H.R. 5866, AS AMENDED BY THE SUBCOMMITTEE ON ENERGY AND ENVIRONMENT ON JULY 28, 2010

1 SECTION 1. SHORT TITLE.

2 This Act may be cited as the "Nuclear Energy Re-3 search and Development Act of 2010".

4 SEC. 2. OBJECTIVES.

5 Section 951(a) of the Energy Policy Act of 2005 (42
6 U.S.C. 16271(a)) is amended—

7 (1) by redesignating paragraphs (2) through
8 (8) as paragraphs (5) through (11), respectively;

9 (2) by inserting after paragraph (1) the fol-10 lowing new paragraphs:

11 "(2) Reducing the costs of nuclear reactor sys-12 tems.

13 "(3) Reducing used nuclear fuel and nuclear14 waste products generated by civilian nuclear energy.

15 "(4) Supporting technological advances in areas
16 that industry by itself is not likely to undertake be17 cause of technical and financial uncertainty."; and

(3) by inserting after paragraph (10), as so re-designated, the following new paragraph:

| 1 | "(11) Researching and developing technologies |
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| 2 | and processes so as to improve and streamline the |
| 3 | process by which nuclear power systems meet Fed- |
| 4 | eral and State requirements and standards.". |
| 5 | SEC. 3. FUNDING. |
| 6 | Section 951 of the Energy Policy Act of 2005 (42) |
| 7 | U.S.C. 16271) is further amended— |
| 8 | (1) in subsection (b), by striking paragraphs |
| 9 | (1) through (3) and inserting the following: |
| 10 | "(1) \$419,000,000 for fiscal year 2011; |
| 11 | ((2) \$429,000,000 for fiscal year 2012; and |
| 12 | "(3) \$439,000,000 for fiscal year 2013."; and |
| 13 | (2) in subsection (d) — |
| 14 | (A) by striking "under subsection (a)" and |
| 15 | inserting "under subsection (b)"; |
| 16 | (B) by amending paragraph (1) to read as |
| 17 | follows: |
| 18 | "(1) For activities under section 953— |
| 19 | "(A) \$201,000,000 for fiscal year 2011; |
| 20 | "(B) \$201,000,000 for fiscal year 2012; |
| 21 | and |
| 22 | "(C) \$201,000,000 for fiscal year 2013."; |
| 23 | and |
| 24 | (C) by inserting after paragraph (3) the |
| 25 | following new paragraphs: |
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| 1 | ((4) For activities under section 952, other |
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| 2 | than those described in section 952(d)— |
| 3 | "(A) \$64,000,000 for fiscal year 2011; |
| 4 | "(B) \$64,000,000 for fiscal year 2012; and |
| 5 | "(C) \$64,000,000 for fiscal year 2013. |
| 6 | "(5) For activities under section $952(d)$ — |
| 7 | "(A) \$55,000,000 for fiscal year 2011; |
| 8 | "(B) \$65,000,000 for fiscal year 2012; and |
| 9 | "(C) \$75,000,000 for fiscal year 2013. |
| 10 | "(6) For activities under section 958— |
| 11 | "(A) \$99,000,000 for fiscal year 2011; |
| 12 | "(B) \$99,000,000 for fiscal year 2012; and |
| 13 | "(C) \$99,000,000 for fiscal year 2013.". |
| 14 | SEC. 4. NUCLEAR ENERGY RESEARCH AND DEVELOPMENT |
| 15 | PROGRAMS. |
| 16 | Section 952 of the Energy Policy Act of 2005 (42) |
| 17 | U.S.C. 16272) is amended by striking subsections (c) |
| 18 | through (e) and inserting the following: |
| 19 | "(c) Reactor Concepts.— |
| 20 | "(1) IN GENERAL.—The Secretary shall carry |
| 21 | out a program of research, development, demonstra- |
| 22 | tion, and commercial application to advance fission |
| 23 | power systems as well as technologies to sustain cur- |
| | Level 2 and a second |

