

ADVANCED NUCLEAR TECHNOLOGY DEVELOPMENT ACT OF 2016

SEPTEMBER 12, 2016.—Committed to the Committee of the Whole House on the
State of the Union and ordered to be printed

Mr. UPTON, from the Committee on Energy and Commerce,
submitted the following

R E P O R T

[To accompany H.R. 4979]

[Including cost estimate of the Congressional Budget Office]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 4979) to foster civilian research and development of advanced nuclear energy technologies and enhance the licensing and commercial deployment of such technologies, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

CONTENTS

	Page
Purpose and Summary	4
Background and Need for Legislation	4
Hearings	6
Committee Consideration	6
Committee Votes	6
Committee Oversight Findings	7
Statement of General Performance Goals and Objectives	7
New Budget Authority, Entitlement Authority, and Tax Expenditures	7
Earmark, Limited Tax Benefits, and Limited Tariff Benefits	7
Committee Cost Estimate	7
Congressional Budget Office Estimate	7
Federal Mandates Statement	8
Duplication of Federal Programs	8
Disclosure of Directed Rule Makings	9
Advisory Committee Statement	9
Applicability to Legislative Branch	9
Section-by-Section Analysis of the Legislation	9
Changes in Existing Law Made by the Bill, as Reported	10

The amendment is as follows:
Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the “Advanced Nuclear Technology Development Act of 2016”.

SEC. 2. FINDINGS.

Congress finds the following:

(1) Nuclear energy generates approximately 20 percent of the total electricity and approximately 60 percent of the carbon-free electricity of the United States.

(2) Nuclear power plants operate consistently at a 90 percent capacity factor, and provide consumers and businesses with reliable and affordable electricity.

(3) Nuclear power plants generate billions of dollars in national economic activity through nationwide procurements and provide thousands of Americans with high paying jobs contributing substantially to the local economies in communities where they operate.

(4) The United States commercial nuclear industry must continue to lead the international civilian nuclear marketplace, because it is one of our most powerful national security tools, guaranteeing the safe, secure, and exclusively peaceful use of nuclear energy.

(5) Maintaining the Nation’s nuclear fleet of commercial light water reactors and expanding the use of new advanced reactor designs would support continued production of reliable baseload electricity and maintain United States global leadership in nuclear power.

(6) Nuclear fusion technology also has the potential to generate electricity with significantly increased safety performance and no radioactive waste.

(7) The development of advanced reactor designs would benefit from a performance-based, risk-informed, efficient, and cost-effective regulatory framework with defined milestones and the opportunity for applicants to demonstrate progress through Nuclear Regulatory Commission approval.

SEC. 3. DEFINITIONS.

In this Act:

(1) **ADVANCED REACTOR.**—The term “advanced reactor” means a nuclear reactor with significant design improvements over the most recent generation of nuclear reactors. Such improvements may include inherent safety features, lower waste yields, greater fuel utilization, superior reliability, resistance to proliferation, and increased thermal efficiency.

(2) **DEPARTMENT.**—The term “Department” means the Department of Energy.

(3) **LICENSING.**—The term “licensing” means NRC activities related to reviewing applications for licenses, permits, and design certifications, and requests for any other regulatory approval for nuclear reactors within the responsibilities of the NRC under the Atomic Energy Act of 1954.

(4) **NATIONAL LABORATORY.**—The term “National Laboratory” has the meaning given that term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

(5) **NRC.**—The term “NRC” means the Nuclear Regulatory Commission.

(6) **SECRETARY.**—The term “Secretary” means the Secretary of Energy.

SEC. 4. AGENCY COORDINATION.

The NRC and the Department shall enter into the a memorandum of understanding regarding the following topics:

(1) **TECHNICAL EXPERTISE.**—Ensuring that the Department has sufficient technical expertise to support the civilian nuclear industry’s timely development and commercial deployment of safe, innovative advanced reactor technology and the NRC has sufficient technical expertise to support the evaluation of applications for licenses, permits, and design certifications, and other requests for regulatory approval for advanced reactors.

