 demnification entered into under paragraph (1), the
24 Secretary—

“(A) may require the contractor to provide and maintain the financial protection of such a type and in such amounts as the Secretary shall determine to be appropriate to cover public liability arising out of or in connection with the contractual activity; and

“(B) shall indemnify the persons indemnified against such claims above the amount of the financial protection required, in the amount of \$10,000,000,000 (subject to adjustment for inflation under subsection t.), in the aggregate, for all persons indemnified in connection with the contract and for each nuclear incident, including such legal costs of the contractor as are approved by the Secretary.”.

(b) CONTRACT AMENDMENTS.—Section 170d. of the Atomic Energy Act of 1954 (42 U.S.C. 2210(d)) is amended by striking paragraph (3) and inserting the following:

“(3) CONTRACT AMENDMENTS.—All agreements of indemnification under which the Department of Energy (or its predecessor agencies) may be required to indemnify any person, shall be deemed to be amended, on the date of enactment of the Price-Anderson Amendments Act of 2001, to reflect the

1 amount of indemnity for public liability and any ap-
 2 plicable financial protection required of the con-
 3 tractor under this subsection on that date.”.

4 **SEC. 105. INCIDENTS OUTSIDE THE UNITED STATES.**

5 (a) AMOUNT OF INDEMNIFICATION.—Section
 6 170d.(5) of the Atomic Energy Act of 1954 (42 U.S.C.
 7 2210(d)(5)) is amended by striking “\$100,000,000” and
 8 inserting “\$500,000,000”.

9 (b) LIABILITY LIMIT.—Section 170e.(4) of the Atom-
 10 ic Energy Act of 1954 (42 U.S.C. 2210(e)(4)) is amended
 11 by striking “\$100,000,000” and inserting
 12 “\$500,000,000”.

13 **SEC. 106. REPORTS.**

14 Section 170p. of the Atomic Energy Act of 1954 (42
 15 U.S.C. 2210(p)) is amended by striking “August 1, 1998”
 16 and inserting “August 1, 2008”.

17 **SEC. 107. INFLATION ADJUSTMENT.**

18 Section 170t. of the Atomic Energy Act of 1954 (42
 19 U.S.C. 2210(t)) is amended—

20 (1) by designating paragraph (2) as paragraph
 21 (3); and

22 (2) by adding after paragraph (1) the following:

23 “(2) ADJUSTMENT.—The Secretary shall adjust
 24 the amount of indemnification provided under an
 25 agreement of indemnification under subsection d.

1 not less than once during each 5-year period fol-
 2 lowing the date of enactment of the Price-Anderson
 3 Amendments Act of 2001, in accordance with the
 4 aggregate percentage change in the Consumer Price
 5 Index since—

6 “(A) that date of enactment, in the case of
 7 the first adjustment under this subsection; or

8 “(B) the previous adjustment under this
 9 subsection.”.

10 **SEC. 108. CIVIL PENALTIES.**

11 (a) REPEAL OF AUTOMATIC REMISSION.—Section
 12 234Ab.(2) of the Atomic Energy Act of 1954 (42 U.S.C.
 13 2282a(b)(2)) is amended by striking the last sentence.

14 (b) LIMITATION FOR NONPROFIT INSTITUTIONS.—
 15 Section 234A of the Atomic Energy Act of 1954 (42
 16 U.S.C. 2282a) is amended by striking subsection d. and
 17 inserting the following:

18 “d. Notwithstanding subsection a., no contractor,
 19 subcontractor, or supplier of the Department of Energy
 20 that is an organization described in section 501(c)(3) of
 21 the Internal Revenue Code of 1986 that is exempt from
 22 taxation under section 501(a) of the Code shall be subject
 23 to a civil penalty under this section in any fiscal year in
 24 excess of the amount of any performance fee paid by the
 25 Secretary during that fiscal year to the contractor, sub-

4 (a) INDEMNIFICATION PROVISIONS.—The amend-
5 ments made by sections 103, 104, and 105 do not apply
6 to a nuclear incident that occurs before the date of enact-
7 ment of this Act.

12 **Subtitle B—Leadership of the Of-**
13 **fice of Nuclear Energy, Science,**
14 **and Technology and the Office**
15 **of Science**

(a) IN GENERAL.—Section 203(a) of the Department of Energy Organization Act (42 U.S.C. 7133(a)) is amended in the matter preceding paragraph (1) by striking “eight” and inserting “ten”.

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1 (1) to one of the Assistant Secretaries, the
2 functions performed by the Director of the Office of
3 Science as of the date of enactment of this Act; and
4 (2) to the other, the functions performed by the
5 Director of the Office of Nuclear Energy, Science,
6 and Technology as of that date.

7 **Subtitle C—Funding of Certain**
8 **Department of Energy Programs**

9 **SEC. 121. ESTABLISHMENT OF PROGRAMS.**

10 The Secretary shall establish or continue programs
11 administered by the Office of Nuclear Energy, Science,
12 and Technology to—

13 (1) support the Nuclear Energy Research Ini-
14 tiative, the Nuclear Energy Plant Optimization Pro-
15 gram, and the Nuclear Energy Technology Program;

16 (2) encourage investments to increase the elec-
17 tricity capacity at commercial nuclear plants in ex-
18 istence on the date of enactment of this Act;

19 (3) ensure continued viability of a domestic ca-
20 pability for uranium mining, conversion, and enrich-
21 ment industries; and

22 (4) support university nuclear engineering edu-
23 cation research and infrastructure programs, includ-
24 ing closely related specialties such as health physics,
25 actinide chemistry, and material sciences.

1 **SEC. 122. NUCLEAR ENERGY RESEARCH INITIATIVE.**

2 (a) AUTHORIZATION OF APPROPRIATIONS.—There
3 are authorized to be appropriated to the Secretary, for a
4 Nuclear Energy Research Initiative to be managed by the
5 Director of the Office of Nuclear Energy, Science, and
6 Technology for grants to be competitively awarded and
7 subject to peer review for research relating to nuclear
8 energy—

9 (1) \$60,000,000 for fiscal year 2002; and

10 (2) such sums as are necessary for fiscal years
11 2003 through 2006.

12 (b) REPORTS.—The Secretary shall submit to the
13 Committee on Science and the Committee on Appropria-
14 tions of the House of Representatives, and to the Com-
15 mittee on Energy and Natural Resources and the Com-
16 mittee on Appropriations of the Senate an annual report
17 on the activities of the Nuclear Energy Research Initia-
18 tive.

19 **SEC. 123. NUCLEAR ENERGY PLANT OPTIMIZATION PRO-**
20 **GRAM.**

21 (a) AUTHORIZATION OF APPROPRIATIONS.—There
22 are authorized to be appropriated to the Secretary for a
23 Nuclear Energy Plant Optimization Program to be man-
24 aged by the Director of the Office of Nuclear Energy,
25 Science, and Technology for a joint program with industry
26 cost-shared by at least 50 percent and subject to annual

1 review by the Secretary of Energy's Nuclear Energy Re-
2 search Advisory Committee—

3 (1) \$15,000,000 for fiscal year 2002; and

4 (2) such sums as are necessary for fiscal years
5 2003 through 2006.

6 (b) REPORTS.—The Secretary shall submit to the
7 Committee on Science and the Committee on Appropria-
8 tions of the House of Representatives, and to the Com-
9 mittee on Energy and Natural Resources and the Com-
10 mittee on Appropriations of the Senate an annual report
11 on the activities of the Nuclear Energy Plant Optimization
12 Program.