| 1 | "(2) Designs and technologies.—In con- |
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| 2 | ducting the program under this subsection, the Sec- |
| 3 | retary shall examine advanced reactor designs and |
| 4 | nuclear technologies, including those that— |
| 5 | "(A) are economically competitive with |
| 6 | other electric power generation plants; |
| 7 | "(B) have higher efficiency, lower cost, and |
| 8 | improved safety compared to reactors in oper- |
| 9 | ation as of the date of enactment of the Nu- |
| 10 | clear Energy Research and Development Act of |
| 11 | 2010; |
| 12 | "(C) utilize passive safety features; |
| 13 | "(D) minimize proliferation risks; |
| 14 | "(E) substantially reduce production of |
| 15 | high-level waste per unit of output; |
| 16 | "(F) increase the life and sustainability of |
| 17 | reactor systems currently deployed; |
| 18 | "(G) use improved instrumentation; |
| 19 | "(H) are capable of producing large-scale |
| 20 | quantities of hydrogen or process heat; or |
| 21 | "(I) minimize water usage or use alter- |
| 22 | natives to water as a cooling mechanism. |
| 23 | "(3) INTERNATIONAL COOPERATION.—In car- |
| 24 | rying out the program under this subsection, the |
| 25 | Secretary shall seek opportunities to enhance the |

| 1 | progress of the program through international co- |
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| 2 | operation through such organizations as the Genera- |
| 3 | tion IV International Forum, or any other inter- |
| 4 | national collaboration the Secretary considers appro- |
| 5 | priate. |
| 6 | "(4) EXCEPTIONS.—No funds authorized to be |
| 7 | appropriated to carry out the activities described in |
| 8 | this subsection shall be used to fund the activities |
| 9 | authorized under sections 641 through 645.". |
| 10 | SEC. 5. SMALL MODULAR REACTOR PROGRAM. |
| 11 | Section 952 of the Energy Policy Act of 2005 (42) |
| 12 | U.S.C. 16272) is further amended by adding at the end |
| 13 | the following new subsection: |
| 14 | "(d) Small Modular Reactor Program.— |
| 15 | "(1) IN GENERAL.— |
| 16 | "(A) The Secretary shall carry out a small |
| 17 | modular reactor program to promote research, |
| 18 | development, demonstration, and commercial |
| 19 | application of small modular reactors, including |
| 20 | through cost-shared projects for commercial ap- |
| 21 | plication of reactor systems designs. |
| 22 | "(B) The Secretary shall consult with and |
| 23 | utilize the expertise of the Secretary of the |
| 24 | Navy in establishing and carrying out such pro- |
| 25 | gram. |

| 1 | "(C) Activities may also include develop- |
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| 2 | ment of advanced computer modeling and sim- |
| 3 | ulation tools, by Federal and non-Federal enti- |
| 4 | ties, which demonstrate and validate new design |
| 5 | capabilities of innovative small modular reactor |
| 6 | designs. |
| 7 | "(2) DEFINITION.—For the purposes of this |
| 8 | subsection, the term 'small modular reactor' means |
| 9 | a nuclear reactor— |
| 10 | "(A) with a rated capacity of less than 300 |
| 11 | electrical megawatts; and |
| 12 | "(B) that can be constructed and operated |
| 13 | in combination with similar reactors at a single |
| 14 | site. |
| 15 | "(3) LIMITATION.—Demonstration activities |
| 16 | carried out under this section shall be limited to in- |
| 17 | dividual technologies and systems, and shall not in- |
| 18 | clude demonstration of full reactor systems or full |
| 19 | plant operations. |
| 20 | "(4) Administration.—In conducting the |
| 21 | small modular reactor program, the Secretary may |
| 22 | enter into cooperative agreements to support small |
| 23 | modular reactor designs that enable— |

| 1 | "(A) lower capital costs or increased access |
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| 2 | to private financing in comparison to current |
| 3 | large reactor designs; |
| 4 | "(B) reduced long-term radiotoxicity, |
| 5 | mass, or decay heat of the nuclear waste pro- |
| 6 | duced by generation; |
| 7 | "(C) increased operating safety of nuclear |
| 8 | facilities; |
| 9 | "(D) reduced dependence of reactor sys- |
| 10 | tems on water resources; |
| 11 | "(E) increased seismic resistance of nu- |
| 12 | clear generation; |
| 13 | "(F) reduced proliferation risks through |
| 14 | integrated safeguards and security proliferation |
| 15 | controls; and |
| 16 | "(G) increased efficiency in reactor manu- |
| 17 | facturing and construction. |
| 18 | "(5) Application.—To be eligible to enter into |
| 19 | a cooperative agreement with the Secretary under |
| 20 | this subsection, an applicant shall submit to the Sec- |
| 21 | retary a proposal for the small modular reactor |
| 22 | project to be undertaken. The proposal shall docu- |
| 23 | ment— |
| 24 | "(A) all partners and suppliers that will be |
| 25 | active in the small modular reactor project, in- |

