

HR 238

Energy Research, Development, Demonstration, and Commercial Application Act of 2003

Congress: 108 (2003–2005, Ended)

Chamber: House

Policy Area: Energy

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Sponsor

Name: Rep. Boehlert, Sherwood [R-NY-24]

Party: Republican • State: NY • Chamber: House

Cosponsors (1 total)

Cosponsor	Party / State	Role	Date Joined
Rep. Hall, Ralph M. [D-TX-4]	D · TX		Jan 8, 2003

Committee Activity

Committee	Chamber	Activity	Date
Natural Resources Committee	House	Referred to	Feb 12, 2003
Science, Space, and Technology Committee	House	Discharged from	Mar 20, 2003

Subjects & Policy Tags

Policy Area:

Energy

Related Bills

Bill	Relationship	Last Action
108 HR 6	Related bill	Nov 21, 2003: Motion by Senator Frist to reconsider the vote by which cloture on the conference report to accompnay H. R. 6 was not invoked (Roll Call Vote No. 456) entered in Senate.

Energy Research, Development, Demonstration, and Commercial Application Act of 2003 - Directs the Secretary of Energy (Secretary) to conduct programs of energy research, development, demonstration and commercial application (RD&D) for: (1) energy efficiency; (2) distributed energy and electric systems; (3) renewable energy; (4) fossil energy; (5) nuclear energy; and (6) hydrogen.

Title I: Research and Development - Subtitle A: Energy Efficiency - Part 1: Authorization of Appropriations - (Sec. 104) Authorizes appropriations for (RD&D) targeting energy efficiency and conservation.

Part 2: Lighting Systems - (Sec. 105) Instructs the Secretary to implement a Next Generation Lighting Initiative to support RD&D activities related to advanced solid-state lighting technologies based on white light emitting diodes. Prescribes implementation guidelines.

Part 3: Buildings - (Sec. 106) Instructs the Director of the Office of Science and Technology Policy to establish an interagency group to develop a National Building Performance Initiative to integrate Federal, State, and voluntary private sector efforts to reduce the costs of construction, operation, maintenance, and renovation of commercial, industrial, institutional, and residential buildings.

(Sec. 106A) Directs the Secretary to conduct an RD&D program on advanced control devices to improve the energy efficiency of electric motors used in heating, ventilation, air conditioning, and comparable systems.

Part 4: Vehicles (Sec. 108) - Directs the Secretary to conduct an RD&D for the secondary use of batteries.

Part 5: Energy Efficiency Science Initiative - (Sec. 110) Requires the Secretary to establish and report to Congress on an Energy Efficiency Science Initiative for competitive grants for research relating to energy efficiency.

Part 6: Advanced Energy Technology Transfer Centers - (Sec. 110A) Directs the Secretary to make grants to nonprofit institutions, State and local governments, or universities (or consortia thereof), to establish a geographically dispersed network of Advanced Energy Technology Transfer Centers.

Subtitle B: Distributed Energy and Electric Energy Systems - Part 1: Authorization of Appropriations - (Sec. 111) Authorizes appropriations for distributed energy and electric energy systems activities, including micro-cogeneration energy technology.

Part 2: Distributed Power - (Sec. 112) Instructs the Secretary to develop and transmit to Congress a strategy for a comprehensive RD&D to develop hybrid distributed power systems that combine: (1) specified renewable electric power generation technologies; and (2) nonintermittent electric power generation technologies suitable for use in a distributed power system.

(Sec. 113) Instructs the Secretary to: (1) establish a comprehensive RD&D to improve energy efficiency of high power density facilities, including data centers, server farms, and telecommunications facilities; and (2) make competitive, merit-based grants to consortia for development of micro-cogeneration energy technology.

Part 3: Transmission Systems - (Sec. 115) Directs the Secretary to develop, implement, and report to Congress on a comprehensive RD&D to promote improved reliability and efficiency of electrical transmission systems.

Part 4: General Provisions - (Sec. 117) Instructs the Secretary to work with the Institute of Electrical and Electronic

Engineers and other standards development organizations to take steps toward the development, promulgation, and implementation of voluntary consensus standards for distributed energy systems for use in manufacturing and using equipment and systems for connection with electric distribution systems, and for obtaining electricity from, or providing electricity to such systems.

Subtitle C: Renewable Energy - Part 1: Authorization of Appropriations - (Sec. 121) Authorizes appropriations for renewable energy RD&D and commercial application activities.

Part 2: BioEnergy - (Sec. 122) Instructs the Secretary to conduct a RD&D for bioenergy.