13 **SEC. 124. UPRATING OF NUCLEAR PLANT OPERATIONS.**

14 (a) IN GENERAL.—The Secretary, to the extent funds
15 are available, shall reimburse costs incurred by a licensee
16 of a nuclear plant as provided in this section.

17 (b) PAYMENT OF COMMISSION USER FEES.—In car-
18 rying out subsection (a), the Secretary shall reimburse all
19 user fees incurred by a licensee of a nuclear plant for ob-
20 taining the approval of the Commission to achieve a per-
21 manent increase in the rated electricity capacity of the li-
22 censee's nuclear plant if the licensee achieves the increased
23 capacity before December 31, 2004.

1 (c) PREFERENCE.—Preference shall be given by the
 2 Secretary to projects in which a single uprating operation
 3 can benefit multiple domestic nuclear power reactors.

4 (d) INCENTIVE PAYMENTS.—

5 (1) IN GENERAL.—In addition to payments
 6 made under subsection (a), the Secretary shall offer
 7 an incentive payment equal to 10 percent of the cap-
 8 ital improvement cost resulting in a permanent in-
 9 crease of at least 5 percent in the rated electricity
 10 capacity of the licensee’s nuclear plant if the licensee
 11 achieves the increased capacity rating before Decem-
 12 ber 31, 2004.

13 (2) LIMITATION.—No incentive payment under
 14 paragraph (1) associated with any single nuclear
 15 unit shall exceed \$1,000,000.

16 (e) AUTHORIZATION OF APPROPRIATIONS.—There is
 17 authorized to be appropriated to carry out this section
 18 \$15,000,000 for each of fiscal years 2002 and 2003.

19 **SEC. 125. UNIVERSITY PROGRAMS.**

20 (a) IN GENERAL.—The Secretary may, as provided
 21 in this section, provide grants and other forms of payment
 22 to further the national goal of producing well-educated
 23 graduates in nuclear engineering and closely related spe-
 24 cialties that support nuclear energy programs such as
 25 health physics, actinide chemistry, and material sciences.

1 (b) SUPPORT FOR UNIVERSITY RESEARCH REAC-
 2 TORS.—The Secretary may provide grants and other
 3 forms of payments for plant upgrading to universities in
 4 the United States that operate and maintain nuclear re-
 5 search reactors.

6 (c) SUPPORT FOR UNIVERSITY RESEARCH AND DE-
 7 VELOPMENT.—The Secretary may provide grants and
 8 other forms of payment for research and development
 9 work by faculty, staff, and students associated with nu-
 10 clear engineering programs and closely related specialties
 11 at universities in the United States.

12 (d) SUPPORT FOR NUCLEAR ENGINEERING STU-
 13 DENTS AND FACULTY.—The Secretary may provide fel-
 14 lowships, scholarships, and other support to students and
 15 to departments of nuclear engineering and closely related
 16 specialties at universities in the United States.

17 (e) AUTHORIZATION OF APPROPRIATIONS.—There
 18 are authorized to be appropriated to carry out this
 19 section—

20 (1) \$34,200,000 for fiscal year 2002, of
 21 which—

22 (A) \$13,000,000 shall be available to carry
 23 out subsection (b);

24 (B) \$10,200,000 shall be available to carry
 25 out subsection (c) of which not less than

1 \$2,000,000 shall be available to support health
2 physics programs; and

3 (C) \$11,000,000 shall be available to carry
4 out subsection (d) of which not less than
5 \$2,000,000 shall be available to support health
6 physics programs; and

7 (2) such sums as are necessary for subsequent
8 fiscal years.

9 **SEC. 126. PROHIBITION OF COMMERCIAL SALES OF URA-**
10 **NIUM AND CONVERSION HELD BY THE DE-**
11 **PARTMENT OF ENERGY UNTIL 2006.**

12 Section 3112(b) of the USEC Privatization Act (42
13 U.S.C. 2297h–10(b)) is amended by striking paragraph
14 (2) and inserting the following:

15 “(2) SALE OF URANIUM HEXAFLUORIDE.—

16 “(A) IN GENERAL.—The Secretary shall—

17 “(i) sell and receive payment for the
18 uranium hexafluoride transferred to the
19 Secretary under paragraph (1); and

20 “(ii) refrain from sales of its surplus
21 natural uranium and conversion services
22 through 2006 (except sales or transfers to
23 the Tennessee Valley Authority in relation
24 to the Department’s HEU or Tritium pro-
25 grams, minor quantities associated with

1 site cleanup projects, or the Department of
2 Energy research reactor sales program).

3 “(B) REQUIREMENTS.—Under subpara-
4 graph (A)(i), uranium hexafluoride shall be
5 sold—

6 “(i) in 1995 and 1996 to the Russian
7 Executive Agent at the purchase price for
8 use in matched sales pursuant to the Sus-
9 pension Agreement; or

10 “(ii) in 2006 for consumption by end
11 users in the United States not before Jan-
12 uary 1, 2007, and in subsequent years, in
13 volumes not to exceed 3,000,000 pounds
14 U₃O₈ equivalent per year.”.

15 **SEC. 127. COOPERATIVE RESEARCH AND DEVELOPMENT**
16 **AND SPECIAL DEMONSTRATION PROJECTS**
17 **FOR THE URANIUM MINING INDUSTRY.**

18 There is authorized to be appropriated to the Sec-
19 retary \$10,000,000 for each of fiscal years 2002, 2003,
20 and 2004 for—

21 (1) cooperative, cost-shared, agreements be-
22 tween the Department and the domestic uranium
23 mining industry to identify, test, and develop im-
24 proved in-situ leaching mining technologies, includ-
25 ing low-cost environmental restoration technologies

1 that may be applied to sites after completion of in-
 2 situ leaching operations; and

3 (2) funding for competitively selected dem-
 4 onstration projects with the domestic uranium min-
 5 ing industry relating to—

6 (A) enhanced production with minimal en-
 7 vironmental impact;

8 (B) restoration of well fields; and

9 (C) decommissioning and decontamination
 10 activities.

11 **SEC. 128. MAINTENANCE OF A VIABLE DOMESTIC URANIUM**
 12 **CONVERSION INDUSTRY.**

13 (a) IN GENERAL.—For Department of Energy ex-
 14 penses necessary in providing to Converdyn Incorporated
 15 a payment for losses associated with providing conversion
 16 services for the production of low-enriched uranium (ex-
 17 cluding imports related to actions taken under the United
 18 States/Russia HEU Agreement), there is authorized to be
 19 appropriated \$8,000,000 for each of fiscal years 2002,
 20 2003, and 2004.

21 (b) RATE.—The payment shall be at a rate, deter-
 22 mined by the Secretary, that—

23 (1)(A) is based on the difference between
 24 Converdyn's costs and its sale price for providing

1 conversion services for the production of low-en-
2 riched uranium fuel; but

3 (B) does not exceed the amount appropriated
4 under subsection (a); and

5 (2) shall be based contingent on submission to
6 the Secretary of a financial statement satisfactory to
7 the Secretary that is certified by an independent
8 auditor for each year.

9 (c) TIMING.—A payment under subsection (a) shall
10 be provided as soon as practicable after receipt and
11 verification of the financial statement submitted under
12 subsection (b).

13 **SEC. 129. PORTSMOUTH GASEOUS DIFFUSION PLANT.**

14 (a) IN GENERAL.—The Secretary may proceed with
15 actions required to place the Portsmouth gaseous diffusion
16 plant into cold standby condition for a period of 5 years.