| 1 | cluding a description of each partner or sup- |
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| 2 | plier's anticipated domestic and international |
| 3 | activities; |
| 4 | "(B) measures to be undertaken to enable |
| 5 | cost-effective implementation of the small mod- |
| 6 | ular reactor project; |
| 7 | "(C) an accounting structure approved by |
| 8 | the Secretary; and |
| 9 | "(D) all known assets that shall be con- |
| 10 | tributed to satisfy the cost-sharing requirement |
| 11 | under paragraph (6). |
| 12 | "(6) COST SHARING.—Notwithstanding section |
| 13 | 988, the Secretary shall require the parties to a co- |
| 14 | operative agreement under this subsection to be re- |
| 15 | sponsible for not less than 50 percent of the costs |
| 16 | of the small modular reactor project. |
| 17 | "(7) CALCULATION OF COST SHARING |
| 18 | AMOUNT.—A recipient of financial assistance under |
| 19 | this section may not satisfy the cost sharing require- |
| 20 | ment under paragraph (6) by using federally appro- |
| 21 | priated funds. |
| 22 | "(8) PROJECT SELECTION CRITERIA.—The Sec- |
| 23 | retary shall consider the following factors in entering |
| 24 | into a cooperative agreement under this subsection: |

| 1 | "(A) The domestic manufacturing capabili- |
|----|---|
| 2 | ties of the parties to the cooperative agreement |
| 3 | and their partners and suppliers. |
| 4 | "(B) The viability of the reactor design |
| 5 | and the business plan or plans of the parties to |
| 6 | the cooperative agreement. |
| 7 | "(C) The parties to the cooperative agree- |
| 8 | ment's potential to continue the development of |
| 9 | small modular reactors without Federal sub- |
| 10 | sidies or loan guarantees. |
| 11 | "(D) The cost share to be provided. |
| 12 | "(E) The degree to which the goals de- |
| 13 | scribed in paragraph $(4)(A)$ through (G) will be |
| 14 | advanced.". |
| 15 | SEC. 6. FUEL CYCLE RESEARCH AND DEVELOPMENT. |
| 16 | (a) Amendments.—Section 953 of the Energy Pol- |
| 17 | icy Act of 2005 (42 U.S.C. 16273) is amended— |
| 18 | (1) in the section heading by striking "AD- |
| 19 | VANCED FUEL CYCLE INITIATIVE " and inserting |
| 20 | "FUEL CYCLE RESEARCH AND DEVELOPMENT"; |
| 21 | (2) by striking subsection (a); |
| 22 | (3) by redesignating subsections (b) through (d) |
| 23 | as subsections (e) through (g), respectively; and |
| | |

(4) by inserting before subsection (e), as so re designated by paragraph (3) of this subsection, the
 following new subsections:

"(a) IN GENERAL.—The Secretary shall conduct a 4 5 fuel cycle research and development program (referred to in this section as the 'program') on fuel cycle options that 6 7 improve uranium resource utilization, maximize energy 8 generation, minimize nuclear waste creation, improve safe-9 ty, mitigate risk of proliferation, and improve waste management in support of a national strategy for spent nu-10 11 clear fuel and the reactor concepts research, development, 12 demonstration, and commercial application program under 13 section 952(c).

14 "(b) FUEL CYCLE OPTIONS.—Under this section the
15 Secretary may consider implementing the following initia16 tives:

17 "(1) OPEN CYCLE.—Developing fuels, including
18 the use of nonuranium materials, for use in reactors
19 that increase energy generation and minimize the
20 amount of nuclear waste produced in an open fuel
21 cycle.

"(2) MODIFIED OPEN CYCLE.—Developing fuel
forms, reactors, and limited separation and transmutation methods that increase fuel utilization and
reduce nuclear waste in a modified open fuel cycle.

"(3) FULL RECYCLE.—Developing technologies
 to repeatedly recycle nuclear waste products to mini mize radiotoxicity, mass, and decay heat to the
 greatest extent possible.

5 "(4) ADVANCED STORAGE METHODS.—Devel-6 oping advanced storage technologies for both onsite 7 and long-term storage that substantially prolong the 8 effective life of current storage devices or that sub-9 stantially improve upon existing nuclear waste stor-10 age technologies and methods, including repositories.