Part 3: Miscellaneous Projects - (Sec. 126) Instructs the Secretary to conduct RD&D programs for: (1) ocean energy, including wave energy; (2) the combined use of renewable energy technologies with one another and with other energy technologies, including the combined use of wind power and coal gasification technologies; and (3) hydrogen carrier fuels.

(Sec. 127) Directs the Secretary to establish a demonstration program for innovative technologies for renewable energy sources in government buildings.

Subtitle D: Nuclear Energy - Part 1: Authorization of Appropriations - (Sec. 132) Authorizes appropriations for nuclear energy RD&D and commercial application activities that target: (1) nuclear infrastructure support; (2) advanced fuel recycling program; (3) university programs; and (4) geological isolation of spent fuel.

Prohibits such funds from being used for decommissioning the Fast Flux Test Facility.

Part 2: Nuclear Energy Research Programs - (Sec. 132) Instructs the Secretary to implement: (1) a nuclear energy research initiative; (2) a nuclear energy plant optimization program; (3) a nuclear power 2010 program; (4) a generation IV nuclear energy systems initiative; (5) a nuclear production of hydrogen; and (6) nuclear infrastructure support.

Part 3: Advanced Fuel Recycling - (Sec. 133) Instructs the Secretary to conduct and report on an advanced fuel recycling technology research and development program to evaluate proliferation-resistant fuel recycling and transmutation technologies which minimize environmental or public health and safety impacts as an alternative to certain aqueous reprocessing technologies.

Part 4: University Programs - (Sec. 134) Requires the Secretary to support a program to invest in human resources and infrastructure in the nuclear sciences and engineering and related fields (including health physics and nuclear and radiochemistry), consistent with departmental missions related to civilian nuclear research and development.

Part 5: Geological Isolation of Spent Fuel - (Sec. 135) Directs the Secretary to establish a program to determine and report to Congress on the feasibility of deep borehole disposal of spent nuclear fuel and high-level radioactive waste.

Subtitle E: Fossil Energy - Part 1: Authorization of Appropriations - (Sec. 141) Authorizes appropriations for fossil energy RD&D.

Requires deposit of specified percentages of certain royalties, rents, and bonuses derived from certain Federal onshore and offshore oil and gas leases into the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Fund.

Authorizes appropriations for: (1) fuel cell proton exchange membrane technology; (2) coal mining technologies; and (3)

the Office of Arctic Energy.

Prohibits the use of funds authorized under this part for either Fossil Energy Environmental Restoration or Import/export Authorization.

Part 2: Research Programs - (Sec. 142) Directs the Secretary to conduct an RD&D and commercial application program for: (1) specified coal and power systems; (2) specified oil and gas research; (3) fuel cells for low-cost, high-efficiency, fuel-flexible, modular power systems; (4) and coal mining technologies.

Instructs the Secretary of the Interior to report to Congress on the latest estimates of natural gas and oil reserves, reserves growth, and undiscovered resources in Federal and State waters off the coast of Louisiana and Texas.

Part 3: Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources - (Sec. 144) Instructs the Secretary to implement an RD&D program for ultra-deepwater and unconventional natural gas and other petroleum resource exploration and production, and safe operations and environmental mitigation (including reduction of greenhouse gas emissions and sequestration of carbon).

Confers upon the Secretary ultimate responsibility and oversight of all program aspects.

(Sec. 145) Directs the Secretary to: (1) increase the supply of onshore unconventional natural gas and other petroleum resources and to reduce the cost and increase the efficiency of their exploration and production, while improving safety and minimizing environmental impacts; and (2) establish the Ultra-Deepwater Advisory Committee and the Unconventional Resources Technology Advisory Committee.

(Sec. 149) Expresses the sense of Congress that ultra-deepwater technology developed under this Act is to be developed primarily for production of ultra-deepwater natural gas and other petroleum resources of the United States, and that this priority is to be reflected in the terms of grants, contracts, and cooperative agreements.

(Sec. 150) Establishes in the Treasury the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research Fund.

(Sec. 150A) Directs the Secretary to: (1) review and assess the suitability of Federal technology programs for use in ultradeep drilling RD&D; and (2) solicit organizations knowledgeable of the technology needs of the ultradeep drilling industry and select the most qualified applicant to manage a technology transfer program.

Subtitle F: Science - Part 1: Authorization of Appropriations - (Sec. 161) Authorizes appropriations for RD&D activities of the Office of Science (DOE). Allocates such funds among the following: (1) fusion energy sciences; (2) spallation neutron source; (3) nanotechnology R&D; (4) Genomes to Life; and (5) a science and technology scholarship program.

Part 2: Fusion Energy Sciences - (Sec. 161A) Authorizes the Secretary to negotiate an agreement for United States participation in ITER (international burning plasma fusion research project). Prescribes implementation guidelines.