17 (b) PLANT CONDITION.—In the cold standby condi-
18 tion, the plant shall be in a condition that—

19 (1) would allow its restart, for production of
20 3,000,000 separative work units per year, to meet
21 domestic demand for enrichment services; and

22 (2) will facilitate the future decontamination
23 and decommissioning of the plant.

24 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
25 authorized to be appropriated to carry out this section—

- 1 (1) \$36,000,000 for fiscal year 2002; and
2 (2) such sums as are necessary for fiscal years
3 2003, 2004, and 2005.

4 **SEC. 130. NUCLEAR GENERATION REPORT.**

5 (a) IN GENERAL.—Not later than 180 days after the
6 date of enactment of this Act, the Commission shall sub-
7 mit to Congress a report on the state of nuclear power
8 generation in the United States.

9 (b) CONTENTS.—The report shall—

10 (1) provide current and historical detail
11 regarding—

12 (A) the number of commercial nuclear
13 plants and the amount of electricity generated;
14 and

15 (B) the safety record of commercial nu-
16 clear plants;

17 (2) review the status of the relicensing process
18 for commercial nuclear plants, including—

19 (A) current and anticipated applications;
20 and

21 (B) for each current and anticipated
22 application—

23 (i) the anticipated length of time for
24 a license renewal application to be proc-
25 essed; and

- 1 (ii) the current and anticipated costs
- 2 of each license renewal;
- 3 (3) assess the capability of the Commission to
- 4 evaluate licenses for new advanced reactor designs
- 5 and discuss the confirmatory and anticipatory re-
- 6 search activities needed to support that capability;
- 7 (4) detail the efforts of the Commission to pre-
- 8 pare for potential new commercial nuclear plants, in-
- 9 cluding evaluation of any new plant design and the
- 10 licensing process for nuclear plants;
- 11 (5) state the anticipated length of time for a
- 12 new plant license to be processed and the anticipated
- 13 cost of such a process; and
- 14 (6) include recommendations for improvements
- 15 in each of the processes reviewed.

16 **TITLE II—CONSTRUCTION OF**

17 **NUCLEAR PLANTS**

18 **SEC. 201. ESTABLISHMENT OF PROGRAMS.**

19 (a) SECRETARY.—The Secretary shall establish a
 20 program within the Office of Nuclear Energy, Science, and
 21 Technology to—

- 22 (1) demonstrate the Nuclear Regulatory Com-
- 23 mission Early Site Permit process;
- 24 (2) evaluate opportunities for completion of
- 25 partially constructed nuclear plants; and

1 (3) develop a report assessing opportunities for
2 Generation IV reactors.

3 (b) COMMISSION.—The Commission shall develop a
4 research program to support regulatory actions relating
5 to new nuclear plant technologies.

6 **SEC. 202. NUCLEAR PLANT COMPLETION INITIATIVE.**

7 (a) IN GENERAL.—The Secretary shall solicit infor-
8 mation on United States nuclear plants requiring addi-
9 tional capital investment before becoming operational or
10 being returned to operation to determine which, if any,
11 should be included in a study of the feasibility of com-
12 pleting and operating some or all of the nuclear plants
13 by December 31, 2004, considering technical and eco-
14 nomic factors.

15 (b) IDENTIFICATION OF UNFINISHED NUCLEAR
16 PLANTS.—The Secretary shall convene a panel of experts
17 to—

18 (1) review information obtained under sub-
19 section (a); and

20 (2) identify which unfinished nuclear plants
21 should be included in a feasibility study.

22 (c) TECHNICAL AND ECONOMIC COMPLETION AS-
23 SESSMENT.—On completion of the identification of can-
24 didate nuclear plants under subsection (b), the Secretary
25 shall commence a detailed technical and economic comple-

1 tion assessment that includes, on a unit-specific basis, all
 2 technical and economic information necessary to permit a
 3 decision on the feasibility of completing work on any or
 4 all of the nuclear plants identified under subsection (b).

5 (d) SOLICITATION OF PROPOSALS.—After making
 6 the results of the feasibility study under subsection (c)
 7 available to the public, the Secretary shall solicit proposals
 8 for completing construction on any or all of the nuclear
 9 plants assessed under subsection (c).

10 (e) SELECTION OF PROPOSALS.—

11 (1) IN GENERAL.—The Secretary shall recon-
 12 vene the panel of experts designated under sub-
 13 section (b) to review and select the nuclear plants to
 14 be pursued, taking into consideration any or all of
 15 the following factors:

16 (A) Location of the nuclear plant and the
 17 regional need for expanded power capability.

18 (B) Time to completion.

19 (C) Economic and technical viability for
 20 completion of the nuclear plant.

21 (D) Financial capability of the offeror.

22 (E) Extent of support from regional and
 23 State officials.

24 (F) Experience and past performance of
 25 the members of the offeror in siting, con-

1 structing, or operating nuclear generating facili-
2 ties.

3 (G) Lowest cost to the Government.

4 (2) REGIONAL AND STATE SUPPORT.—No pro-
5 posal shall be accepted without endorsement by the
6 State Governor and by the elected governing bodies
7 of—

8 (A) each political subdivision in which the
9 nuclear plant is located; and

10 (B) each other political subdivision that
11 the Secretary determines has a substantial in-
12 terest in the completion of the nuclear plant.

13 (f) REPORT TO CONGRESS.—

14 (1) IN GENERAL.—Not later than June 1,
15 2002, the Secretary shall submit to Congress a re-
16 port describing the reactors identified for completion
17 under subsection (e).

18 (2) CONTENTS.—The report shall—

19 (A) detail the findings under each of the
20 criteria specified in subsection (e); and

21 (B) include recommendations for action by
22 Congress to authorize actions that may be initi-
23 ated in fiscal year 2003 to expedite completion
24 of the reactors.

1 (3) CONSIDERATIONS.—In making rec-
 2 ommendations under paragraph (2)(B), the Sec-
 3 retary shall consider—

4 (A) the advisability of authorizing payment
 5 by the Government of Commission user fees (in-
 6 cluding consideration of the estimated cost to
 7 the Government of paying such fees); and

8 (B) other appropriate considerations.

9 (g) AUTHORIZATION OF APPROPRIATIONS.—There is
 10 authorized to be appropriated to carry out this section
 11 \$3,000,000 for fiscal year 2002.

12 **SEC. 203. EARLY SITE PERMIT DEMONSTRATION PROGRAM.**

13 (a) IN GENERAL.—The Secretary shall initiate a pro-
 14 gram of Government/private partnership demonstration
 15 projects to encourage private sector applications to the
 16 Commission for approval of sites that are potentially suit-
 17 able to be used for the construction of future nuclear
 18 power generating facilities.

19 (b) PROJECTS.—Not later than 60 days after the
 20 date of enactment of this Act, the Secretary shall issue
 21 a solicitation of offers for proposals from private sector
 22 entities to enter into partnerships with the Secretary to—

23 (1) demonstrate the Early Site Permit process;
 24 and

1 (2) create a bank of approved sites by Decem-
2 ber 31, 2003.

3 (c) CRITERIA FOR PROPOSALS.—A proposal sub-
4 mitted under subsection (b) shall—

5 (1) identify a site owned by the offeror that is
6 suitable for the construction and operation of a new
7 nuclear plant; and

8 (2) state the agreement of the offeror to pay
9 not less than $\frac{1}{2}$ of the costs of—

10 (A) preparation of an application to the
11 Commission for an Early Site Permit for the
12 site identified under paragraph (1); and

13 (B) review of the application by the Com-
14 mission.