(2) **MODELING AND SIMULATION.**—The use of computers and software codes to calculate the behavior and performance of advanced reactors based on mathematical models of their physical behavior.

(3) **FACILITIES.**—Ensuring that the Department maintains and develops the facilities to support the civilian nuclear industry’s timely development and commercial deployment of safe, innovative reactor technology and ensuring that the NRC has access to such facilities, as needed.

SEC. 5. REPORTING TO CONGRESS.

Not later than 180 days after the date of enactment of this Act, the Secretary shall transmit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report that evaluates the status of activities intended to facilitate the testing and demonstration of advanced reactors on Department land and facilities and the potential for the Department to use testing and demonstration on private land.

SEC. 6. ADVANCED REACTOR REGULATORY FRAMEWORK.

(a) **PLAN REQUIRED.**—Not later than 1 year after the date of enactment of this Act, the NRC shall transmit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Environment and Public Works of the Senate a plan for developing an efficient, risk-informed, technology-neutral framework for advanced reactor licensing. The plan shall evaluate the following subjects, consistent with the NRC’s role in protecting public health and safety and common defense and security:

(1) The unique aspects of advanced reactor licensing and any associated legal, regulatory, and policy issues the NRC will need to address to develop a framework for licensing advanced reactors.

(2) Options for licensing advanced reactors under existing NRC regulations in title 10 of the Code of Federal Regulations, a proposed new regulatory framework, or a combination of these approaches.

(3) Options to expedite and streamline the licensing of advanced reactors, including opportunities to minimize the time from application submittal to final NRC licensing decision and minimize the delays that may result from any necessary amendments or supplements to applications.

(4) Options to expand the incorporation of consensus-based codes and standards into the advanced reactor regulatory framework to minimize time to completion and provide flexibility in implementation.

(5) Options to make the advanced reactor licensing framework more predictable. This evaluation should consider opportunities to improve the process by which application review milestones are established and maintained.

(6) Options to allow applicants to use phased review processes under which the NRC issues approvals that do not require the NRC to re-review previously approved information. This evaluation shall consider the NRC’s ability to review and conditionally approve partial applications, early design information, and submittals that contain design criteria and processes to be used to develop information to support a later phase of the design review.

(7) The extent to which NRC action or modification of policy is needed to implement any part of the plan required by this subsection.

(8) The role of licensing advanced reactors within NRC long-term strategic resource planning, staffing, and funding levels.

(9) Options to provide cost-sharing financial structures for license applicants in a phased licensing process.

(b) **COORDINATION AND STAKEHOLDER INPUT REQUIRED.**—In developing the plan required by subsection (a), the NRC shall seek input from the Department, the nuclear industry, and other public stakeholders.

(c) **COST AND SCHEDULE ESTIMATE.**—The plan required by subsection (a) shall include proposed cost estimates, budgets, and specific milestones for implementing the advanced reactor regulatory framework by September 30, 2019.

(d) **DESIGN CERTIFICATION STATUS.**—In the NRC’s first budget request after the acceptance of any design certification application for an advanced nuclear reactor, and annually thereafter, the NRC shall provide the status of performance metrics and milestone schedules. The budget request shall include a plan to correct or recover from any milestone schedule delays, including delays because of NRC’s inability to commit resources for its review of the design certification applications.

SEC. 7. USER FEES AND ANNUAL CHARGES.

Section 6101(c)(2)(A) of the Omnibus Budget Reconciliation Act of 1990 (42 U.S.C. 2214(c)(2)(A)) is amended—

(1) by striking “and” at the end of clause (iii);

(2) by striking the period at the end of clause (iv) and inserting “; and”; and

(3) by adding at the end the following:

“(v) for fiscal years ending before October 1, 2020, amounts appropriated to the Commission for activities related to the development of regulatory infrastructure for advanced nuclear reactor technologies.”.