11 "(5) ALTERNATIVE AND DEEP BOREHOLE
12 STORAGE METHODS.—Developing alternative storage
13 methods for long-term storage, including deep
14 boreholes into stable crystalline rock formations and
15 salt dome storage.

16 "(6) OTHER TECHNOLOGIES.—Developing any
17 other technology or initiative that the Secretary de18 termines is likely to advance the objectives of the
19 program established under subsection (a).

"(c) ADDITIONAL ADVANCED RECYCLING AND
CROSSCUTTING ACTIVITIES.—In addition to and in support of the specific initiatives described in paragraphs (1)
through (6), the Secretary may support the following activities:

| 1 | "(1) Development and testing of integrated |
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| 2 | process flow sheets nuclear fuel recycling processes. |
| 3 | "(2) Research to characterize the byproducts |
| 4 | and waste streams resulting from fuel recycling |
| 5 | processes. |
| 6 | "(3) Research and development on reactor con- |
| 7 | cepts or transmutation technologies that improve re- |
| 8 | source utilization or reduce the radiotoxicity of waste |
| 9 | streams. |
| 10 | "(4) Research and development on waste treat- |
| 11 | ment processes and separations technologies, ad- |
| 12 | vanced waste forms, and quantification of prolifera- |
| 13 | tion risks. |
| 14 | ((5) Identification and evaluation of test and |
| 15 | experimental facilities necessary to successfully im- |
| 16 | plement the advanced fuel cycle initiative. |
| 17 | "(6) Advancement of fuel cycle-related modeling |
| 18 | and simulation capabilities. |
| 19 | "(d) Blue Ribbon Commission Report.—In car- |
| 20 | rying out this section the Secretary shall give consider- |
| 21 | ation to the final report on a long-term nuclear waste solu- |
| 22 | tion produced by the Blue Ribbon Commission on Amer- |
| 23 | ica's Nuclear Future. Not later than 180 days after the |
| 24 | release of the Blue Ribbon Commission on America's Nu- |
| | |

Congress a report describing any plans the Department
 may have to incorporate any relevant recommendations
 from this report into the program.".

4 (b) CONFORMING AMENDMENT.—The item relating
5 to section 953 in the table of contents of the Energy Policy
6 Act of 2005 is amended to read as follows:

"Sec. 953. Fuel cycle research and development.".

7 SEC. 7. NUCLEAR ENERGY ENABLING TECHNOLOGIES PRO8 GRAM.

9 (a) AMENDMENT.—Subtitle E of title IX of the En-10 ergy Policy Act of 2005 (42 U.S.C. 16271 et seq.) is 11 amended by adding at the following new section:

12 "SEC. 958. NUCLEAR ENERGY ENABLING TECHNOLOGIES.

"(a) IN GENERAL.—The Secretary shall conduct a 13 14 program to support the integration of activities under-15 taken through the reactor concepts research, development, demonstration, and commercial application program under 16 section 952(c) and the fuel cycle research and development 17 program under section 953, and support crosscutting nu-18 19 clear energy concepts. Activities commenced under this 20 section shall be concentrated on broadly applicable re-21 search and development focus areas.

22 "(b) ACTIVITIES.—Activities conducted under this
23 section may include research involving—

24 "(1) advanced reactor materials;

25 "(2) advanced radiation mitigation methods;

| 1 | "(3) advanced proliferation and security risk |
|----|---|
| 2 | assessment methods; |
| 3 | "(4) advanced sensors and instrumentation; |
| 4 | "(5) advanced nuclear manufacturing methods; |
| 5 | or |
| 6 | "(6) any crosscutting technology or trans- |
| 7 | formative concept aimed at establishing substantial |
| 8 | and revolutionary enhancements in the performance |
| 9 | of future nuclear energy systems that the Secretary |
| 10 | considers relevant and appropriate to the purpose of |
| 11 | this section. |
| 12 | "(c) REPORT.—The Secretary shall submit, as part |
| 13 | of the annual budget submission of the Department, a re- |
| 14 | port on the activities of the program conducted under this |
| 15 | section, which shall include a brief evaluation of each ac- |
| 16 | tivity's progress.". |
| 17 | (b) Conforming Amendment.—The table of con- |
| 18 | tents of the Energy Policy Act of 2005 is amended by |
| 19 | adding at the end of the items for subtitle E of title IX |
| 20 | the following new item: |
| | "Sec. 958. Nuclear energy enabling technologies.". |
| 21 | SEC. 8. EMERGENCY RISK ASSESSMENT AND PREPARED- |
| 22 | NESS REPORT. |
| 23 | Not later than 180 days after the date of enactment |
| 24 | of this Act, the Secretary shall transmit to the Congress |
| 25 | a report summarizing quantitative risks associated with |