(Sec. 163) Instructs the Secretary to transmit an implementation plan to Congress that reflects U.S. policy for a fusion energy sciences RD&D program in order to ensure that the United States is competitive with other nations in providing fusion energy for its own needs and the needs of other nations, including by demonstrating electric power or hydrogen production for the U.S. energy grid utilizing fusion energy at the earliest date possible.

Part 3: Spallation Neutron Source - (Sec. 165) Requires the Secretary, as part of DOE annual budget submission, to report on the Spallation Neutron Source (Department Project 99-E-334, Oak Ridge National Laboratory, Oak Ridge, Tennessee), including a description of the achievement of milestones, a comparison of actual costs to estimated costs, and any changes in estimated project costs or schedule.

Limits the total amount obligated by DOE for such program.

Part 4: Miscellaneous - (Sec. 167) Directs the Secretary to develop, implement, and transmit, with the President's budget request to Congress, a strategy for the nonmilitary energy laboratories and facilities of the Office of Science.

(Sec. 168) Authorizes allocation of appropriations for research regarding precious metal catalysis.

(Sec. 169) Instructs the Secretary to: (1) implement a Nanotechnology Research and Development Program; (2) support a program to advance the Nation's computing capability across a diverse set of grand challenge computationally based science problems related to departmental missions; and (3) support an RD&D program on biological nitrogen fixation.

Part 5: Genomes to Life - (Sec. 170B) Requires the Secretary to establish an RD&D program in systems biology and proteomics (the determination of the structure, function, and expression of the proteins encoded in any genome, including new protein sequences encoded in a genome for which the structural or functional correlates are not currently known).

(Sec. 170C). Instructs the Secretary to establish a Department of Energy Science and Technology Scholarship Program designed to recruit and prepare students for careers in the Department.

Subtitle G: Energy and Environment - (Sec. 171) Authorizes appropriations for United States-Mexico energy technology cooperation.

(Sec. 172) Requires the Secretary to establish an RD&D and commercial application program in collaboration with entities in Mexico and the United States to promote energy efficient, environmentally sound economic development along the United States-Mexico border.

(Sec. 173) Authorizes the Secretary to: (1) make a single grant to a qualified institution to examine and develop the feasibility of burning post-consumer carpet in cement kilns as an alternative energy source; (2) provide loan guarantees for a specified project to produce energy from a plant using integrated gasification combined cycle technology; and (3) provide loan guarantees for at least one petroleum coke gasification polygeneration project.

(Sec. 176) Directs the Secretary to conduct a program to assist in implementation of specified biopower and biofuels projects.

(Sec. 177) Authorizes appropriations for a coal technology loan to the owner of a specified experimental plant on such terms and conditions as the Secretary determines.

(Sec. 178) Authorizes appropriations for a report on the results of a study regarding establishment of a test center for next-generation fuel cells at an institution of higher education which has available a continuous source of hydrogen and access to the electric transmission grid.

Subtitle H: Hydrogen - (Sec. 181) George E. Brown, Jr. and Robert S. Walker Hydrogen Future Act of 2003 - Amends the Spark M. Matsunaga Hydrogen Research, Development, and Demonstration Act of 1990 (Act) to direct the Secretary to conduct an RD&D and commercial application program on: (1) accelerated uses of hydrogen and related technologies

in stationary and transportation applications; and (2) advanced vehicle technologies (FreedomCAR program) to address engine and emission control systems, energy storage, electric propulsion, and hybrid systems, automotive materials, clean fuels in addition to hydrogen, and other advanced vehicle technologies.

Authorizes the Secretary to implement programs for: (1) interagency, intergovernmental, and international education, information exchange, and cooperation concerning hydrogen and hydrogen-related products; and (2) a program of technology transfer to the private sector (similar to the one under current law) to foster the exchange of generic, nonproprietary information and technology developed under this Act.

Directs the President to establish an interagency task force to work toward development of: (1) a safe, economical, and environmentally sound hydrogen infrastructure; (2) uniform hydrogen codes, standards, and safety protocols; (3) fuel cells in government applications, including portable, stationary, and transportation applications; and (4) vehicle hydrogen fuel system integrity safety performance.

Replaces the Hydrogen Technical Advisory Panel with the Hydrogen Technical and Fuel Cell Advisory Committee.

Instructs the Secretary to enter into an arrangement with a competitively selected nongovernmental entity, such as the National Academy of Sciences, to review and evaluate a coordinated plan submitted by the Secretary regarding: (1) accelerated use of hydrogen and related technologies in stationary and transportation applications; (2) the FreedomCAR program; and (3) other programs directly related to fuel cells or hydrogen.