SEC. 8. AGREEMENTS FOR PRIVATELY FUNDED REACTORS.

The Department shall not enter into a new agreement with any private entity to host a privately funded reactor at a Department-owned site that would affect the Federal Government’s liability—

(1) with respect to the disposal of spent nuclear fuel or high-level radioactive waste, as defined by section 2 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101), until the NRC has published a final decision on an application for construction for a repository under section 114(d) of the Nuclear Waste Policy Act (42 U.S.C. 10168(d)); and

(2) with respect to operation and decommissioning—

(A) unless such private entity has obtained and is maintaining financial protection of such type and in such amounts as the NRC shall require to cover public liability claims pursuant to section 170 of the Atomic Energy Act; and

(B) until such private entity has provided reasonable assurance that funds will be available for the decommissioning process pursuant to part 50 of title 10, Code of Federal Regulations.

PURPOSE AND SUMMARY

H.R. 4979, the “Advanced Nuclear Technology Development Act of 2016,” was introduced by Rep. Robert Latta (R–OH) on April 18, 2016, with Rep. Jerry McNerney (D–CA). The legislation addresses the need to develop, license, and regulate advanced nuclear technologies and commercial deployment of such technologies. Key provisions of H.R. 4979 include the following:

- The bill would require the Department of Energy (DOE) and the Nuclear Regulatory Commission (NRC or Commission) enter into a Memorandum of Understanding (MOU) to assure technical expertise is maintained, modeling and simulation is utilized, and DOE facilities are available to NRC as needed.
- The bill also would require the NRC develop a plan to implement an efficient, risk-informed, technology-neutral regulatory framework for advanced nuclear technologies.
- The bill also would authorize the appropriations of amounts to the NRC for the development of a regulatory infrastructure for advanced nuclear reactor technologies is not subject to statutory “fee recovery” requirements.

BACKGROUND AND NEED FOR LEGISLATION

The Atomic Energy Act of 1946¹ (AEA) established the Atomic Energy Commission (AEC) as the regulatory agency for nuclear facilities. In 1954, Congress passed and the President signed into law the Atomic Energy Act of 1954,² which authorized the Federal government to regulate, license, and oversee commercial, civilian nuclear facilities and nuclear material. Under the AEA, the AEC held dual roles as both the promotor and regulator of nuclear technology.

As a result of public perception that the AEC was not providing adequate safety regulation over civilian nuclear facilities, Congress passed the Energy Reorganization Act (ERA) of 1974³ and found it in the public interest that the licensing and related regulatory functions of the AEC be separated from the performance of other functions. The ERA abolished the AEC and created two separate entities. It established the Energy Research and Development Administration, DOE’s predecessor, to promote nuclear energy through research, development, and demonstration activities. The ERA also established the NRC as an independent safety regulator of civilian nuclear facilities.

The distinct and separate roles of DOE and NRC to promote and regulate the use of nuclear technologies led to a divergence between DOE nuclear energy activities and the regulatory requirements established by the NRC for civilian nuclear power reactors.

¹P.L. 79–585.

²P.L. 83–703.

³P.L. 93–438.

H.R. 4979 would require DOE and NRC to enter into a MOU to assure technical expertise is maintained to assist in the development of advanced nuclear technologies. The MOU would also assure that the modeling and simulation capabilities housed in DOE's National Laboratory system are made available to NRC and to ensure DOE's civilian nuclear facilities can be accessed by the NRC, as needed, to fulfill its regulatory responsibilities. This MOU will assure that DOE and NRC collaboration, within the parameters of their unique missions, have a formal, defined relationship.

The current fleet of operating nuclear power plants all utilize light-water reactor (LWR) technology. LWRs use water as the primary coolant of nuclear fuel and to transfer heat to generate electricity. LWR technology was developed due to a decision by the U.S. Navy for naval propulsion in the 1950's. As a result, commercial nuclear technology mirrored the Navy's technology choice and the NRC's nuclear reactor regulatory activities, including licensing requirements, were primarily formed for the purpose of regulating LWRs.