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the potential of a severe accident arising from the use of 1 2 civilian nuclear energy technology, including reactor technology deployed or likely to be deployed as of the date 3 4 of enactment of this Act, and outlining the technologies 5 currently available to mitigate the consequences of such 6 an accident. The report shall include recommendations of 7 areas of technological development that should be pursued 8 to reduce the potential public harm arising from such an incident. 9

10 SEC. 9. NEXT GENERATION NUCLEAR PLANT.

(a) PROTOTYPE PLANT LOCATION.—Section
642(b)(3) of the Energy Policy Act of 2005 (42 U.S.C.
16022(b)(3)) is amended to read as follows:

"(3) PROTOTYPE PLANT LOCATION.—The prototype nuclear reactor and associated plant shall be
constructed at a location determined by the consortium through an open and transparent competitive
selection process.".

19 (b) REPORT.—

(1) REQUIREMENT.—Not later than 1 year
after the date of enactment of this Act, the Comptroller General shall transmit to the Congress a report providing a status update of the Next Generation Nuclear Plant program that provides analysis
of—

| 1 | (A) its progress; |
|----|--|
| 2 | (B) how Federal funds appropriated for |
| 3 | the project have been distributed and spent; |
| 4 | and |
| 5 | (C) the current and expected participation |
| 6 | by non-Federal entities. |
| 7 | (2) CONTENTS.—The report shall include— |
| 8 | (A) an analysis of the proposed facility's |
| 9 | technical capabilities and remaining techno- |
| 10 | logical development challenges, and a cost esti- |
| 11 | mate and construction schedule; |
| 12 | (B) an assessment of the advantages and |
| 13 | disadvantages of funding a pilot-scale research |
| 14 | reactor project in lieu of a full-scale commercial |
| 15 | power reactor; |
| 16 | (C) an assessment of alternative construc- |
| 17 | tion sites proposed by private industry; |
| 18 | (D) an assessment of the extent to which |
| 19 | the Department of Energy is working with in- |
| 20 | dustry and the Nuclear Regulatory Commission |
| 21 | to ensure that the Next Generation Nuclear |
| 22 | Plant program meets industry expectations for |
| 23 | long-term application of technologies and ad- |
| 24 | dresses potential licensing procedures for de- |
| 25 | ployment; |

| 1 | (E) an assessment of the known or antici- |
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| 2 | pated challenges to securing private non-Fed- |
| 3 | eral cost share funds and any measures to over- |
| 4 | come these challenges, including any alternative |
| 5 | funding approaches such as front loading the |
| 6 | Federal share; |
| 7 | (F) an assessment of project risks, includ- |
| 8 | ing those related to— |
| 9 | (i) project scope, schedule, and re- |
| 10 | sources; |
| 11 | (ii) the formation of partnerships or |
| 12 | agreements between the Department and |
| 13 | the private sector necessary for the |
| 14 | project's success; and |
| 15 | (iii) the Department's capabilities to |
| 16 | identify and manage such risks; and |
| 17 | (G) an assessment of what is known about |
| 18 | the potential impact of natural gas and other |
| 19 | fossil fuel prices on private entity participation |
| 20 | in the project. |
| 21 | SEC. 10. TECHNICAL STANDARDS COLLABORATION. |
| 22 | (a) IN GENERAL.—The Director of the National In- |
| 23 | stitute of Standards and Technology shall establish a nu- |
| 24 | clear energy standards committee (in this section referred |
| 25 | to as the "technical standards committee") to facilitate |

and support, consistent with the National Technology
 Transfer and Advancement Act of 1995, the development
 or revision of technical standards for new and existing nu clear power plants and advanced nuclear technologies.

5 (b) Membership.—

6 (1) IN GENERAL.—The technical standards 7 committee shall include representatives from appro-8 priate Federal agencies and the private sector, and 9 be open to materially affected organizations involved 10 in the development or application of nuclear energy-11 related standards.

(2) CO-CHAIRS.—The technical standards committee shall be co-chaired by a representative from
the National Institute of Standards and Technology
and a representative from a private sector standards
organization.