Authorizes DOE to represent United States interests regarding activities and programs under this Act before governmental and nongovernmental organizations, including: (1) other Federal, State, regional, and local governments; (2) industry representatives, including the energy and transportation industries; and (3) in consultation with the Department of State, foreign governments and international organizations.

(Sec. 183) Repeals the Hydrogen Future Act of 1996.

Subtitle I: Management - (Sec. 184) Sets forth statutory parameters governing availability of funds, cost sharing, merit review of proposals and external technical review of departmental programs.

(Sec. 188) Instructs the Secretary to: (1) designate a Technology Transfer Coordinator to perform oversight and policy development for DOE technology transfer activities; (2) establish a Technology Transfer Working Group, consisting of representatives of the National Laboratories and single-purpose research facilities; and (3) require the Director of each National Laboratory to designate a small business advocate and assistance program.

(Sec. 190) Directs the Secretary to arrange for a National Academy of Sciences report to Congress on: (1) obstacles to accelerating the commercial application of energy technology; and (2) the adequacy of DOE policies, procedures and oversight concerning technology transfer-related disputes between contractors of the DOE and the private sector.

(Sec. 196) Directs the Secretary to report to Congress on the feasibility of promoting collaborations for energy projects between large and small institutions of higher education through grants, contracts, and cooperative agreements.

(Sec. 197) Amends the Stevenson-Wydler Technology Innovation Act of 1980 to provide that Federal royalties received by certain Federal laboratories may be used by them for educational assistance.

Title II: Department of Energy Management - (Sec. 201) Amends the Department of Energy Organization Act to replace the position of Director of the Office of Science with the position of Assistant Secretary.

(Sec. 202) Directs the Secretary to report biennially to Congress on equal employment opportunity practices at DOE National laboratories.

(Sec. 203) Instructs the Secretary to report to Congress on the assumption of DOE regulatory and enforcement responsibilities by: (1) the NRC with respect to nuclear safety; and (2) the Occupational Safety and Health Administration with respect to DOE nonmilitary energy laboratories.

Title III: Clean School Buses - (Sec. 301) Directs the Secretary to establish and report to Congress on the following programs: (1) a pilot program for awarding grants on a competitive basis to eligible entities for RD&D of alternative fuel school buses and ultra-low sulfur diesel school buses; (2) cooperative agreements with private sector fuel cell bus developers for the development of fuel cell-powered school buses; and (3) awarding grants on a competitive basis for the demonstration and commercial application of retrofit technologies for diesel school buses.

(Sec. 304) Authorizes appropriations for school bus grants and for retrofit grants.

Title IV: Alternative Fueled and Advanced Vehicles - (Sec. 402) Instructs the Secretary to establish a competitive grant pilot program (administered through the Clean Cities Program of DOE) to provide geographically dispersed project grants for: (1) acquisition by governmental entities or metropolitan transportation authorities of alternative fueled vehicles, fuel cell and hybrid vehicles, and ultra-low sulfur diesel vehicles; and (2) the infrastructure necessary to directly support operation and maintenance of those fleets.

(Sec. 403) Requires the Secretary to report to Congress on the program.

Title V: Clean Coal - (Sec. 501) Authorizes appropriations for a clean coal power initiative conditioned upon a report by the Secretary of Energy to certain congressional committees detailing a ten-year implementation plan. Sets forth technical and financial criteria for the initiative.

(Sec. 503) Requires the Secretary to submit a status report to Congress.

(Sec. 504) Instructs the Secretary to: (1) award competitive, merit-based grants to universities for the establishment of Centers of Excellence for Energy Systems of the Future; and (2) provide grants to universities that show the greatest potential for advancing new clean coal technologies.

Actions Timeline

- **Jun 27, 2003:** Committee on Resources discharged.
- **Jun 27, 2003:** Committee on Resources discharged.
- **Jun 27, 2003:** Placed on the Union Calendar, Calendar No. 94.
- **May 22, 2003:** Reported (Amended) by the Committee on Science. H. Rept. 108-128, Part I.
- **May 22, 2003:** Reported (Amended) by the Committee on Science. H. Rept. 108-128, Part I.
- **May 22, 2003:** House Committee on Resources Granted an extension for further consideration ending not later than June 27, 2003.
- **Apr 2, 2003:** Committee Consideration and Mark-up Session Held.
- **Apr 2, 2003:** Ordered to be Reported (Amended) by Voice Vote.
- **Mar 20, 2003:** Subcommittee on Energy Discharged.
- **Feb 20, 2003:** Referred to the Subcommittee on Energy.
- **Feb 12, 2003:** Referred to the Subcommittee on Energy and Mineral Resources.
- **Jan 8, 2003:** Introduced in House
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- **Jan 8, 2003:** Referred to the Committee on Science, and in addition to the Committee on Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned.
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