Currently, there are private companies interested in developing advanced nuclear reactor designs that may have inherently different designs from the power reactors currently licensed by the NRC. These technologies could increase safety margins, reduce the amount of spent nuclear fuel, or increase efficiency. Applying the existing regulatory regime intended for LWR technology would be inefficient and time consuming for vendors of advanced reactor designs.

The cost and expected length of time for NRC to approve a new design result in high uncertainty for private companies, investors, and nuclear engineers. The regulatory barrier is consistently cited as a significant obstacle to developing and deploying advanced technologies.

The development of an efficient, risk-informed, technology-neutral regulatory framework could provide confidence that the various stages of NRC licensing approval and ultimate construction and operation can be achieved in a timely manner.

H.R. 4979 would direct the NRC submit a plan on a regulatory framework with several key components. The framework would be a risk-informed, technology-neutral, predictable, and efficient process. A phased licensing process, or establishing "gates," would provide certainty for technology developers that decisions on design components could be approved while the design certification advanced through the review process. In developing the plan, the NRC shall specifically examine the phased-licensing process established by the Canadian Nuclear Safety Commission (CNSC).

The CNSC model also incorporates a staged funding model in which a review includes specific milestones for investors to assess the licensability of the technology. This structure provides more predictability for investors to make discreet decisions of financial support. The various stages of regulatory review could also have different cost-sharing requirements or caps for the applicant within that review stage. NRC should consider alternative cost-sharing requirements and limiting the total amount of funding an applicant would pay in each licensing gate.

The Omnibus Budget and Reconciliation Act established a fee recovery model for the NRC in which license applicants and holders

fund 90 percent of the Commission's budget authority. The law exempts from the fee base certain activities that do not directly support existing license applicants and holders, such as amounts appropriated from the Nuclear Waste Fund and generic homeland security activities. H.R. 4979 would authorize amounts appropriated for the development of a regulatory infrastructure for advanced nuclear reactor technologies to also be exempt from fee recovery requirements.

The Commission requested this funding in its Fiscal Year 2017 Congressional Budget Request to understand from stakeholders the need for particular regulatory requirements to ensure how prospective applications might fit into those requirements. H.R. 4979 supports this request.

HEARINGS

The Subcommittee on Energy and Power held a hearing on H.R. 4979 on April 29, 2016. The Subcommittee received testimony from:

- Marvin Fertel, President and Chief Executive Officer, Nuclear Energy Institute;
- Jeffrey S. Merrifield, Partner, Pillsbury Law Firm; Chairman Advanced Reactors Task Force, Nuclear Infrastructure Council;
- Todd Allen, Senior Fellow, Clean Energy Program, third Way; and,
- Geoffrey Fettus, Senior, Attorney, Natural Resources Defense Council.

The Subcommittee on Energy and Power and Subcommittee on Environment and the Economy held a hearing on the Nuclear Regulatory Commission's Fiscal Year 2017 Budget on April 20, 2016. While the hearing was not a legislative review of H.R. 4979, the Subcommittees did discuss issues related to advanced nuclear technologies. The Subcommittees received testimony from:

- Stephen Burns, Chairman, Nuclear Regulatory Commission;
- Kristine Svinicki, Commissioner, Nuclear Regulatory Commission;
- William Ostendorff, Commissioner, Nuclear Regulatory Commission; and,
- Jeff Baran, Commissioner, Nuclear Regulatory Commission.

COMMITTEE CONSIDERATION

On May 11 and May 12, 2016, the Subcommittee on Energy and Power met in open markup session and forwarded H.R. 4979 to the full Committee, without amendment, by a voice vote. On May 17 and 18, 2016, the full Committee on Energy and Commerce met in open markup session and ordered H.R. 4979 reported to the House, as amended, by a voice vote.