15 (d) SELECTION OF PROPOSALS.—The Secretary shall
16 establish a competitive process to review and select the
17 projects to be pursued, taking into consideration the fol-
18 lowing:

19 (1) Time to prepare the application.

20 (2) Site qualities or characteristics that could
21 affect the duration of application review.

22 (3) The financial capability of the offeror.

23 (4) The experience of the offeror in siting, con-
24 structing, or operating nuclear plants.

25 (5) The support of regional and State officials.

1 (6) The need for new electricity supply in the
2 vicinity of the site, or proximity to suitable trans-
3 mission lines.

4 (7) Lowest cost to the Government.

5 (e) COOPERATIVE AGREEMENTS.—The Secretary
6 may enter into cooperative agreements with up to 3
7 offerors selected through the competitive process to pay
8 not more than $\frac{1}{2}$ of the costs incurred by the parties to
9 the agreements for—

10 (1) preparation of an application to the Com-
11 mission for an Early Site Permit for the site; and

12 (2) review of the application by the Commis-
13 sion.

14 (f) AUTHORIZATION OF APPROPRIATIONS.—There is
15 authorized to be appropriated to carry out this section
16 \$15,000,000 for each of fiscal years 2002 and 2003, to
17 remain available until expended.

18 **SEC. 204. NUCLEAR ENERGY TECHNOLOGY STUDY FOR**
19 **GENERATION IV REACTORS.**

20 (a) IN GENERAL.—The Secretary shall conduct a
21 study of Generation IV nuclear energy systems, including
22 development of a technology roadmap and performance of
23 research and development necessary to make an informed
24 technical decision regarding the most promising can-
25 didates for commercial deployment.

1 (b) UPGRADES AND ADDITIONS.—The Secretary may
2 make upgrades or additions to the nuclear energy research
3 facility infrastructure as needed to carry out the study
4 under subsection (a).

5 (c) REACTOR CHARACTERISTICS.—To the extent
6 practicable, in conducting the study under subsection (a),
7 the Secretary shall study nuclear energy systems that offer
8 the highest probability of achieving the goals for Genera-
9 tion IV nuclear energy systems established by the Nuclear
10 Energy Research Advisory Committee, including—

11 (1) economics competitive with natural gas-
12 fueled generators;

13 (2) enhanced safety features or passive safety
14 features;

15 (3) substantially reduced production of high-
16 level waste, as compared with the quantity of waste
17 produced by reactors in operation on the date of en-
18 actment of this Act;

19 (4) highly proliferation resistant fuel and waste;

20 (5) sustainable energy generation including op-
21 timized fuel utilization; and

22 (6) substantially improved thermal efficiency, as
23 compared with the thermal efficiency of reactors in
24 operation on the date of enactment of this Act.

1 (c) CONSULTATION.—In conducting the study, the
2 Secretary shall consult with—

3 (1) the Commission, with respect to evaluation
4 of regulatory issues; and

5 (2) the International Atomic Energy Agency,
6 with respect to international safeguards.

7 (d) REPORT.—

8 (1) IN GENERAL.—Not later than December 31,
9 2002, the Secretary shall submit to Congress a re-
10 port describing the results of the roadmap and plans
11 for research and development leading to a public/pri-
12 vate cooperative demonstration of one or more Gen-
13 eration IV nuclear energy systems.

14 (2) CONTENTS.—The report shall contain—

15 (A) an assessment of all available tech-
16 nologies;

17 (B) a summary of actions needed for the
18 most promising candidates to be considered as
19 viable commercial options within the five to ten
20 years after the date of the report with consider-
21 ation of regulatory, economic, and technical
22 issues;

23 (C) a recommendation of not more than
24 three promising Generation IV nuclear energy
25 system concepts for further development;

1 (D) an evaluation of opportunities for pub-
 2 lic/private partnerships;

3 (E) a recommendation for structure of a
 4 public/private partnership to share in develop-
 5 ment and construction costs;

6 (F) a plan leading to the selection and con-
 7 ceptual design, by September 30, 2004, of at
 8 least one Generation IV nuclear energy system
 9 for demonstration through a public/private
 10 partnership; and

11 (G) a recommendation for appropriate in-
 12 volvement of the Commission.

13 (e) AUTHORIZATION OF APPROPRIATIONS.—There
 14 are authorized to be appropriated to carry out this
 15 section—

16 (1) \$50,000,000 for fiscal year 2002; and

17 (2) such sums as are necessary for fiscal years
 18 2003 through 2006.

19 **SEC. 205. RESEARCH SUPPORTING REGULATORY PROC-**
 20 **ESSES FOR NEW REACTOR TECHNOLOGIES**
 21 **AND DESIGNS.**

22 (a) IN GENERAL.—The Commission shall develop a
 23 comprehensive research program to support resolution of
 24 potential licensing issues associated with new reactor con-

1 cepts and new technologies that may be incorporated into
 2 new or current designs of nuclear plants.

3 (b) IDENTIFICATION OF CANDIDATE DESIGNS.—The
 4 Commission shall work with the Office of Nuclear Energy,
 5 Science, and Technology and the nuclear industry to iden-
 6 tify candidate designs to be addressed by the program.

7 (c) ACTIVITIES TO BE INCLUDED.—The research
 8 shall include—

9 (1) modeling, analyses, tests, and experiments
 10 as required to provide input into total system behav-
 11 ior and response to hypothesized accidents; and

12 (2) consideration of new reactor technologies
 13 that may affect—

14 (A) risk-informed licensing of new plants;

15 (B) behavior of advanced fuels;

16 (C) evolving environmental considerations
 17 relative to spent fuel management and health
 18 effect standards;

19 (D) new technologies (such as advanced
 20 sensors, digital instrumentation, and control)
 21 and human factors that affect the application of
 22 new technology to current plants; and

23 (E) other emerging technical issues.

24 (d) AUTHORIZATION OF APPROPRIATIONS.—There is
 25 authorized to be appropriated to carry out this section—

- 1 (1) \$25,000,000 for fiscal year 2002; and
- 2 (2) such sums as are necessary for subsequent
- 3 fiscal years.

4 **TITLE III—EVALUATIONS OF**

5 **NUCLEAR ENERGY**

6 **SEC. 301. ENVIRONMENTALLY PREFERABLE PURCHASING.**

7 (a) ACQUISITION.—For the purposes of Executive
 8 Order No. 13101 (3 C.F.R. 210 (1998)) and policies es-
 9 tablished by the Office of Federal Procurement Policy or
 10 other executive branch offices for the acquisition or use
 11 of environmentally preferable products (as defined in sec-
 12 tion 201 of the Executive order), electricity generated by
 13 a nuclear plant shall be considered to be an environ-
 14 mentally preferable product.

15 (b) PROCUREMENT.—No Federal procurement policy
 16 or program may—

17 (1) discriminate against or exclude nuclear gen-
 18 erated electricity in making purchasing decisions; or

19 (2) subscribe to product certification programs
 20 or recommend product purchases that exclude nu-
 21 clear electricity.

22 **SEC. 302. EMISSION-FREE CONTROL MEASURES UNDER A**

23 **STATE IMPLEMENTATION PLAN.**

24 (a) DEFINITIONS.—In this section:

1 (1) CRITERIA AIR POLLUTANT.—The term “cri-
2 teria air pollutant” means a pollutant listed under
3 section 108(a) of the Clean Air Act (42 U.S.C.
4 7408(a)).