17 (c) DUTIES.—The technical standards committee18 shall, in cooperation with appropriate Federal agencies—

(1) perform a needs assessment to identify and
evaluate the technical standards that are needed to
support nuclear energy, including those needed to
support new and existing nuclear power plants and
advanced nuclear technologies;

24 (2) formulate, coordinate, and recommend pri-25 orities for the development of new technical stand-

1 ards and the revision of existing technical standards 2 to address the needs identified under paragraph (1); 3 (3) facilitate and support collaboration and co-4 operation among standards developers to address the 5 needs and priorities identified under paragraphs (1) 6 and (2); 7 (4) as appropriate, coordinate with other na-8 tional, regional, or international efforts on nuclear 9 energy-related technical standards in order to avoid 10 conflict and duplication and to ensure global com-11 patibility; and 12 (5) promote the establishment and maintenance 13 of a database of nuclear energy-related technical 14 standards. (d) AUTHORIZATION OF APPROPRIATIONS.—There 15 are authorized to be appropriated \$1,000,000 for each of 16 fiscal years 2011 through 2013 to the Director of the Na-17 tional Institute for Standards and Technology for activi-18 19 ties under this section. 20 SEC. 11. EVALUATION OF LONG-TERM OPERATING NEEDS. 21 (a) IN GENERAL.—Secretary of Energy shall enter 22 into an arrangement with the National Academies to con-23 duct an evaluation of the scientific and technological chal-

24 lenges to the long-term maintenance and safe operation

of currently deployed nuclear power reactors up to and
 beyond the specified design-life of reactor systems.

3 (b) REPORT.—Not later than 1 year after the date
4 of enactment of this Act, the Secretary shall transmit to
5 the Congress, and make publically available, the results
6 of the evaluation undertaken by the Academies pursuant
7 to subsection (a).

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AMENDMENT TO H.R. 5866 OFFERED BY MR. GORDON OF TENNESSEE

Page 3, line 22, strike "fission" and insert "nuclear".

Page 6, line 11, strike "and".

Page 6, line 12, redesignate subparagraph (B) as subparagraph (C).

Page 6, after line 11, insert the following new subparagraph:

"(B) with respect to which most parts can
 be factory assembled and shipped as modules to
 a reactor plant site for assembly; and

Page 8, lines 20 and 21, strike "using federally appropriated funds" insert "using funds received from the Federal Government through appropriation Acts".

Page 9, lines 12 through 14, amend subparagraph (E) to read as follows:

4 "(E) The degree to which the following5 goals will be advanced:

| 1 | "(i) Lower capital costs or increased |
|----|--|
| 2 | access to private financing in comparison |
| 3 | to current large reactor designs. |
| 4 | "(ii) Reduced long-term radiotoxicity, |
| 5 | mass, or decay heat of the nuclear waste |
| 6 | produced by generation. |
| 7 | "(iii) Increased operating safety of |
| 8 | nuclear facilities. |
| 9 | "(iv) Reduced dependence of reactor |
| 10 | systems on water resources. |
| 11 | "(v) Increased seismic resistance of |
| 12 | nuclear generation. |
| 13 | "(vi) Reduced proliferation risks |
| 14 | through integrated safeguards and security |
| 15 | proliferation controls. |
| 16 | "(vii) Increased efficiency in reactor |
| 17 | manufacturing and construction.". |

Page 10, line 5, strike "research and development program" and insert "research, development, demonstration, and commercial application program".

Page 11, line 15, strike "salt dome storage" and insert ""mined repositories in a range of geologic media". Page 12, line 2, insert "for advanced" after "flow sheets".

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| | XI | |
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Amendment to H.R. 5866 Offered by Mr. Bilbray of California

Page 3, after line 13, insert the following new section (and redesignate the subsequent sections accordingly):

1 SEC. 4. PROGRAM OBJECTIVES STUDY.

2 Section 951 of the Energy Policy Act of 2005 (42
3 U.S.C. 16271) is amended by adding at the end the fol4 lowing new subsection:

5 "(f) PROGRAM OBJECTIVES STUDY.—In furtherance of the program objectives listed in subsection (a) of this 6 7 section, the Secretary shall, within one year after the date of enactment of this subsection, transmit to the Congress 8 9 a report on the results of a study on the scientific and technical merit of major State requirements and stand-10 11 ards, including moratoria, that delay or impede the further development and commercialization of nuclear power, and 12 how the Federal Government can assist in overcoming 13 such delays or impediments.". 14