COMMITTEE VOTES

Clause 3(b) of rule XIII of the Rules of the House of Representatives requires the Committee to list the record votes on the motion

to report legislation and amendments thereto. There were no record votes taken in connection with ordering H.R. 4979 reported.

COMMITTEE OVERSIGHT FINDINGS

Pursuant to clause 3(c)(1) of rule XIII of the Rules of the House of Representatives, the Committee held hearings and made findings that are reflected in this report.

STATEMENT OF GENERAL PERFORMANCE GOALS AND OBJECTIVES

The goal and objective of H.R. 4979 is to develop the regulatory framework for advanced nuclear technologies and direct Federal agencies to align advanced nuclear activities to license and deploy new nuclear technologies.

NEW BUDGET AUTHORITY, ENTITLEMENT AUTHORITY, AND TAX EXPENDITURES

In compliance with clause 3(c)(2) of rule XIII of the Rules of the House of Representatives, the Committee finds that H.R. 4979 would result in no new or increased budget authority, entitlement authority, or tax expenditures or revenues.

EARMARK, LIMITED TAX BENEFITS, AND LIMITED TARIFF BENEFITS

In compliance with clause 9(e), 9(f), and 9(g) of rule XXI of the Rules of the House of Representatives, the Committee finds that H.R. 4979 contains no earmarks, limited tax benefits, or limited tariff benefits.

COMMITTEE COST ESTIMATE

The Committee adopts as its own the cost estimate prepared by the Director of the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

CONGRESSIONAL BUDGET OFFICE ESTIMATE

Pursuant to clause 3(c)(3) of rule XIII of the Rules of the House of Representatives, the following is the cost estimate provided by the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, June 10, 2016.

Hon. FRED UPTON,
Chairman, Committee on Energy and Commerce,
Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 4979, the Advanced Nuclear Technology Development Act of 2016.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Megan Carroll.

Sincerely,

KEITH HALL.

Enclosure.

H.R. 4979—Advanced Nuclear Technology Development Act of 2016

The Nuclear Regulatory Commission (NRC) licenses and regulates the use of radioactive materials at civilian facilities, including nuclear reactors. Funding for that agency is provided in annual appropriation acts, and the agency is required to recover most of its funding through fees charged to licensees and applicants.

H.R. 4979 would direct the NRC to report to the Congress on existing federal activities related to testing and demonstrating advanced reactors with significant design improvements over existing commercial reactors. The bill also would require the NRC to submit to the Congress, within one year of enactment, a plan for establishing a framework for licensing such reactors. Finally, the bill would specify that any funding provided to the NRC prior to fiscal year 2021 to develop a regulatory framework for advanced reactors would be excluded from the portion of its budget that is offset by fees.

Based on information from the NRC about the historical costs of studies and reports similar to those required under H.R. 4979, CBO estimates that implementing H.R. 4979 would cost about \$1 million in 2017; such spending would be subject to the availability of appropriated funds. That estimate does not include additional costs that the NRC might incur to develop a licensing framework for advanced reactors pursuant to the plan required under the bill, which CBO estimates could range between \$5 million and \$10 million annually over several years. The agency received no significant funding for such activities in 2016, and CBO has no basis for predicting whether funds will be provided in future years. Under current law, any such funding provided in future years would be largely offset by fees charged to the nuclear industry; under H.R. 4979, such amounts would be excluded from fee calculations through fiscal year 2021.

H.R. 4979 would not affect direct spending or revenues; therefore pay-as-you-go procedures do not apply. CBO estimates that enacting H.R. 4979 would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2027.

H.R. 4979 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act and would impose no costs on state, local, or tribal governments.

The CBO staff contact for this estimate is Megan Carroll. The estimate was approved by H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

FEDERAL MANDATES STATEMENT

The Committee adopts as its own the estimate of Federal mandates prepared by the Director of the Congressional Budget Office pursuant to section 423 of the Unfunded Mandates Reform Act.