5 (2) EMISSION-FREE ELECTRICITY SOURCE.—
6 The term “emission-free electricity source” means—

7 (A) a facility that generates electricity
8 without emitting criteria pollutants, hazardous
9 pollutants, or greenhouse gases as a result of
10 onsite operations of the facility; and

11 (B) a facility that generates electricity
12 using nuclear fuel that meets all applicable
13 standards for radiological emissions under sec-
14 tion 112 of the Clean Air Act (42 U.S.C.
15 7412).

16 (3) GREENHOUSE GAS.—The term “greenhouse
17 gas” means a natural or anthropogenic gaseous con-
18 stituent of the atmosphere that absorbs and re-emits
19 infrared radiation.

20 (4) HAZARDOUS POLLUTANT.—The term “haz-
21 ardous pollutant” has the meaning given the term in
22 section 112(a) of the Clean Air Act (42 U.S.C.
23 7412(a)).

24 (5) IMPROVEMENT IN AVAILABILITY.—The
25 term “improvement in availability” means an in-

1 crease in the amount of electricity produced by an
 2 emission-free electricity source that provides a com-
 3 mensurate reduction in output from emitting
 4 sources.

5 (6) INCREASED EMISSION-FREE CAPACITY
 6 PROJECT.—The term “increased emission-free ca-
 7 pacity project” means a project to construct an
 8 emission-free electricity source or increase the rated
 9 capacity of an existing emission-free electricity
 10 source.

11 (b) TREATMENT OF CERTAIN STATE ACTIONS AS
 12 CONTROL MEASURES.—An action taken by a State to
 13 support the continued operation of an emission-free elec-
 14 tricity source or to support an improvement in availability
 15 or an increased emission-free capacity project shall be con-
 16 sidered to be a control measure for the purposes of section
 17 110(a) of the Clean Air Act (42 U.S.C. 7410(a)).

18 (c) ECONOMIC INCENTIVE PROGRAMS.—

19 (1) CRITERIA AIR POLLUTANTS AND HAZ-
 20 ARDOUS POLLUTANTS.—Emissions of criteria air
 21 pollutants or hazardous pollutants prevented or
 22 avoided by an improvement in availability or the op-
 23 eration of increased emission-free capacity shall be
 24 eligible for, and may not be excluded from, incentive
 25 programs used as control measures, including pro-

1 grams authorizing emission trades, revolving loan
 2 funds, tax benefits, and special financing programs.

3 (2) GREENHOUSE GASES.—Emissions of green-
 4 house gases prevented or avoided by an improvement
 5 in availability or the operation of increased emission-
 6 free capacity shall be eligible for, and may not be ex-
 7 cluded from, incentive programs used as control
 8 measures on the national, regional State, or local
 9 level.

10 **SEC. 304. PROHIBITION OF DISCRIMINATION AGAINST**
 11 **EMISSION-FREE ELECTRICITY PROJECTS IN**
 12 **INTERNATIONAL DEVELOPMENT PROGRAMS.**

13 (a) PROHIBITION.—No Federal funds shall be used
 14 to support a domestic or international organization en-
 15 gaged in the financing, development, insuring, or under-
 16 writing of electricity production facilities if the activities
 17 fail to include emission-free electricity production facility
 18 projects that use nuclear fuel.

19 (b) REQUEST FOR POLICIES.—The Secretary of En-
 20 ergy shall request copies of all written policies regarding
 21 the eligibility of emission-free nuclear electricity produc-
 22 tion facilities for funding or support from international or
 23 domestic organizations engaged in the financing, develop-
 24 ment, insuring, or underwriting of electricity production
 25 facilities, including—

- 1 (1) the Agency for International Development;
- 2 (2) the World Bank;
- 3 (3) the Overseas Private Investment Corpora-
- 4 tion;
- 5 (4) the International Monetary Fund; and
- 6 (5) the Export-Import Bank.

7 **TITLE IV—DEVELOPMENT OF**
 8 **NATIONAL SPENT NUCLEAR**
 9 **FUEL STRATEGY**

10 **SEC. 401. FINDINGS.**

11 Congress finds that—

12 (1) before the Federal Government takes any
 13 irreversible action relating to the disposal of spent
 14 nuclear fuel, Congress must determine whether the
 15 spent fuel should be treated as waste subject to per-
 16 manent burial or should be considered to be an en-
 17 ergy resource that is needed to meet future energy
 18 requirements; and

19 (2) national policy on spent nuclear fuel may
 20 evolve with time as improved technologies for spent
 21 fuel are developed or as national energy needs
 22 evolve.

23 **SEC. 402. OFFICE OF SPENT NUCLEAR FUEL RESEARCH.**

24 (a) DEFINITIONS.—In this section:

1 (1) ASSOCIATE DIRECTOR.—The term “Asso-
2 ciate Director” means the Associate Director of the
3 Office.

4 (2) OFFICE.—The term “Office” means the Of-
5 fice of Spent Nuclear Fuel Research established by
6 subsection (b).

7 (b) ESTABLISHMENT.—There is established an Office
8 of Spent Nuclear Fuel Research within the Office of Nu-
9 clear Energy Science and Technology of the Department
10 of Energy.

11 (c) HEAD OF OFFICE.—The Office shall be headed
12 by the Associate Director, who shall be a member of the
13 Senior Executive Service appointed by the Director of the
14 Office of Nuclear Energy Science and Technology, and
15 compensated at a rate determined by applicable law.

16 (d) DUTIES OF THE ASSOCIATE DIRECTOR.—

17 (1) IN GENERAL.—The Associate Director shall
18 be responsible for carrying out an integrated re-
19 search, development, and demonstration program on
20 technologies for treatment, recycling, and disposal of
21 high-level nuclear radioactive waste and spent nu-
22 clear fuel, subject to the general supervision of the
23 Secretary.

24 (2) PARTICIPATION.—The Associate Director
25 shall coordinate the participation of national labora-

1 tories, universities, the commercial nuclear industry,
2 and other organizations in the investigation of tech-
3 nologies for the treatment, recycling, and disposal of
4 spent nuclear fuel and high-level radioactive waste.

5 (3) ACTIVITIES.—The Associate Director
6 shall—

7 (A) develop a research plan to provide rec-
8 ommendations by 2015;

9 (B) identify promising technologies for the
10 treatment, recycling, and disposal of spent nu-
11 clear fuel and high-level radioactive waste;

12 (C) conduct research and development ac-
13 tivities for promising technologies;

14 (D) ensure that all activities include as key
15 objectives minimization of proliferation concerns
16 and risk to health of the general public or site
17 workers, as well as development of cost-effective
18 technologies;

19 (E) require research on both reactor- and
20 accelerator-based transmutation systems;

21 (F) require research on advanced proc-
22 essing and separations;

23 (G) include participation of international
24 collaborators in research efforts, and provide
25 funding to a collaborator that brings unique ca-

1 pabilities not available in the United States if
 2 the country in which the collaborator is located
 3 is unable to provide support; and

4 (H) ensure that research efforts are co-
 5 ordinated with research on advanced fuel cycles
 6 and reactors conducted by the Office of Nuclear
 7 Energy Science and Technology.

8 (e) GRANT AND CONTRACT AUTHORITY.—The Sec-
 9 retary may make grants, or enter into contracts, for the
 10 purposes of the research projects and activities described
 11 in subsection (d)(3).

12 (f) REPORT.—The Associate Director shall annually
 13 submit to Congress a report on the activities and expendi-
 14 tures of the Office that describes the progress being made
 15 in achieving the objectives of this section.