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AMENDMENT TO H.R. 5866 Offered by Mr. Lipinski of Illinois

Page 8, after line 11, insert the following new subparagraph (and make the necessary conforming changes):

| 1 | "(E) the extent to which the proposal will |
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| 2 | increase domestic manufacturing activity, ex- |
| 3 | ports, or employment. |

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Amendment to H.R. 5866 Offered by Mr. Tonko of New York

Page 9, after line 14, insert the following new section (and redesignate the subsequent sections accordingly):

1 SEC. 6. CONVENTIONAL IMPROVEMENTS TO NUCLEAR2POWER PLANTS.

3 Section 952 of the Energy Policy Act of 2005 (42
4 U.S.C. 16272) is further amended by adding at the end
5 the following new subsection:

6 "(e) CONVENTIONAL IMPROVEMENTS TO NUCLEAR7 POWER PLANTS.—

- 8 "(1) IN GENERAL.—The Secretary may carry 9 out a Nuclear Energy Research Initiative for re-10 search and development related to steam-side im-11 provements to nuclear power plants to promote the 12 research, development, demonstration, and commer-13 cial application of—
- 14 "(A) cooling systems;
- 15 "(B) turbine technologies;
- 16 "(C) heat exchangers and pump design;

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| 1 | "(D) special coatings to improve lifetime of |
|----|---|
| 2 | components and performance of heat exchang- |
| 3 | ers; and |
| 4 | "(E) advanced power conversion systems |
| 5 | for advanced reactor technologies. |
| 6 | "(2) Administration.—The Secretary may |
| 7 | undertake initiatives under this subsection only when |
| 8 | the goals are relevant and proper to enhance the |
| 9 | performance of technologies developed under sub- |
| 10 | section (c). Not more than \$10,000,000 of funds au- |
| 11 | thorized for this section may be used for carrying |
| 12 | out this subsection.". |
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Amendment to H.R. 5866 Offered by Mr. Garamendi of California

Page 11, lines 1 through 4, amend paragraph (3) to read as follows:

| 1 | "(3) Full recycle.—Developing advanced re- |
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| 2 | cycling technologies, including Generation IV Reac- |
| 3 | tors, to reduce the risk of proliferation, radiotoxicity, |
| 4 | mass, and decay heat to the greatest extent possible. |
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Amendment to H.R. 5866 Offered by Mr. Inglis of South Carolina

Page 12, line 19, through page 13, line 3, amend subsection (d) to read as follows:

"(d) BLUE RIBBON COMMISSION REPORT.—

"(1) In carrying out this section the Secretary shall give consideration to the final report on a long-term nuclear waste solution produced by the Blue Ribbon Commission on America's Nuclear Future.

"(2) Not later than 180 days after the release of the Blue Ribbon Commission on America's Nuclear Future final report, the Secretary shall transmit to Congress a report, which shall include----

"(A) any plans the Department may have to incorporate any relevant recommendations from this report into the program; and

"(B) how those recommendations for longterm nuclear waste solutions that will be incorporated into the plan compare with plans for a long-term nuclear waste solution of a repository at Yucca Mountain, that may or may not be incorporated into the plan, with regard to the safety, security, legal, cost, and technological

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and site readiness factors associated with any recommendations related to final disposition pathways for spent nuclear fuel and high-level radioactive waste to the same factors associated with permanent deep geological disposal at the Yucca Mountain waste repository. "(3) The analysis described in paragraph

(2)(B) shall be conducted using scientific and technical materials and information used to support policy actions related to the Yucca Mountain project.".

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AMENDMENT TO H.R. 5866 OFFERED BY MR. WU OF OREGON

At the end of the bill, add the following new section:

1 SEC. 12. AVAILABLE FACILITIES DATABASE.

2 The Secretary of Energy shall prepare a database of
3 non-Federal user facilities receiving Federal funds that
4 may be used for unclassified nuclear energy research.
5 The Secretary shall make this database accessible on the
6 Department of Energy's website.

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Amendment to H.R. 5866 Offered by Mr. Sensenbrenner of Wisconsin

At the end of the bill, add the following new section:

1 SEC. 12. NUCLEAR WASTE DISPOSAL.

Consistent with the requirements of current law, the
Department of Energy shall be responsible for disposal of
high-level radioactive waste or spent nuclear fuel generated by reactors developed under the programs authorized in this Act, or the amendments made by this Act.

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