DUPLICATION OF FEDERAL PROGRAMS

No provision of H.R. 4979 establishes or reauthorizes a program of the Federal Government known to be duplicative of another Federal program, a program that was included in any report from the Government Accountability Office to Congress pursuant to section

21 of Public Law 111–139, or a program related to a program identified in the most recent Catalog of Federal Domestic Assistance.

DISCLOSURE OF DIRECTED RULE MAKINGS

The Committee estimates that enacting H.R. 4979 specifically directs to be completed zero rule makings within the meaning of 5 U.S.C. 551.

ADVISORY COMMITTEE STATEMENT

No advisory committees within the meaning of section 5(b) of the Federal Advisory Committee Act were created by this legislation.

APPLICABILITY TO LEGISLATIVE BRANCH

The Committee finds that the legislation does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act.

SECTION-BY-SECTION ANALYSIS OF THE LEGISLATION

Section 1. Short title

This section provides the short title of “Advanced Nuclear Technology Development Act of 2016.”

Section 2. Findings

This section provides several findings about the importance of nuclear power for the United States, including national security and economic activity.

Section 3. Definitions

This section contains the following definitions:

(1) The term “Advanced Reactor” means a nuclear reactor with significant design improvements over the most recent generation of nuclear reactors.

(2) The term “Department” means the Department of Energy.

(3) The term “Licensing” means NRC activities related to reviewing applications for licenses, permits, design certifications, and requests for any other regulatory approval for nuclear reactors within the responsibility of the NRC under the Atomic Energy Act of 1954.

(4) The term “National Laboratory” has the meaning given that term in section 2 of the Energy Policy Act of 2005.

(5) The term “NRC” means the Nuclear Regulatory Commission.

(6) The term “Secretary” means the Secretary of Energy.

Section 4. Agency coordination

This section instructs DOE and NRC to enter into a MOU regarding the following topics:

- (1) Technical Expertise,
- (2) Modeling and Simulation, and
- (3) Facilities.

Section 5. Reporting to Congress

This section requires the Secretary to report to Congress regarding the status of activities intended to facilitate the testing and demonstration of advanced reactors.

Section 6. Advanced reactor licensing framework

Section 6(a) requires the NRC to report to Congress a plan for developing an efficient, risk-informed, technology-neutral framework for advanced reactor licensing including:

- (1) Unique aspects of advanced reactor licensing, including legal, regulatory, and policy issues;
- (2) Options to license under existing NRC regulations, a proposed new framework, or a combination of the two;
- (3) Options to streamline and expedite licensing process for advanced reactors;
- (4) Options to incorporate consensus based codes and standards into the licensing process;
- (5) Options to make the framework more predictable, potentially establishing milestones;
- (6) Options for a phased review process, including conditional approvals for partial applications, early design information, and information that helps to inform the later phases of design review;
- (7) The extent to which NRC action or policy is needed to implement any part of the framework;
- (8) The role of licensing advanced reactors within NRC's long-term planning, staffing, and funding; and,
- (9) Options to provide cost-sharing financial structures for license applicants in a phased licensing process.

Section 6(b) requires the NRC to seek input from DOE, the nuclear industry, and other public stakeholders.

Section 6(c) requires that the plan include a proposed cost estimate, budget, and implementation plan to implement the framework by 2019.

Section 7. User fees and annual charges

This section authorizes appropriations for the purposes of developing a regulatory infrastructure for advanced nuclear reactor technologies. The authorization sunsets in 2020.

Section 8. Agreements for privately funded reactors

This section prevents the Department from entering into an agreement to host a privately funded reactor if that agreement affects Federal government liability to dispose of spent nuclear fuel or high-level radioactive waste unless the NRC has acted on a license application for a nuclear waste repository and the facility has financial protections for public liability claims and decommissioning funding, as required by the NRC.

CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic,

and existing law in which no change is proposed is shown in roman):

OMNIBUS BUDGET RECONCILIATION ACT OF 1990

* * * * *

TITLE VI—ENERGY AND ENVIRONMENTAL PROGRAMS

* * * * *

SEC. 6101. NRC USER FEES AND ANNUAL CHARGES.

(a) ANNUAL ASSESSMENT.—

(1) IN GENERAL.—The Nuclear Regulatory Commission (in this section referred to as the “Commission”) shall annually assess and collect such fees and charges as are described in subsections (b) and (c).

(2) FIRST ASSESSMENT.—The first assessment of fees under subsection (b) and annual charges under subsection (c) shall be made not later than September 30, 1991.

(b) FEES FOR SERVICE OR THING OF VALUE.—Pursuant to section 9701 of title 31, United States Code, any person who receives a service or thing of value from the Commission shall pay fees to cover the Commission’s costs in providing any such service or thing of value.

(c) ANNUAL CHARGES.—

(1) PERSONS SUBJECT TO CHARGE.—Except as provided in paragraph (4), any licensee or certificate holder of the Commission may be required to pay, in addition to the fees set forth in subsection (b), an annual charge.

(2) AGGREGATE AMOUNT OF CHARGES.—

(A) IN GENERAL.—The aggregate amount of the annual charges collected from all licensees and certificate holders in a fiscal year shall equal an amount that approximates the percentages of the budget authority of the Commission for the fiscal year stated in subparagraph (B), less—

(i) amounts collected under subsection (b) during the fiscal year;

(ii) amounts appropriated to the Commission from the Nuclear Waste Fund for the fiscal year;

(iii) amounts appropriated to the Commission for the fiscal year for implementation of section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005; [and]

(iv) amounts appropriated to the Commission for homeland security activities of the Commission for the fiscal year, except for the costs of fingerprinting and background checks required by section 149 of the Atomic Energy Act of 1954 (42 U.S.C. 2169) and the costs of conducting security inspections[.]; and

(v) *for fiscal years ending before October 1, 2020, amounts appropriated to the Commission for activities related to the development of regulatory infrastructure for advanced nuclear reactor technologies.*

(B) PERCENTAGES.—The percentages referred to in subparagraph (A) are—

- (i) 98 percent for fiscal year 2001;
- (ii) 96 percent for fiscal year 2002;
- (iii) 94 percent for fiscal year 2003;
- (iv) 92 percent for fiscal year 2004; and
- (v) 90 percent for fiscal year 2005 and each fiscal year thereafter and fiscal year 2006.

(3) AMOUNT PER LICENSEE.—The Commission shall establish, by rule, a schedule of charges fairly and equitably allocating the aggregate amount of charges described in paragraph (2) among licensees. To the maximum extent practicable, the charges shall have a reasonable relationship to the cost of providing regulatory services and may be based on the allocation of the Commission's resources among licensees or classes of licensees.

(4) EXEMPTION.—

(A) IN GENERAL.—Paragraph (1) shall not apply to the holder of any license for a federally owned research reactor used primarily for educational training and academic research purposes.

(B) RESEARCH REACTOR.—For purposes of subparagraph (A), the term “research reactor” means a nuclear reactor that—

(i) is licensed by the Nuclear Regulatory Commission under section 104 c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) for operation at a thermal power level of 10 megawatts or less; and

(ii) if so licensed for operation at a thermal power level of more than 1 megawatt, does not contain—

(I) a circulating loop through the core in which the licensee conducts fuel experiments;

(II) a liquid fuel loading; or

(III) an experimental facility in the core in excess of 16 square inches in cross-section.

(d) DEFINITION.—As used in this section, the term “Nuclear Waste Fund” means the fund established pursuant to section 302(c) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(c)).

(e) CONFORMING AMENDMENT TO COBRA.—[Omitted—amends other Act(s).]

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