16 **SEC. 403. ADVANCED FUEL RECYCLING TECHNOLOGY DE-**
 17 **VELOPMENT PROGRAM.**

18 (a) IN GENERAL.—The Secretary, acting through the
 19 Director of the Office of Nuclear Energy, Science, and
 20 Technology, shall conduct an advanced fuel recycling tech-
 21 nology research and development program to further the
 22 availability of electrometallurgical technology as a pro-
 23 liferation-resistant alternative to aqueous reprocessing in
 24 support of evaluation of alternative national strategies for
 25 spent nuclear fuel and the Generation IV advanced reactor

1 concepts, subject to annual review by the Nuclear Energy
2 Research Advisory Committee.

3 (b) REPORTS.—The Secretary shall submit to the
4 Committee on Science and the Committee on Appropria-
5 tions of the House of Representatives and the Committee
6 on Energy and Natural Resources and the Committee on
7 Appropriations of the Senate an annual report on the ac-
8 tivities of the advanced fuel recycling technology develop-
9 ment program.

10 (c) AUTHORIZATION OF APPROPRIATIONS.—There
11 are authorized to be appropriated to carry out this
12 section—

13 (1) \$10,000,000 for fiscal year 2002; and

14 (2) such sums as are necessary for fiscal years
15 2003 through 2006.

16 **TITLE V—NATIONAL**
17 **ACCELERATOR SITE**

18 **SEC. 501. FINDINGS.**

19 Congress finds that—

20 (1)(A) high-current proton accelerators are ca-
21 pable of producing significant quantities of neutrons
22 through the spallation process without using a crit-
23 ical assembly; and

1 (B) the availability of high-neutron fluences en-
2 ables a wide range of missions of major national im-
3 portance to be conducted;

4 (2)(A) public acceptance of repositories, wheth-
5 er for spent fuel or for final waste products from
6 spent fuel, can be enhanced if the radio-toxicity of
7 the materials in the repository can be reduced;

8 (B) transmutation of long-lived radioactive spe-
9 cies by an intense neutron source provides an ap-
10 proach to such a reduction in toxicity; and

11 (C) research and development in this area
12 (which, when the source of neutrons is derived from
13 an accelerator, is called “accelerator transmutation
14 of waste”) should be an important part of a national
15 spent fuel strategy;

16 (3)(A) nuclear weapons require a reliable source
17 of tritium;

18 (B) the Department of Energy has identified
19 production of tritium in a commercial light water re-
20 actor as the first option to be pursued;

21 (C) the importance of tritium supply is of suffi-
22 cient magnitude that a backup technology should be
23 demonstrated and available for rapid scale-up to full
24 requirements;

1 (D) evaluation of tritium production by a high-
 2 current accelerator has been underway; and

3 (E) accelerator production of tritium should be
 4 demonstrated, so that the capability can be scaled
 5 up to levels required for the weapons stockpile if dif-
 6 ficulties arise with the reactor approach;

7 (4)(A) radioisotopes are required in many med-
 8 ical procedures;

9 (B) research on new medical procedures is ad-
 10 versely affected by the limited availability of produc-
 11 tion facilities for certain radioisotopes; and

12 (C) high-current accelerators are an important
 13 source of radioisotopes, and are best suited for pro-
 14 duction of proton-rich isotopes; and

15 (5)(A) a spallation source provides a continuum
 16 of neutron energies; and

17 (B) the energy spectrum of neutrons can be al-
 18 tered and tailored to allow a wide range of experi-
 19 ments in support of nuclear engineering studies of
 20 alternative reactor configurations, including studies
 21 of materials that may be used in future fission or fu-
 22 sion systems.

23 **SEC. 502. DEFINITIONS.**

24 In this title:

1 (1) OFFICE.—The term “Office” means the Of-
 2 fice of Nuclear Energy, Science, and Technology of
 3 the Department of Energy.

4 (2) PROGRAM.—The term “program” means
 5 the Advanced Accelerator Applications Program es-
 6 tablished under section 503.

7 (3) PROPOSAL.—The term “proposal” means
 8 the proposal for a location supporting the missions
 9 identified for the program developed under section
 10 503.

11 **SEC. 503. ADVANCED ACCELERATOR APPLICATIONS PRO-**
 12 **GRAM.**

13 (a) ESTABLISHMENT OF PROGRAM.—The Secretary
 14 shall establish a program to be known as the “Advanced
 15 Accelerator Applications Program”.

16 (b) MISSION.—The mission of the program shall in-
 17 clude conducting scientific or engineering research, devel-
 18 opment, and demonstrations on—

19 (1) accelerator production of tritium as a
 20 backup technology;

21 (2) transmutation of spent nuclear fuel and
 22 waste;

23 (3) production of radioisotopes;

24 (4) advanced nuclear engineering concepts, in-
 25 cluding material science issues; and

1 (5) other applications that may be identified.

2 (c) ADMINISTRATION.—The program shall be admin-
3 istered by the Office—

4 (1) in consultation with the National Nuclear
5 Security Administration, for all activities related to
6 tritium production; and

7 (2) in consultation with the Office of Civilian
8 Radioactive Waste Management, for all activities re-
9 lating to the impact of waste transmutation on re-
10 pository requirements.

11 (d) PARTICIPATION.—The Office shall encourage par-
12 ticipation of international collaborators, industrial part-
13 ners, national laboratories, and, through support for new
14 graduate engineering and science students and professors,
15 universities.

16 (e) PROPOSAL OF LOCATION.—

17 (1) IN GENERAL.—The Office shall develop a
18 detailed proposal for a location supporting the mis-
19 sions identified for the program.

20 (2) CONTENTS.—The proposal shall—

21 (A) recommend capabilities for the accel-
22 erator and for each major research or produc-
23 tion effort;

24 (B) include development of a comprehen-
25 sive site plan supporting those capabilities;

1 (C) specify a detailed time line for con-
2 struction and operation of all activities;

3 (D) identify opportunities for involvement
4 of the private sector in production and use of
5 radioisotopes;

6 (E) contain a recommendation for funding
7 required to accomplish the proposal in future
8 fiscal years; and

9 (F) identify required site characteristics.

10 (3) PRELIMINARY ENVIRONMENTAL IMPACT AS-
11 SESSMENT.—As part of the process of identification
12 of required site characteristics, the Secretary shall
13 undertake a preliminary environmental impact as-
14 sessment of a range of sites.

15 (4) SUBMISSION TO CONGRESS.—Not later than
16 March 31, 2002, the Secretary shall submit to the
17 Committee on Energy and Natural Resources and
18 Committee on Appropriations of the Senate and the
19 Committee on Science and Committee on Appropria-
20 tions of the House of Representatives a report de-
21 scribing the proposal.

22 (f) COMPETITION.—

23 (1) IN GENERAL.—The Secretary shall use the
24 proposal to conduct a nationwide competition among
25 potential sites.

1 (2) REPORT.—Not later than June 30, 2003,
 2 the Secretary shall submit to the Committee on En-
 3 ergy and Natural Resources and Committee on Ap-
 4 propriations of the Senate and the Committee on
 5 Science and the Committee on Appropriations of the
 6 House of Representatives a report that contains an
 7 evaluation of competing proposals and a rec-
 8 ommendation of a final site and for funding require-
 9 ments to proceed with construction in future fiscal
 10 years.

11 (g) AUTHORIZATION OF APPROPRIATIONS.—

12 (1) PROPOSAL.—There is authorized to be ap-
 13 propriated for development of the proposal
 14 \$20,000,000 for each of fiscal years 2002 and 2003.

15 (2) RESEARCH, DEVELOPMENT, AND DEM-
 16 ONSTRATION ACTIVITIES.—There are authorized to
 17 be appropriated for research, development, and dem-
 18 onstration activities of the program—

19 (A) \$120,000,000 for fiscal year 2002; and

20 (B) such sums as are necessary for subse-
 21 quent fiscal years.

1 **TITLE VI—NUCLEAR REGU-**
 2 **LATORY COMMISSION RE-**
 3 **FORM**

4 **SEC. 601. DEFINITIONS.**

5 Section 11 of the Atomic Energy Act of 1954 (42
 6 U.S.C. 2014) is amended—

7 (1) in subsection f., by striking “Atomic Energy
 8 Commission” and inserting “Nuclear Regulatory
 9 Commission”;

10 (2) by redesignating subsection jj. as subsection
 11 ll.; and

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

13 “jj. FEDERAL NUCLEAR OBLIGATION.—The term
 14 ‘Federal nuclear obligation’ means—

15 “(1) a nuclear decommissioning obligation;

16 “(2) a fee required to be paid to the Federal
 17 Government by a licensee for the storage, transpor-
 18 tation, or disposal of spent nuclear fuel and high-
 19 level radioactive waste, including a fee required
 20 under the Nuclear Waste Policy Act of 1982 (42
 21 U.S.C. 10101 et seq.); and

22 “(3) an assessment by the Federal Government
 23 to fund the cost of decontamination and decommis-
 24 sioning of uranium enrichment facilities, including

1 an assessment required under chapter 28 of the En-
 2 ergy Policy Act of 1992 (42 U.S.C. 2297g).

3 “kk. NUCLEAR DECOMMISSIONING OBLIGATION.—

4 The term ‘nuclear decommissioning obligation’ means an
 5 expense incurred to ensure the continued protection of the
 6 public from the dangers of any residual radioactivity or
 7 other hazards present at a facility at the time the facility
 8 is decommissioned, including all costs of actions required
 9 under rules, regulations and orders of the Commission
 10 for—

11 “(1) entombing, dismantling and decommis-
 12 sioning a facility; and

13 “(2) administrative, preparatory, security and
 14 radiation monitoring expenses associated with en-
 15 tombing, dismantling, and decommissioning a facil-
 16 ity.”.

17 **SEC. 602. OFFICE LOCATION.**

18 Section 23 of the Atomic Energy Act of 1954 (42
 19 U.S.C. 2033) is amended by striking “; however, the Com-
 20 mission shall maintain an office for the service of process
 21 and papers within the District of Columbia”.

22 **SEC. 603. LICENSE PERIOD.**

23 Section 103c. of the Atomic Energy Act of 1954 (42
 24 U.S.C. 2133(c)) is amended—

1 (1) by striking “c. Each such” and inserting
2 the following:

3 “c. LICENSE PERIOD.—

4 “(1) IN GENERAL.—Each such”; and

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

6 “(2) COMBINED LICENSES.—In the case of a
7 combined construction and operating license issued
8 under section 185(b), the initial duration of the li-
9 cense may not exceed 40 years from the date on
10 which the Commission finds, before operation of the
11 facility, that the acceptance criteria required by sec-
12 tion 185(b) are met.”.

13 **SEC. 604. ELIMINATION OF FOREIGN OWNERSHIP RESTRIC-**
14 **TIONS.**

15 (a) COMMERCIAL LICENSES.—Section 103d. of the
16 Atomic Energy Act of 1954 (42 U.S.C. 2133(d)) is
17 amended by striking the second sentence.

18 (b) MEDICAL THERAPY AND RESEARCH AND DEVEL-
19 OPMENT.—Section 104d. of the Atomic Energy Act of
20 1954 (42 U.S.C. 2134(d)) is amended by striking the sec-
21 ond sentence.

1 **SEC. 605. ELIMINATION OF DUPLICATIVE ANTITRUST RE-**
 2 **VIEW.**

3 Section 105 of the Atomic Energy Act of 1954 (42
 4 U.S.C. 2135) is amended by striking subsection c. and in-
 5 serting the following:

6 “c. CONDITIONS.—

7 “(1) IN GENERAL.—A condition for a grant of
 8 a license imposed by the Commission under this sec-
 9 tion in effect on the date of enactment of the Nu-
 10 clear Assets Restructuring Reform Act of 2001 shall
 11 remain in effect until the condition is modified or re-
 12 moved by the Commission.

13 “(2) MODIFICATION.—If a person that is li-
 14 censed to construct or operate a utilization or pro-
 15 duction facility applies for reconsideration under this
 16 section of a condition imposed in the person’s li-
 17 cense, the Commission shall conduct a proceeding,
 18 on an expedited basis, to determine whether the li-
 19 cense condition—

20 “(A) is necessary to ensure compliance
 21 with section 105a.; or

22 “(B) should be modified or removed.”.

23 **SEC. 606. GIFT ACCEPTANCE AUTHORITY.**

24 (a) IN GENERAL.—Section 161g. of the Atomic En-
 25 ergy Act of 1954 (42 U.S.C. 2201(g)) is amended—

26 (1) by inserting “(1)” after “(g)”;

1 (2) by striking “this Act;” and inserting “this
2 Act; or”; and

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

4 “(2) accept, hold, utilize, and administer gifts
5 of real and personal property (not including money)
6 for the purpose of aiding or facilitating the work of
7 the Commission.”.

8 (b) CRITERIA FOR ACCEPTANCE OF GIFTS.—

9 (1) IN GENERAL.—Chapter 14 of title I of the
10 Atomic Energy Act of 1954 (42 U.S.C. 2201 et
11 seq.) is amended by adding at the end the following:

12 **“SEC. 170C. CRITERIA FOR ACCEPTANCE OF GIFTS.**

13 “(a) IN GENERAL.—The Commission shall establish
14 written criteria for determining whether to accept gifts
15 under section 161g.(2).

16 “(b) CONSIDERATIONS.—The criteria under sub-
17 section (a) shall take into consideration whether the ac-
18 ceptance of a gift would compromise the integrity of, or
19 the appearance of the integrity of, the Commission or any
20 officer or employee of the Commission.”.

21 (2) CONFORMING AMENDMENT.—The table of
22 contents of the Atomic Energy Act of 1954 (42
23 U.S.C. prec. 2011) is amended by adding at the end
24 of the items relating to chapter 14 the following:

“Sec. 170C. Criteria for acceptance of gifts.”.

1 **SEC. 607. AUTHORITY OVER FORMER LICENSEES FOR DE-**
 2 **COMMISSIONING FUNDING.**

3 Section 161i. of the Atomic Energy Act of 1954 (42
 4 U.S.C. 2201(i)) is amended—

5 (1) by striking “and (3)” and inserting “(3)”;
 6 and

7 (2) by inserting before the semicolon at the end
 8 the following: “, and (4) to ensure that sufficient
 9 funds will be available for the decommissioning of
 10 any production or utilization facility licensed under
 11 section 103 or 104b., including standards and re-
 12 strictions governing the control, maintenance, use,
 13 and disbursement by any former licensee under this
 14 Act that has control over any fund for the decom-
 15 missioning of the facility”.

16 **SEC. 608. CARRYING OF FIREARMS BY LICENSEE EMPLOY-**
 17 **EES.**

18 (a) IN GENERAL.—Chapter 14 of title I of the Atomic
 19 Energy Act of 1954 (42 U.S.C. 2201 et seq.) (as amended
 20 by section 606(b)) is amended—

21 (1) in section 161, by striking subsection k. and
 22 inserting the following:

23 “k. authorize to carry a firearm in the performance
 24 of official duties such of its members, officers, and employ-
 25 ees, such of the employees of its contractors and sub-
 26 contractors (at any tier) engaged in the protection of prop-

erty under the jurisdiction of the United States located at facilities owned by or contracted to the United States or being transported to or from such facilities, and such of the employees of persons licensed or certified by the Commission (including employees of contractors of licensees or certificate holders) engaged in the protection of facilities owned or operated by a Commission licensee or certificate holder that are designated by the Commission or in the protection of property of significance to the common defense and security located at facilities owned or operated by a Commission licensee or certificate holder or being transported to or from such facilities, as the Commission considers necessary in the interest of the common defense and security;” and

(2) by adding at the end the following:

“SEC. 170D. CARRYING OF FIREARMS.

“(a) AUTHORITY TO MAKE ARREST.—

“(1) IN GENERAL.—A person authorized under section 161k. to carry a firearm may, while in the performance of, and in connection with, official duties, arrest an individual without a warrant for any offense against the United States committed in the presence of the person or for any felony under the laws of the United States if the person has a reason-

1 able ground to believe that the individual has com-
2 mitted or is committing such a felony.

3 “(2) LIMITATION.—An employee of a contractor
4 or subcontractor or of a Commission licensee or cer-
5 tificate holder (or a contractor of a licensee or cer-
6 tificate holder) authorized to make an arrest under
7 paragraph (1) may make an arrest only—

8 “(A) when the individual is within, or is in
9 flight directly from, the area in which the of-
10 fense was committed; and

11 “(B) in the enforcement of—

12 “(i) a law regarding the property of
13 the United States in the custody of the De-
14 partment of Energy, the Commission, or a
15 contractor of the Department of Energy or
16 Commission or a licensee or certificate
17 holder of the Commission;

18 “(ii) a law applicable to facilities
19 owned or operated by a Commission li-
20 censee or certificate holder that are des-
21 ignated by the Commission under section
22 161k.;

23 “(iii) a law applicable to property of
24 significance to the common defense and se-
25 curity that is in the custody of a licensee

1 or certificate holder or a contractor of a li-
 2 censee or certificate holder of the Commis-
 3 sion; or

4 “(iv) any provision of this Act that
 5 subjects an offender to a fine, imprison-
 6 ment, or both.

7 “(3) OTHER AUTHORITY.—The arrest authority
 8 conferred by this section is in addition to any arrest
 9 authority under other law.

10 “(4) GUIDELINES.—The Secretary and the
 11 Commission, with the approval of the Attorney Gen-
 12 eral, shall issue guidelines to implement section
 13 161k. and this subsection.”.

14 (b) CONFORMING AMENDMENT.—The table of con-
 15 tents of the Atomic Energy Act of 1954 (42 U.S.C. prec.
 16 2011) (as amended by section 7(b)(2)) is amended by add-
 17 ing at the end of the items relating to chapter 14 the fol-
 18 lowing:

“Sec. 170D. Carrying of firearms.”.

19 **SEC. 609. COST RECOVERY FROM GOVERNMENT AGENCIES.**

20 Section 161w. of the Atomic Energy Act of 1954 (42
 21 U.S.C. 2201(w)) is amended—

22 (1) by striking “, or which operates any facility
 23 regulated or certified under section 1701 or 1702,”;

1 (2) by striking “483a of title 31 of the United
2 States Code” and inserting “9701 of title 31, United
3 States Code,”; and

4 (3) by inserting before the period at the end the
5 following: “, and, commencing October 1, 2002, pre-
6 scribe and collect from any other Government agen-
7 cy any fee, charge, or price that the Commission
8 may require in accordance with section 9701 of title
9 31, United States Code, or any other law”.

10 **SEC. 610. HEARING PROCEDURES.**

11 Section 189a.(1) of the Atomic Energy Act of 1954
12 (42 U.S.C. 2239(a)(1)) is amended by adding at the end
13 the following:

14 “(C) HEARINGS.—A hearing under this
15 section shall be conducted using informal adju-
16 dicatory procedures established under sections
17 553 and 555 of title 5, United States Code, un-
18 less the Commission determines that formal ad-
19 judicatory procedures are necessary—

20 “(i) to develop a sufficient record; or

21 “(ii) to achieve fairness.”.

22 **SEC. 611. UNAUTHORIZED INTRODUCTION OF DANGEROUS**
23 **WEAPONS.**

24 Section 229a. of the Atomic Energy Act of 1954 (42
25 U.S.C. 2278a(a)) is amended in the first sentence by in-

1 serting “or subject to the licensing authority of the Com-
 2 mission or to certification by the Commission under this
 3 Act or any other Act” before the period at the end.

4 **SEC. 612. SABOTAGE OF NUCLEAR FACILITIES OR FUEL.**

5 Section 236a. of the Atomic Energy Act of 1954 (42
 6 U.S.C. 2284(a)) is amended—

7 (1) in paragraph (2), by striking “storage facil-
 8 ity” and inserting “storage, treatment, or disposal
 9 facility”;

10 (2) in paragraph (3)—

11 (A) by striking “such a utilization facility”
 12 and inserting “a utilization facility licensed
 13 under this Act”; and

14 (B) by striking “or” at the end;

15 (3) in paragraph (4)—

16 (A) by striking “facility licensed” and in-
 17 serting “or nuclear fuel fabrication facility li-
 18 censed or certified”; and

19 (B) by striking the period at the end and
 20 inserting “; or”; and

21 (4) by adding at the end the following:

22 “(5) any production, utilization, waste storage,
 23 waste treatment, waste disposal, uranium enrich-
 24 ment, or nuclear fuel fabrication facility subject to
 25 licensing or certification under this Act during con-

1 struction of the facility, if the person knows or rea-
 2 sonably should know that there is a significant pos-
 3 sibility that the destruction or damage caused or at-
 4 tempted to be caused could adversely affect public
 5 health and safety during the operation of the facil-
 6 ity;”.

7 **SEC. 613. NUCLEAR DECOMMISSIONING OBLIGATIONS OF**
 8 **NONLICENSEES.**

9 (a) IN GENERAL.—The Atomic Energy Act of 1954
 10 is amended by inserting after section 241 (42 U.S.C.
 11 2015) the following:

12 **“SEC. 242. NUCLEAR DECOMMISSIONING OBLIGATIONS OF**
 13 **NONLICENSEES.**

14 “(a) DEFINITION OF FACILITY.—In this section, the
 15 term ‘facility’ means a commercial nuclear electric gener-
 16 ating facility for which a Federal nuclear obligation is in-
 17 curred.

18 “(b) DECOMMISSIONING OBLIGATIONS.—After public
 19 notice and in accordance with section 181, the Commis-
 20 sion shall establish by rule, regulation, or order any re-
 21 quirement that the Commission considers necessary to en-
 22 sure that a person that is not a licensee (including a
 23 former licensee) complies fully with any nuclear decommis-
 24 sioning obligation.”.

1 (b) CONFORMING AMENDMENT.—The table of con-
2 tents of the Atomic Energy Act of 1954 (42 U.S.C. prec.
3 2011) is amended by inserting after the item relating to
4 section 241 the following:

“Sec. 242. Nuclear decommissioning obligations of nonlicensees.”.

5 **SEC. 614. EFFECTIVE DATE.**

6 (a) IN GENERAL.—Except as provided in subsection
7 (b), this title and the amendments made by this title take
8 effect on the date of enactment of this Act.

9 (b) RECOMMISSIONING AND LICENSE REMOVAL.—
10 The amendment made by section 613 takes effect on the
11 date that is 180 days after the date of enactment of this
12 Act.

